

HAMILTON HALO

The Hamilton Halo project was launched in 2007 by Waikato Regional Council. Its focus is on increasing the number of tūī and bellbirds that survive in bush breeding areas and making the city an attractive place for those birds to stay, feed and breed.

To improve nesting success, Waikato Regional Council carries out annual pest control (rat and possum) at key breeding sites in the Hamilton Halo area before the tūī breeding season. Other native species of birds (such as bellbirds), plants and invertebrates also benefit. Having more birds survive to maturity in the bush means there will be more dispersion into surrounding areas where tūī and bellbirds have not previously bred, such as Hamilton.

In winter, tūī are known to commute into the city from summer nesting forests to feed on native and exotic plants. Since the Hamilton Halo project was established, there have been a growing number of tūī staying in Hamilton beyond the winter feeding and into the breeding season, which is very exciting.

INCREASING OUR BIODIVERSITY

Unlike other urban areas, Hamilton had very few iconic native species like tūī, bellbird and kererū. These species are important pollinators and dispersers of native plants and are also highly valued by residents of the city.

To increase the number of tūī visiting the city, breeding success must increase in the forest ranges surrounding Hamilton.

Research results show that without predator control, tūī nesting success is very low – only about a quarter of nests will host fledglings. This is mainly due to the high population of ship rats and possums, which climb trees and invade tūī nests, eating the eggs and chicks. To improve nesting success, Waikato Regional Council carries out annual rat and possum control at selected high priority sites in an approximately 20 kilometre (km) radius ('halo') around Hamilton.

Hamilton Halo also works with Hamilton City Council, community groups and landowners on pest control and plantings at key sites within the city. This provides year-round sources of food and safe habitat for the tūī and bellbird populations that have increased numbers in the bush and now need more habitat to breed in.

WHO'S INVOLVED

Waikato Regional Council leads the Hamilton Halo project. Landcare Research, Hamilton City Council and Ngati Haua are project partners. The project is supported by the Department of Conservation, Weedbusters and Tui 2000, a Hamilton-based environmental group involved in the restoration of Pukemako Historic Reserve (a Hamilton Halo site).



Native birds such as tūī and bellbirds were once abundant in the area where Hamilton stands. Due to introduced pests (rats and possums) and loss of habitat and food sources, many of our native birds were rarely seen in our city. Hamilton Halo was instigated in 2007 to bring native birds, such as tūī and bellbirds, back into Hamilton.

THE HALO 'RECIPE'

The pest control methodology or 'recipe' is a crucial component of the Hamilton Halo project. Halo sites receive pest control on a 'three years on, two years off' basis and the focus is on the intensive control of rats. Both ground and aerial techniques can be used, as long as they are able to achieve a rat tracking index (RTI) of less than five per cent prior to October. While rats are the main target species, a co-benefit of the work is that possum numbers are also dramatically reduced. This assists birds to breed and fledge successfully and improves forest health because pests are no longer eating its foliage.

