

## 15. PEST REPORT

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The purpose of this report is to inform elected members about the pest management role of the Christchurch City Council, and to recommend the establishment of a Christchurch Biosecurity Liaison Group with representatives from ECan and DoC.

The City Council carries out a considerable amount of pest control work, of both plants and animals. Other agencies with a significant role are the Department of Conservation and Environment Canterbury. Each organisation has a slightly different focus and role, but increasingly we are working together to maximise the effectiveness of our effort and resources.

Pest control is carried out for a range of reasons, and typically for more than one. Those reasons include:-

- To protect peoples health (eg mosquitos can carry disease)
- To protect native biodiversity (eg purple loosestrife changes habitat for native wetland species)
- For economic reasons (eg possums carry TB, which is a risk to market access for New Zealand's cattle and deer exports)
- To meet legislative requirements (eg the Resource Management Act, City Plan, Health Act)
- To reduce flooding (eg growth of egeria can raise water levels)
- To enable recreational use of an area (eg lagarosiphon growth interferes with rowing)
- In response to complaints (eg magpies attacking people)

The Ministry of Agriculture and Forestry (MAF) has overall responsibility for Biosecurity and Pest Management in New Zealand. Their focus is on biosecurity issues at the border but the recently completed Biosecurity strategy for New Zealand gives them a leadership role in pest management activities. This includes ensuring that pest management roles and responsibilities are clarified, decision making is more transparent and improving national and regional communication and coordination.

Environment Canterbury (ECan) has region wide responsibilities for biosecurity and pest management and the Department of Conservation (DoC) also have responsibilities for pest control, nationally as well as on its estate. Both Ecan and DoC also have a regional focus that includes Christchurch. The establishment of a 'Christchurch Biosecurity Liaison Group' could improve communication between these groups, and better align all of our activities to ensure they have the maximum effect.

### RELEVANT LEGISLATION

Pest control meets the requirements of a range of legislation, some of which is outlined below. It is particularly important to note that the Regional Councils' role has changed in recent years.

#### Resource Management Act (1991)

The Resource Management Act (RMA) requires us to manage and protect significant indigenous vegetation and significant habitats of indigenous fauna (Section 6(c)). The City Council is also required to maintain indigenous biological diversity (Section 31(1)(b)(iii)).

#### Christchurch City Plan (1999)

Pest control achieves a number of the objectives and policies in the City Plan, particularly those on the Natural Environment (Volume 2, Section 2).

The overall objective for the Natural Environment is "*The maintenance and enhancement of the quality of natural resources and their ability to meet the needs of present and future generations*".

Several policies refer to the *protection* of particular habitats, native vegetation and animals (see policies 2.2.6, 2.2.7, 2.4.1, 2.4.4, 2.4.6, 2.7.3, 2.8.1). Pest control is one of the practical ways that these policies are accomplished.

## **Health Act (1956)**

Under the Health Act, the Council has a duty to protect public health (Section 23). This includes control of certain pest species (eg rats, mice, mosquitoes). The definition of nuisances under the Health Act includes "any condition giving rise or capable of giving rise to the breeding of flies or mosquitoes or suitable for the breeding of other insects, or of mites or ticks, which are capable of causing or transmitting disease" (Section 29).

## **The Reserves Act (1977)**

The requirements for pest control under the Reserves Act vary depending on how the reserve is classified. Two examples are:

- For Scenic Reserves, Section 19(2)(a)  
"Except where the Minister otherwise determines, the *indigenous flora and fauna, ecological associations*, and natural environment and beauty shall as far as possible be *preserved*, and for this purpose, except where the Minister otherwise determines, *exotic flora and fauna shall as far as possible be exterminated*"
- For Recreation Reserves, Section 17(2)(b)  
"Where scenic, historic, archaeological, biological, geological, or other scientific features or *indigenous flora or fauna or wildlife are present on the reserve, those features or that flora or fauna or wildlife shall be managed and protected* to the extent compatible with the principal or primary purpose of the reserve"

## **Wildlife Act (1955)**

The Wildlife Act covers both the protection and control of wild animals and birds, and the management of game. It is relevant to the management of species like deer, goats, possums and pigs.

## **Wild Animal Control Act (1977)**

The Wild Animal Control Act provides "...for the purposes of controlling wild animals generally, and of eradicating wild animals locally where necessary and practicable..." (Section 4(1)). This Act gives DoC the authority to prepare wild animal control plans (Section 5), some of which cover species in Christchurch (eg possums).

