Red Squirrel Monitoring Report

Autumn 2017

Lancashire,
Manchester &
N Merseyside

In partnership with

Introduction

The autumn monitoring of the North Merseyside and West Lancashire Red Squirrel Stronghold was conducted throughout October 2017 using two different surveying techniques; visual transects and hair tubes. 14 sites throughout the reserve woodlands within Formby, Ainsdale and Altcar were included in the survey. Further to this, 12 woodlands within the buffer zone were surveyed, including Little Crosby, Ince Blundell, Southport and Scarisbrick. An additional two sites outside the stronghold at Knowsley and Mere Sands Wood were also surveyed.

Reserve Woodlands: Autumn Surveys

14 visual transects were carried out throughout the reserve woodlands. No grey squirrels were seen within the reserve woodlands and red squirrels were seen at all sites. Additionally, 4 of these transects were surveyed using hair tubes (3 hair tubes per transect). Red squirrel hair was found on 3 of the transects and both red and grey hair was found at Altcar.

Reserve Woodlands: Autumn Population Analysis

Figure 1 shows red squirrel monitoring results in the reserve woodlands from autumn 2002 to autumn 2017. The average number of red squirrels seen across reserve transects in 2002 are taken as 100%. The average number of red squirrels seen in subsequent years are compared to this value. You can see from the graph that there is an increase in the number of red squirrels seen on the visual transects this year (2017) compared to last year (2016), which experienced a decrease from the previous year. This autumn, the red squirrel population was at over 95% of the baseline figure from 2002, compared to 72% in autumn 2016 and 92% in autumn 2015.

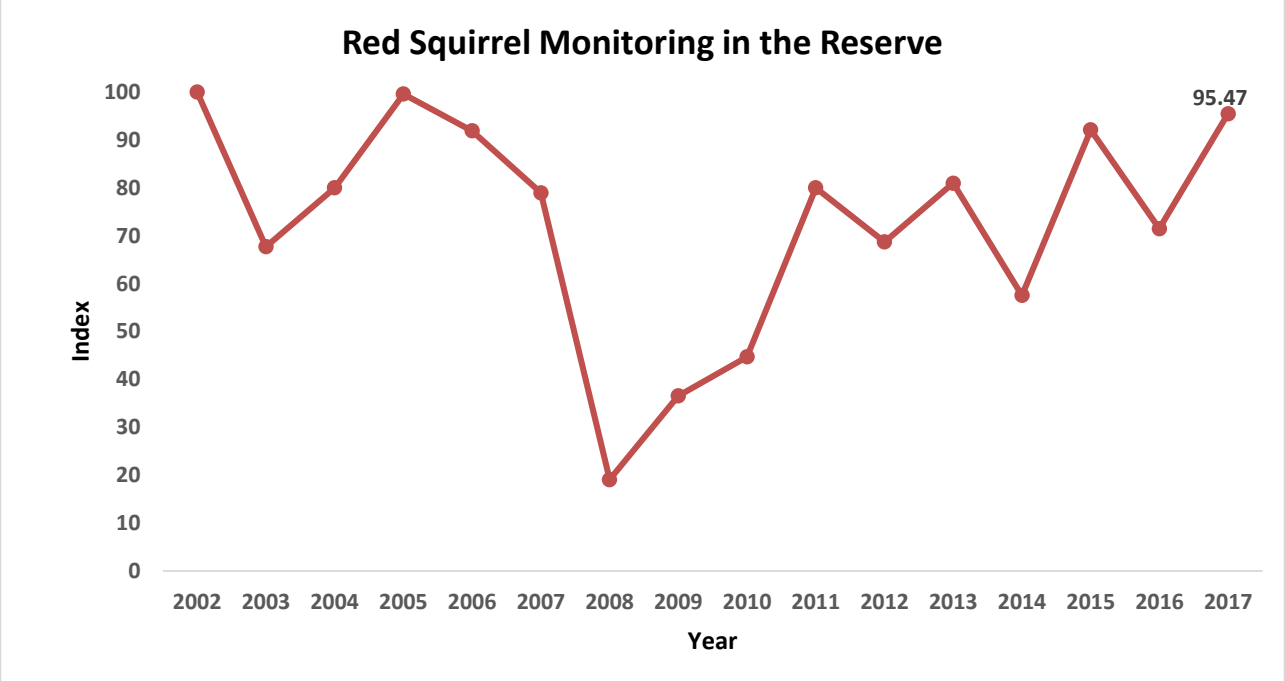

Figure 1. Line graph showing the changes in the autumn red squirrel reserve population between 2002 and 2017.