BIRD NUMBERS

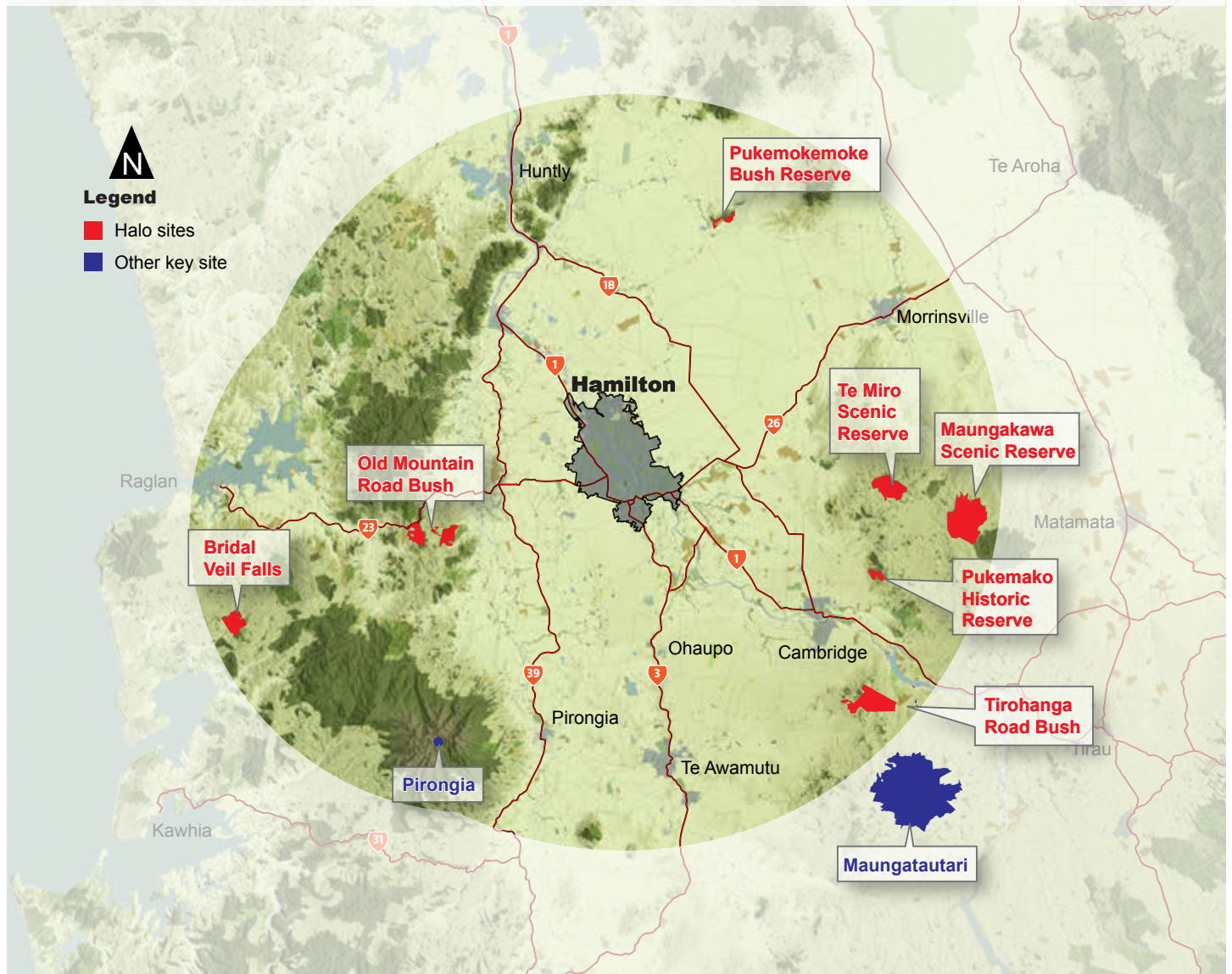
Bird counts in Hamilton

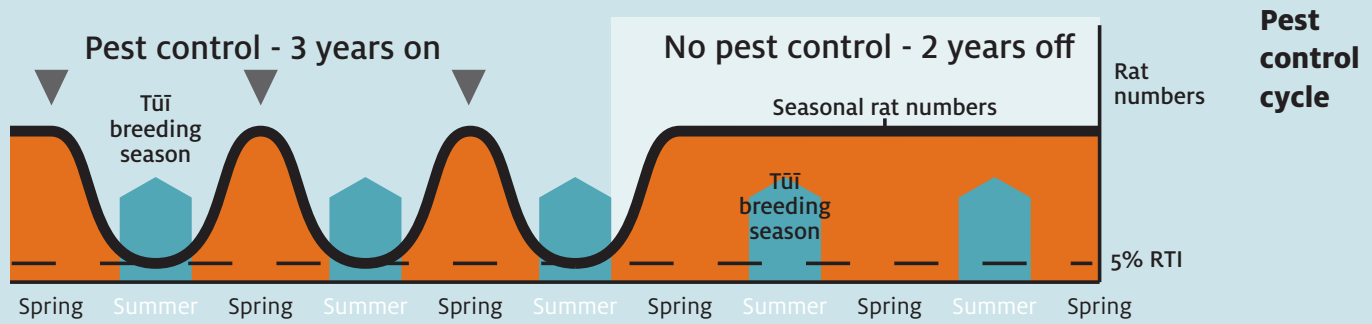
Landcare Research has conducted five-minute bird counts every two years in Hamilton since 2004. These show that tūī distribution and abundance has increased significantly in the city, both in the breeding and non-breeding seasons. This indicates that more tūī are now staying on and breeding in Hamilton rather than just visiting, which is a key success indicator for Hamilton Halo.

Bird counts at Halo sites

Waikato Regional Council contracts Landcare Research to undertake bird counts in Halo forest sites where rat and possum control is undertaken. By repeating the bird counts every three to five years, we are able to record changes in bird species numbers, as well as the abundance of each of those species at each Halo site. The good news is these counts show that 8 out of 11 native bird species have increased, in particular tūī and bellbirds.

The 'Halo' is a ring drawn around Hamilton, taking in key sites where tūī breed. The halo's radius is approximately 20km, as this is how far tūī will fly to feed.





PEST CONTROL

Rats



Rats feed on lizards, young plants, seeds, bird eggs and chicks. They also threaten other native species as they eat invertebrates, native snails, frogs and a variety of fruit.

Controlling rats is the responsibility of landowners, however Waikato Regional Council is happy to provide advice to anyone who wishes to undertake rat control on their property. There are two introduced European rat species in New Zealand.

Rat control

Making your backyard unfavourable to rats is probably one of the simplest means of control. Clearing your backyard of rubbish or any scrubby weed areas, as well as enclosing your compost heap, will mean that rats will have less habitat to live in on your property.

The most effective time for control is in the winter and spring. Rat 'snap traps' are available from hardware stores and some supermarkets. Locate traps in places where rats are likely to live, or where signs of rats are seen. Bait traps with peanut butter or chocolate, ensuring the bait is firmly attached to the bait pedal. If traps are placed outside they need to be covered or placed in a tunnel so children and pets can't get to the bait.