## **Biosecurity Act (1993) and Pest Management Strategies**

The Biosecurity Act aims to enable eradication or effective management of pests that are already in the country, and to prevent the entry of any additional pest species.

The Biosecurity Act enables, *but does not require*, ECan to prepare a Regional Pest Management Strategy (RPMS). ECan has prepared strategies because they are "of the opinion that the organisms under consideration are capable of causing serious adverse and unintended effects". Currently there are two RPMS in effect for Canterbury, and these are currently being reviewed.

In the past, ECan undertook the physical control of pests such as rabbits and possums, but there is now more emphasis on a regulatory approach, with land occupiers being required to carry out the work. For many of the pest species covered by the RPMS, ECan use a mixture of methods to achieve control. These measures include enforcing control rules for some species on land occupiers, facilitating and encouraging control work by other parties, and preventing the sale/propagation/distribution of some pest species. For the balance ECan carries out the control work, often in partnership with other agencies such as Territorial Authorities, DOC and farmer groups.

There are also two National Pest Management Strategies (NPMS) in place under the Biosecurity Act. For instance the Animal Health Board's National Pest Management Strategy for Bovine Tb, which targets possums as a feral vector. ECan manages the feral vector control (possum and ferret control) component of this strategy for Canterbury.

## **Biosecurity Strategy for New Zealand (2003)**

A National Biosecurity Strategy has recently been released (August 2003). This document highlights that pest control is important to New Zealand's economy, its biodiversity, and to New Zealanders' health. The strategy makes various recommendations, including the need for better co-ordination between the various organisations involved (with MAF to have an overview role), and increased resources.

### **CONSTRAINTS**

The arrival of new pest species and the expansion of existing species will continue, and is likely to accelerate due to factors like climate change and increased global travel. Some of the constraints to making significant progress in this area are:

- Insufficient resources and funding, eg to carry out pest control work and surveillance
- Lack of knowledge of where pests are, and which ones might be a problem in the future
- Public knowledge, eg people growing weed pests in their gardens, unaware that they are a problem
- Scarce expertise - people may not recognise a species as being a problem one, especially new ones
- Lack of coordinated control - pests do not respect paper/administrative boundaries

Possible solutions to some of these issues are discussed below.

### **PEST CONTROL CARRIED OUT BY THE CHRISTCHURCH CITY COUNCIL**

#### **PLANT PESTS**

##### **'Site-led' programmes**

'Weed plans' have been written for some sites (eg Brooklands Lagoon, Travis Wetland, Styx Mill Reserve, McLeans Reserve, Port Hills), and more are underway. Each site is broken down into management units, and the weed species in each unit are identified. For example, Travis Wetland has 32 management units, and 34 weed species are present in at least one of those management units.

The matrix of species and locations is then assessed to determine what priority each part of the control work should have. The factors considered in deciding how to allocate limited resources include:

- The importance of the particular habitat (eg rock outcrops on the Port Hills support some threatened species and some that only grow there and on Banks Peninsula)
- Weed potential of the species (eg old mans beard is more damaging than ivy, and is more difficult to control once established)
- The possibility of eradication – if there is a small amount of a species present, that is the time when eradication is possible, thereby reducing future control work
- Cooperative effort – if other agencies are also carrying out control work, it is more likely to be effective
- The existence of effective control methods (eg control of some invasive grasses is difficult and not often attempted)
- Dispersal potential (eg an upstream site would be controlled first, other things being equal)
- Legislation – there are rules requiring control of some species in the RPMS

Once all of these factors have been considered, a work schedule is drawn up for each site and the plan is then implemented by staff (mostly rangers).

The weed plans enable us to keep track of all the control work required, which involves a large number of sites and species. The plans also enable us to evaluate the most effective order for the work to be carried out, given limited resources, and they facilitate budgeting of costs for future control work.

### ***'Weed-led' programmes***

'Weed-led' programmes focus on control of particular species, typically ones that are not yet widespread. The objective of these programmes is to eradicate or contain the species before it becomes a major problem.

The purple peril programme, which targets purple loosestrife, is an example of this approach. This programme is run in conjunction with DoC, ECan and Ngai Tahu. Without the cooperation of these other agencies, no effective control would be possible. The City Council administers the largest site with this species - the wetland at Cockayne Reserve. However it would not be worth the City Council attempting any control at all without the cooperation of the other agencies, because new plants seed in from neighbouring land unless control is widespread.