This autumn saw an increase in red squirrels at 11 of the transects surveyed (located within Ainsdale NNR, National Trust: Formby and Shorrocks Hill). Numbers stayed the same at Ravenmeols and decreased slightly at Altcar since last year. Asparagus Fields at Formby NT still appears to have the highest density of red squirrels, with 34 seen on one transect walk. Red squirrel populations do fluctuate naturally over time (with food availability being the biggest driving force) and this should be taken into account when considering the variation in Figure 1.

Reserve Woodlands: Breeding Success

The breeding success of red squirrels in the reserve area is calculated by taking the average numbers seen on autumn transects as a proportion of those in the spring. Figure 2 shows the breeding success of red squirrels in the reserve area each year between 2002 and 2017.

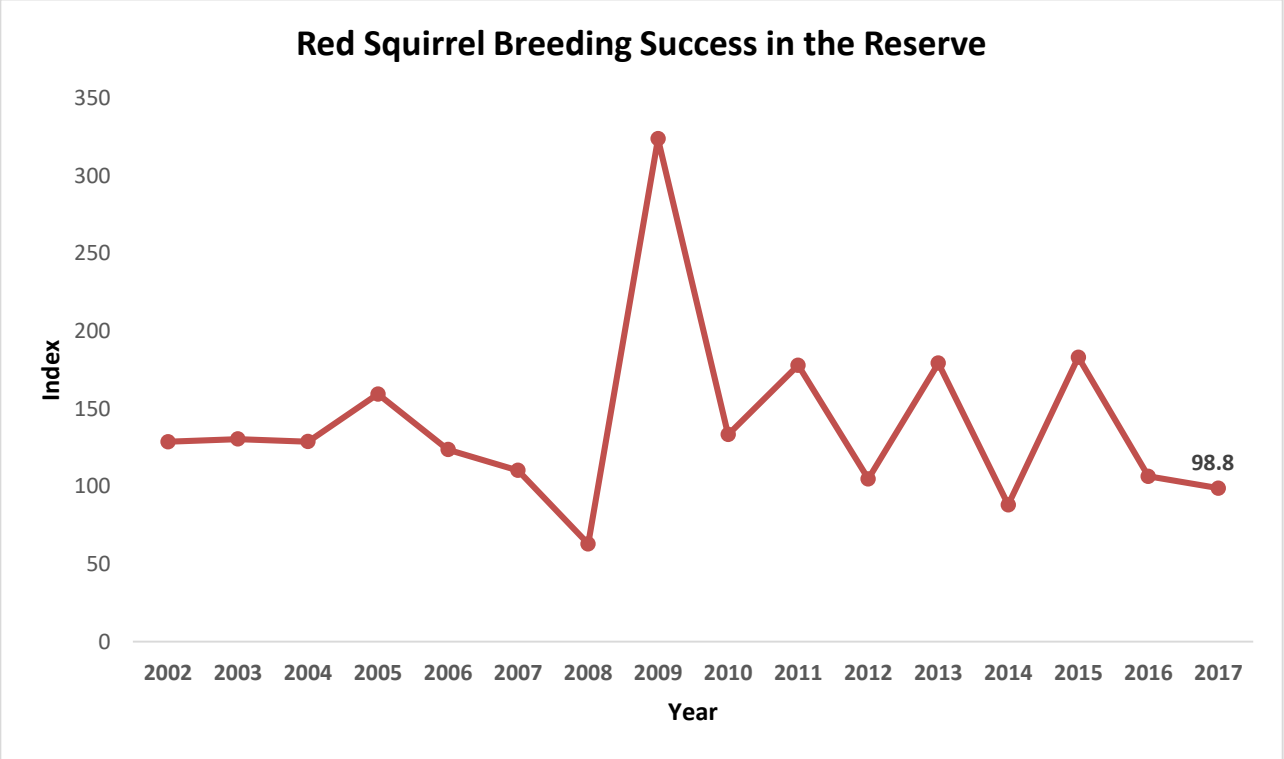

Figure 2. Line graph showing the changes in breeding success of the red squirrel population in the reserve between 2002 and 2017.

