



Otari Rodent and Mustelid Monitoring Report For Otari Wilton's Bush

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1. Summary

Rodent and stoat monitoring in Otari Wilton's Bush was initiated by Wellington City Council (WCC), and is a co-operative programme involving WCC, Otari volunteer group RAMBO (Rodent and Mustelid Blitzing at Otari), and Greater Wellington Regional Council (Greater Wellington). The monitoring programme ran in conjunction with the trapping and baiting regime in the reserve. The monitoring was conducted in June 2007.

Rodent monitor results:

- a rat tracking rate of 1.7% was recorded;
- a mouse tracking rate of 5.0% was recorded;
- one mustelid was tracked.

Mustelid monitor results:

- a rat tracking rate of 3.3% was recorded;
- a mouse tracking rate of 20.0% was recorded;
- a mustelid tracking rate of 6.7% was recorded;
- one hedgehog was tracked.

2. Monitoring methods and control history

There has previously been no formal monitoring undertaken in Otari. The intention is to monitor quarterly. The next rodent monitor is due in late September or early October.

Current pest control comprises ongoing control of possums and rodents using Brodifacoum in bait stations. Bait stations are located at approximately 150m intervals along lines spaced approximately 150m apart. There are also some randomly located bait stations approximately 200m apart in an irregularly shaped piece of habitat in the east of the reserve (**refer map 1**).

2.1 Rodent monitoring

The rodent monitor design used a grid covering the entire reserve; this design differs from the Department of Conservation (DoC) protocol. Such a design will ensure greater sensitivity in the detection of rodent incursions and hot spots of activity.

Monitoring tunnels were located along existing possum bait lines, or were associated with randomly placed bait stations where they existed. Monitoring tunnels were spaced at 50m intervals along possum bait lines (**refer map 1**). Each rodent station is an independent sample unit. Sixty monitoring tunnels were placed in the field two weeks prior to the monitor. The monitor was done over one fine night. Monitoring tunnels were baited with peanut butter.

2.2 Mustelid monitoring

The mustelid monitor was done over three fine nights immediately following the rodent monitor. Mustelid monitoring will give presence/absence information. Three lines of tunnels were located along existing possum bait station lines. Each line having five to eight tunnels spaced at 50 intervals (**refer map 2**). Tunnels were baited with salted rabbit meat. Each line is a sample unit.

3. Monitoring results

Table One – rodent monitoring results summary

Species	Number of tunnels tracked	Tracking Rate %	Tunnel No's tracked	Notes on tunnel location and surrounding habitat
Rat	1	1.7	25	The tunnel that detected rats is near the middle of the reserve well within the native bush
Mouse	3	5.0	12, 35 and K1	Tunnels with mouse tracking appear to be near the reserve boundary and are associated with grassy habitat.
Mustelid	1	N/A	47	The mustelid tracked tunnel was near the carpark on Churchill Drive and is near a stream
Other	<p>Three unknown tracks were detected. These may have been mustelid, invertebrate or possum.</p> <p>There were 12 tunnels with invertebrate tracks, mostly weta</p>			

Table Two – mustelid monitoring results summary

Species	Number of tunnels tracked	Tracking Rate %	Tunnel No's tracked	Notes on tunnel location and surrounding habitat
Rat	2	10.8	43, 52	The tunnels that detected rats were not far from the boundary of the reserve and are near public tracks
Mouse	2	11.4	12, 33	The tunnels with mouse tracks tended to be on the edge of the reserve
Mustelid	4	18.5	8, 10, 14, 16	Mustelids tended to be detected in the northern half of the reserve and in particular along the line that followed a stream up the middle of the reserve
Other	<p>There was one hedgehog detected near the top of the line in the middle of the reserve, the line followed the course of a stream</p> <p>There was one unidentifiable mud print</p> <p>There were six tunnels with invertebrate tracks, mostly weta</p>			

4. Discussion

The results indicate a relatively small population of rodents. Only one rat was detected during the rodent monitor.

The monitor detected a relatively high number of mustelids, with one positively identified track in the rodent monitor and four in the mustelid monitor. One print was relatively large and was most likely to have been a ferret, but most prints were probably stoat. The large number of mustelid tunnels relative to the small size of the monitoring area makes the sampling design highly sensitive to mustelid detection. The results may over estimate mustelid abundance, as the same animal may be responsible for visiting multiple tunnels.

Mustelid monitoring has been conducted at Wrights Hill since November 2005. Since then we have detected only one mustelid, possibly a ferret. Compared with the Wrights Hill result, Otari appears to have a relatively high abundance of mustelids, however, given the different sampling designs, results may not be directly comparable.

The average rodent tracking index for the Wellington region is 15% and ranged from 0% to 70%. Historical monitoring trends show rodent control is generally effective at maintaining rat populations to about 10% tracking index or less, and this is consistent with the Otari results.

Regional trends show mice numbers tend to increase when rat and possum control is undertaken, and mice tracking indices have been as high as 50% in the past. This trend is not evident at Otari where there was a relatively low mouse-tracking index.

5. Supply of monitoring data – Terms and Conditions

The enclosed information is supplied, within the framework of our data quality system, from the best practice currently available. Greater Wellington¹ has exercised all reasonable skill and care in controlling the contents of the information.

As we endeavour to continuously improve our service, we may amend the data on which this information is based, where necessary and without notice, at any time.

Under no circumstances will Greater Wellington Regional Council or its employees or agents be liable in contract or otherwise to compensate you for any loss, injury or damage (including loss of profits or consequential loss) arising directly or indirectly from the supply by Greater Wellington or its agents of inadequate, inaccurate or incorrect monitoring information.

Any use of the material supplied, for example, by inclusion in a report or media release, should be accompanied by an acknowledgement of the source of the data.

Your acceptance of the enclosed material and/or services signifies your acceptance of these terms and conditions.

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