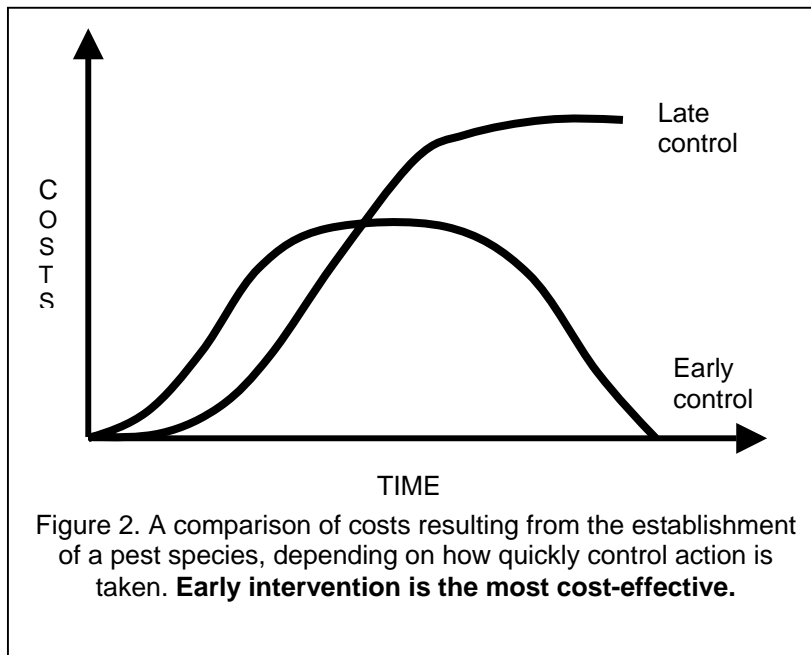


Figure 1. Control of purple loosestrife at Cockayne Reserve - access is difficult.

Another very successful weed-led programme is underway for spartina, which is an invasive grass in saline wetlands. This species has almost been eradicated in Canterbury, through the combined efforts of DoC and the City Council.

Other weed-led programmes underway include ones on African feather grass, beggars tick, egeria, lagarosiphon, *Limonium campyanis*, nassella, old mans beard, phragmites and Spanish heath.

The intention of weed-led programmes is to minimise the impact of the weed species, and to minimise future control costs if the species becomes widely established – “a stitch in time saves nine” (see Figure 2).



The success to-date of the *Egeria* control carried out by the City Council demonstrates early control working effectively - following 'weed training' one of the field staff reported a new aquatic plant. Because it was only present in a small area, prompt action to achieve a high level of control was possible. The control was expensive initially (~\$200,000), but the long term costs of maintaining a high level of control is expected to be relatively low as a result.

Where possible, such programmes are carried out in co-operation with other agencies. DoC has recently launched a 'weed buster' programme, based on an Australian model, which will help to coordinate and promote such activities.

### ***Training and Education***

Since some staff (eg rangers, contract supervisors, CityCare staff) spend a significant amount of time in the field, they have the potential to spot new incursions and to report them for further investigation. 'Hands-on' training sessions are held periodically for these staff. Training sessions also make use of a 'weed library' that is maintained by the Council nursery – this is a collection of live material to assist in teaching correct identification.

The advantage of good surveillance (i.e. staff in the field detecting a new species early on) is that it provides us with the possibility of eradicating or containing any new species. This has the potential to greatly reduce control costs in the long term (see Figure 2).

Booklets and identification sheets are produced as required, to aid staff in the field. A 'weed of the month' sheet is also produced, in cooperation with ECan and DoC. The weed of the month sheets are currently circulated to about 70 staff from Ngai Tahu, CityCare, several weed-control contractors, DoC, ECan and CCC.

Weed information is also made available to the public. Some printed material has been produced and information is also available in the 'Canterbury Weed Guide' which is on the internet (see [www.ccc.govt.nz/parks/TheEnvironment/weedguide.asp](http://www.ccc.govt.nz/parks/TheEnvironment/weedguide.asp)). The weed guide currently covers 44 species, and also makes the ongoing 'weed of the month' series available to the public.

Staff also raise the awareness by the public of pest issues in various forums. These include providing displays (eg at Gardenz), talking to community and school groups, writing articles, and producing posters, signs and pamphlets.

### ***Research***

In some cases research to determine the most appropriate control method is necessary. Investigation on the weed potential of new, possibly weedy, species is also carried out where required.

## Vertebrate animal pests

Vertebrate animal pests include possums, goats, rabbits, hares, ferrets, stoats, weasels, rats, mice, feral cats, hedgehogs, magpies and Canada geese.

Predator control work, along with monitoring before and after control, is carried out at quite a few sites within the City. There are a range of methods used, depending on the pest and the location.

