

About Project Echo

Project Echo is a multi-agency initiative to raise people's awareness of long-tailed bats (*Chalinolobus tuberculatus*) in Hamilton and surrounding rural fringes.

Work includes gathering information on distribution, identifying roosting sites and raising awareness of the species' needs and threats. The project's objectives are:

- E**ducation - through bat tours, open days, public talks
- C**alculation - researching numbers and distribution
- H**abitat - protection and enhancement of bat habitat, and predator control
- O**versight - collaboration, planning, advocacy, politics

A special animal under threat

Hamilton is one of only a few cities in New Zealand with a resident population of long-tailed bats. The long-tailed bat is unique to New Zealand and, together with the short-tailed bat, is New Zealand's only remaining native land mammal.

Long-tailed bats can be found throughout New Zealand in varying habitats. However, their numbers are declining due to removal of roosting trees, predation by animal pests, and increasing competition for roost sites from rats and possums.

In the past, bats used large, old canopy trees (rimu, kahikatea, totara, pukatea) to roost in, either beneath the bark or in cavities. With the clearing of native forest and subsequent loss of natural habitat, bats have had to find other roosts in old exotic trees. Recently, long-tailed bats have been detected roosting in pine, eucalyptus and oak trees in and around Hamilton.

Long-tailed bat facts

Appearance	<ul style="list-style-type: none"> • Dark brown to black furry torso • Virtually hairless limbs and membranes • Wingspan: about 25cm • Weight: 8 to 14g
Diet	<ul style="list-style-type: none"> • Eat flying insects such as moths, beetles, mayflies, midges and mosquitoes
Breeding	Breeding females: <ul style="list-style-type: none"> • give birth to one pup per year • carry juveniles during feeding flights until adolescence at around 4-6 weeks
Behaviour	<ul style="list-style-type: none"> • Bounce high frequency sounds off their surroundings (echolocation) to identify food and other objects while flying • Rest by day and feed by night • Roost in small cavities in old or large trees, including dead trees • Frequently move between different roosts • Hang upside down and hold onto roost with claws of one or both feet • Social animals, with sometimes 10 to 50 bats roosting and feeding together • Can fly long distances and may have large home ranges • Regularly move between forest fragments to feed and roost • May separate into male and female colonies during breeding season • Less active in winter, and can even enter a torpid (semi-hibernation) state during colder months
Threats	<ul style="list-style-type: none"> • Habitat loss • Competition for roosting sites from possums and rats • Predation by feral cats, stoats and rats



Photographer: Kerry Borkin

Help us keep track of bats

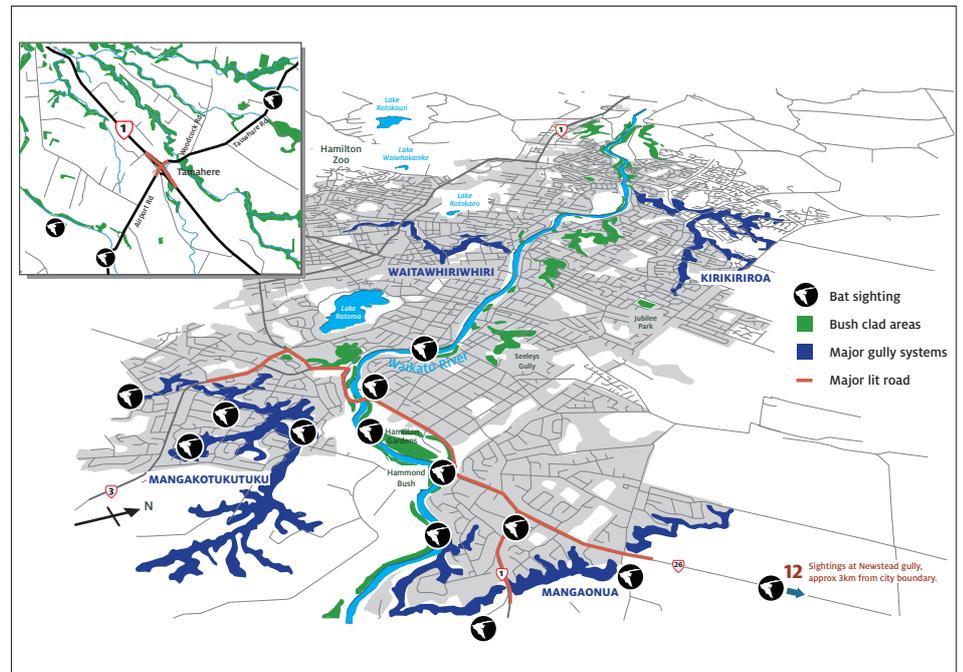
If you have seen a long-tailed bat in or around Hamilton – or detected one with a bat detector – we'd like to know about it. Complete the bat sighting form at www.waikatoregion.govt.nz/projectechno.

Bats move to new roost trees regularly. If you think bats might be present on your property, or you're about to remove a large or dead tree, contact Waikato Regional Council.



Photo: Crown Copyright: Department of Conservation, Te Papa Atawhai (August 1973), Photographer: J. L. Kendrick

Confirmed bat sightings in Hamilton (and Tamahere)



Detecting bats

Bats fly at dusk and after dark so are rarely seen. People often think they are fantails or swallows, but keen observers may spot them moving from their roost sites and feeding just after dusk.

In winter, bats are less active, leaving their shelter for only short bursts of feeding. They may even enter a torpid (semi-hibernation) state during colder months. In warmer spring and summer nights, they are more active.

Bats leave little sign of their presence or activity. Their guano (faeces), about the size of mouse droppings, are occasionally found outside a tree cavity being used as a roost.

Bats emit high frequency sounds which are inaudible to humans. However, bat detectors convert these sounds so they are audible to humans. If you would like to check for bats on your property, you can borrow a bat detector free of charge. Contact Waikato Regional Council for more information.



You can help protect bats

1. **Check before you chop** - Dead or old trees with hollows and cavities are long-tailed bats' natural habitat. You can help them by protecting standing dead trees and old trees with cavities.
2. **Plant for the future** - Plant large trees for future bat generations.
3. **Control pests** - Pests like rats, possums and cats predate on bats and can compete with them for habitat. Control pests at your place to protect bats (as well as birds, lizards and other native fauna).
4. **Advocacy** - Hamilton's bat population is under increasing threat from development, such as residential subdivisions, roading and industrial parks. It is important that bats are advocated for through policy, planning and resource consent processes.

For more information

Freephone Waikato Regional Council on 0800 800 401 or visit www.waikatoregion.govt.nz/projectechno