Signs of rats

- Rat droppings – 10mm spindle shaped.
- Unusual smells – an ongoing rat problem can create a stale smell.
- Holes – which appear in the garden, approximately 7-12cm in size with a pile of earth near the entrance.
- Rat runs – a continuous depression in grass or other low vegetation, a smooth pathway may be visible on bare earth.
- Gnawing – often to the bottom of wooden doors and sheds.
- Scattering – of compost being dragged out of bins or heaps.

Possums



Possums affect native birds by preying on their eggs and young, and competing with native birds by eating young leaves, flowers and fruit. They also ruin fruit trees and roses, carry bovine tuberculosis (TB) and generally cause a nuisance.

Waikato Regional Council carries out possum control in some areas, but it is also the responsibility of landowners, especially in urban areas.

Possom control

Live-capture cage traps are the best option to ensure the safety of pets and members of the public. 'Kill traps', for example 'Yellow Timms traps', can be an effective option if used safely.

For those living in Hamilton, Hamilton City Council offers the hire of live capture traps for possums. Hamilton City Council offers free disposal of possums caught in this way. To hire a trap, or to make enquiries please contact Animal Control at Hamilton City Council, phone (07) 838 6664. For more information see the Waikato Regional Council 'possum control' factsheet, or check out www.waikatoregion.govt.nz/possums.

Signs of possums

- Tattered leaf remnants, partially eaten leaves, flowers and fruit beneath feed trees. Heavy and persistent possum browsing will kill a tree.
- 'Runs' (tracks) used nightly by possums to travel to and from feeding areas (very distinctive in grassed areas).
- Claw marks on trees, fence posts and gates.
- Bark biting (horizontal bites) on trees.
- Possum droppings scattered under food trees and in the forks of trees.
- Droppings approximately 2.5cm long and slightly thicker than a pencil.

PLANTING

Increasing the area of vegetation suitable for native birds to feed and nest in is an essential requirement for their return. Fortunately there have been nearly 20 years of planting carried out by community organisations in Hamilton parks, reserves, riverbanks and gullies, which has helped to provide year-round food sources for tūi. Nevertheless, every urban resident and home gardener can increase the chances of tūi visiting the city by planting the right species. As well as tūi, other birds, native butterflies, moths, skinks, geckos and beneficial insects can all be attracted to your garden by offering a suitable habitat for them to find food and live in.

Recommended food source plants

Tūi and bellbirds are primarily nectar feeders, so aim to have flowers or juicy berries to span the seasons beyond the main winter and spring period when tūi may visit and when nectar and fruit is in short supply in native forests.

Smaller trees and plants such as kowhai, flax, wineberry and five-finger grow easily in Hamilton and can be planted in urban sections. Larger trees such as kahikatea, rewarewa, kohekohe and pūriri may be more suitable for larger properties, school grounds, parks or gullies.

For best results plant in autumn and winter as the soil is naturally moist. On our website, you will find a useful gardener's guide for attracting tūi and bellbirds. Go to www.waikatoregion.govt.nz/hamiltonhalo.

Eco-sourcing

When selecting plants for your planting project, aim to use eco-sourced plants – plants which have been sourced locally from natural bush areas in the Waikato region. Planting native eco-sourced plants will help to avoid cross-breeding with plants foreign to the area. They are also better adapted for the climate and soils of this area.

Pest plants

Watch out for invasive plant species – plants that are introduced into new areas. They no longer face their natural enemies or competition from their place of origin, which allows them to spread and produce rapidly and widely. Waikato Regional Council's Regional Pest Management Plan can help identify some of the main invasive pests.



Flax flowers are a popular food source for tūi.

RELATED PUBLICATIONS

To request a copy of the following publications call **Waikato Regional Council's freephone 0800 800 401** or visit **www.waikatoregion.govt.nz** for more information.

Gardener's guide – planting for tūi and bellbirds in the Hamilton area. (2012). Waikato Regional Council.

Planting natives in the Waikato region. (2005). Waikato Regional Council.

Waikato Regional Council's animal pest factsheets: Possum and Possum control.

Plant me instead. (2007). Also available from Weedbusters (see 'contacts' below).

To request a copy of the following publication contact **Hamilton City Council** or visit **www.gullyguide.co.nz**.

Gully Restoration Guide – A Guide to Assisting the Ecological Restoration of Hamilton's Gully Systems. (June 2006).

CONTACTS

For additional advice and information on effective methods of pest control, contact 0800 BIOSEC (0800 246 732).

For advice on planting in Hamilton, contact the Gully Restoration programme on (07) 838 6622 or visit www.gullyguide.co.nz.

For advice on other ways you can assist in bringing biodiversity back in the Waikato region, call Biodiversity Advice Waikato – 0800 BIODIV (0800 246 348) or visit www.waikatobiodiversity.org.nz.

For help with pest plants contact Weedbusters, 0274 434 431 – or visit www.weedbusters.co.nz.