A "Regional Park Pest Management Strategy" is currently being prepared, and several sites already have quite detailed programmes in place for predator control and monitoring: -

### ***Travis Wetland***

Pests considered in the plan for this site are stoats, ferrets, rodents, domestic and feral cats, hedgehogs, possums and magpies. The objectives of the plan are: -

- Sustained control of mustelids (stoats and ferrets).
- To increase the breeding success of resident bird populations.
- To meet DoC protocols for predator control, to enable the re-introduction of endangered wetland bird species within 5 to 10 years.
- To reduce the predation pressure on skinks.

### ***Port Hills***

An Integrated pest control programme is being carried out with ECan, and with cooperation from some neighbouring landholders. This enables control work carried out to be more effective. The objective of this work is to reduce animal pests (including possums, mustelids, feral goats) to levels sufficient to ensure that biodiversity values are protected on the Port Hills

### ***Other animal control work***

There is a programme to control rats within the city, on council property and waterways, to maintain public health. The Environmental Services Unit of the Council also provides information to Christchurch residents on how to eradicate rats and mice from private property.

The Council offers a 'trap loan' scheme, whereby the public can borrow traps to control animal pests within their own properties. Most traps are either humane kill traps or live capture. Included with the trap is a handout on how to use the trap safely, and how to target the correct pest.

The council also responds to complaints received from members of the public regarding pests in public areas. Most common complaints are for magpies, feral cats and possums.

The Regional Parks team delivers an education programme, mainly to school groups, that highlights animal threats to local biodiversity. Signs and pamphlets are also used to raise awareness of the damage that pests can cause.

## **INSECT PESTS**

The Environmental Services Unit responds to complaints about nuisance species (eg rats, flies, midges, mice, white-tailed spiders, mosquitoes) under Section 29 of the Health Act.

### ***Mosquitoes***

Some mosquitoes carry diseases that are of public health significance and Christchurch is considered an area of medium risk for incursion by disease carrying mosquito species, by the Ministry of Health.

The Parks and Waterways Unit administer a mosquito larvae monitoring programme at sites around Christchurch waterways, and the results are supplied to Community Public Health.

### ***Darwin's ants***

These ants are widespread in Christchurch but can cause a nuisance to householders, where they enter the home. The council provides information to the public on how to control infestations themselves.

### **Argentine ants**

These ants pose a threat to other insects, young birds, cause damage to fruit trees and are a household pest. The Council recently worked with the DoC and ECan to eradicate Argentine ants from a site in Riccarton.

### **Wasp and bees**

Some control of nests is carried out, in response to requests from the public. The council's park ranger team also eradicate nests on council parks.

### **PEST FISH**

Any sightings of pest fish are reported to DoC. The Department has a pest fish survey team which assesses sites throughout the county. A list of potential sites within the city have been forwarded to this team, to be checked this summer.

### **PROPOSED CHRISTCHURCH BIOSECURITY LIAISON GROUP**

The value of joint action with other agencies to achieve control, share information, and to combine resources and skills has already proved invaluable. The increasing number of pests occurring in Christchurch, the complexity of some of the issues, and the limited nature of resources, all mean that continued cooperative effort is essential if we are to be effective.

Therefore we propose the formation of a 'Christchurch Biosecurity Liaison Group' to: -

- improve communication and co-operation between the agencies in Christchurch that are involved in pest management
- to increase the effectiveness of pest control work that is undertaken
- to ensure decision making is based on good information and advice
- to increase the level of awareness of pest and biosecurity issues

### **Terms of Reference**

- Explore possible synergies between agencies, for instance aligning budgets and co-operating on specific projects
- Identify matters of potential concern, eg discussion of new incursions and the appropriate response
- Clarify the role of each agency in biosecurity projects as they arise, including legislative requirements
- Identify areas that other staff may need to follow up on (eg the existing joint Weed Liaison and Animal Pest Management teams)
- Communication of pest matters to senior managers

### **Structure**

The liaison group would include several staff representatives from each organisation. Agencies involved initially would be Christchurch City Council, Environment Canterbury and the Department of Conservation. Other agencies, eg Ministry of Agriculture and Forestry and Community Public Health, could be involved as required.

### **Reporting**

The group would report regularly to their respective organisations. In the case of the City Council, reporting would be to the Parks, Gardens and Waterways Committee.

### **Staff**

- Recommendation:**
1. That the above information be received.
  2. That the establishment of a "Christchurch Biosecurity Liaison Group" be supported, that includes Environment Canterbury, Department of Conservation and the Christchurch City Council.

### **Chairman's**

- Recommendation:** That the above recommendation be adopted.