Bat Acoustic Monitoring

We will place Automatic Bat Monitors (ABMs) between January and April 2018. The ABMs record when a bat is detected calling (echo locating and socialising). Bats do this when they are looking for food, finding their way around in the dark or when talking to other bats.

Listening to the bats means that we can understand how often bats are using different parts of the landscape, such as gullies, ponds, Waikato River and the Hamilton Gardens etc.

Bat Radio Tracking

To find where bats are roosting (day and night resting locations), we are going to trap a small number of bats and attach a light weight device that will allow the bats to be tracked when feeding, flying and sleeping.

In January and March 2018, two teams of surveyors will work all night following the bats to see what they do and where they go.

Bat Thermal Imaging

Bats are active at night and it is very difficult to see what they are doing.

To understand the height at which bats are travelling along the Waikato River thermal imaging cameras have been used.

The bats are only in the camera frame for few seconds but these images are then slowed down to allowing the surveyor to see the bat and to understand what it is doing (e.g. changing direction, flying straight along the river etc.).

You may see the surveyors undertaking these works at night around the Waikato River in February and March 2018.

Southern Links Ecology Update, November 2017

Southern Links is a joint project between the NZ Transport Agency and the Hamilton City Council to develop a network of state highways and urban arterial roads that will support planned residential growth in the southern part of the city.

In 2017, the Transport Agency and Council worked together on a range of ecological surveys to gain an understanding of how the Southern Links project could affect the behaviour of native species.

These initial surveys concentrated on monitoring bats. This summer we will conduct more bat monitoring while expanding the surveys to look for native lizards, geckos and birds.

This update was prepared by AECOM for the Transport Agency and the Hamilton City Council.

2017 Monitoring of Long Tailed Bats

To understand more about long-tailed bats and how Southern Links might affect their behaviour we undertook acoustic monitoring using Automatic Bat Monitoring units (ABMs).

The ABMs were set up in areas of potential bat habitat or where activity or roosts (day and night resting sites) had been previously identified. ABM’s are activated by bat calls which are recorded and used as an indicator of bat activity.

Why are bats important?

Bats are New Zealand’s only native land mammal. Of the three formally identified species, only two remain in existence:

- short-tailed bat (Mystacina tuberculata)
- long-tailed bat (Chalinolobus tuberculatus).

The long-tailed bat is smaller than the short-tailed bat and is chestnut brown in colour, with small ears. They are slightly smaller than a mouse weighing only 8-11 grams.

The population has suffered dramatic losses since the introduction of mammalian predators, e.g. cats and stoats. The long-tailed bat is more widespread than the short-tailed bat and can be found throughout most of the main islands and onshore islands of New Zealand.

Long-tailed bats have a threat classification of ‘Threatened - Nationally Critical’ and are vulnerable to the effects of habitat loss, predation and disturbance.

Any questions?

For Hamilton City

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2017 Monitoring Results

In 2017, we set up 31 ABMs and bats were recorded at all of the sites. This figure shows the monitoring sites and the average number of bat passes per night recorded at each site.

Surveys Planned for 2018

In 2018 we will be carrying out further bat surveys, along with surveys to look for native lizards, geckos and birds that use the habitats.

We will provide you with an update on the results of these surveys later in 2018.

Lizard and Gecko Surveys

To help us find lizards and gecko’s artificial covers (squares of roofing felt) have been placed in suitable habitats. These will be left undisturbed for several months to encourage the reptiles to hide under them.

We will check them three times in April 2018 to understand the types and numbers of reptiles that are present.

As geckos are active at night, surveyors will search the gullies using spot lights. The spot lights reflect the eyes of the geckos indicating their presence. The different colours of the geckos, seen in the torch light, allow the type of gecko to be confirmed.

Birds

To understand which birds are present within and around the Southern Links project area surveyors will be undertaking 5 minute bird counts. To do this, a bird surveyor stands in a specified location for 5 minutes and counts all of the birds that they can hear singing or those they can see.

We will undertake three visits in November/December 2017 to see which birds are present during the breeding season and one in August 2018 to see which birds are present during the winter.

Did you know?

All of the background information about Southern Links including detailed maps, designation conditions and other documents are available online:

- [www.nzta.govt.nz/southernlinks](http://www.nzta.govt.nz/southernlinks)