The comparison between spring 2017 and autumn 2017 shows a slight decrease in breeding success since last year (2016). We know that red squirrels started breeding early in 2017, with the first litter being in born in January before the spring monitoring took place. This means that some of the breeding success would have been accounted for in the high overwinter survival between autumn 2016 and spring 2017 (105% survival).

Buffer Zone: Surveys and Analysis

10 visual transects were conducted within the remaining woodlands inside the stronghold area and 3 outside of the stronghold. Table 1 shows a summary of the presence of red and grey squirrels throughout these 13 sites taking into account visual transects and hair tubes.

	Red squirrel only	Grey squirrel only	Both species	None
Number of sites	2	8	3	0

Table 1. The number of sites within the buffer zone with red squirrel, grey squirrels and both species present

Within the stronghold, Flea Moss Wood in Little Crosby and Southport Crematorium were the only sites with red squirrel only presence. Red squirrels were detected here through the standardised monitoring. Both species were detected at two of the sites in Crosby and Ince Blundell. The number of grey squirrels seen at Hesketh Park in Southport has reduced dramatically from a record high of 21 in autumn 2016 to just 3 this year. However, the number of grey squirrels seen on the transect at Botanic Gardens, Southport has increased from 2 to 6.

Two sites outside of the stronghold were also monitored (1 transect at Mere Sands Wood and 2 transects at Knowsley Estate). Red squirrels have continued to exist at these sites in recent years (despite the presence of greys) due to consistent grey control efforts. Unfortunately, no reds were detected at Knowsley Estate during the visual transects or via hair tubes. A red squirrel was seen however during the standardised monitoring for the first time at Mere Sands Wood.

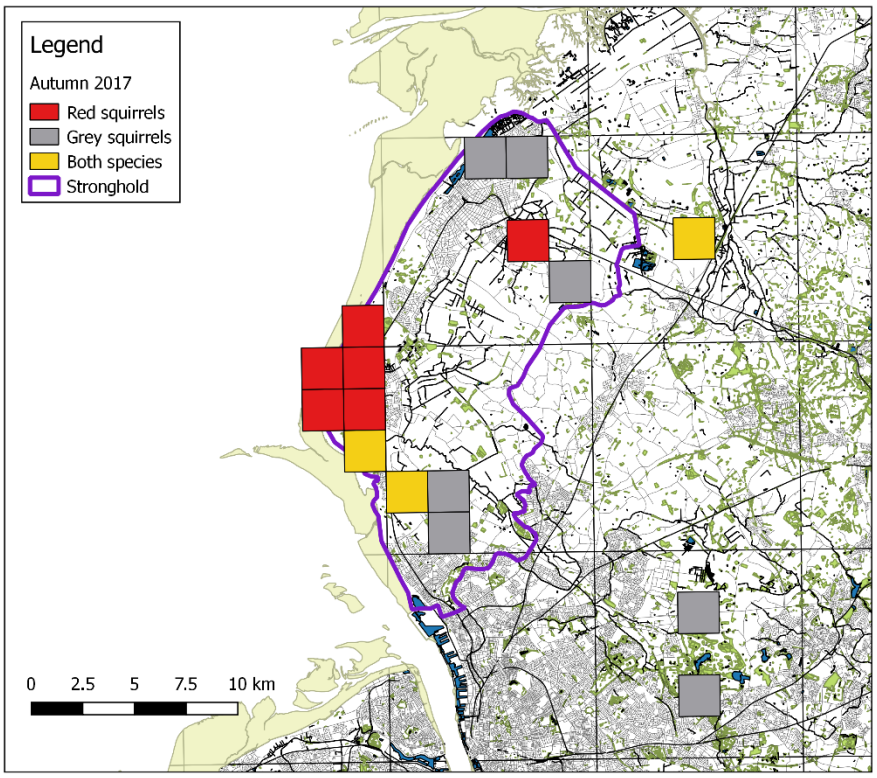

Figure 3. Autumn 2017 standardised monitoring results in the North Merseyside and West Lancashire red squirrel stronghold. Map shows presence of red squirrels (red), grey squirrels (grey) and both (orange) species in 1km x 1km squares. Transects at Mere Sands Wood and Knowsley Estate (both outside the stronghold boundary) are also shown.

Public Sightings and grey squirrel control data

Grey squirrel control is undertaken in the woodlands throughout the stronghold all year round by the Red Squirrel Ranger and volunteers. There is also an urban trap loan scheme to tackle grey squirrels in urban areas. This is co-ordinated by the Red Squirrel Office but run by local volunteers. Records of grey squirrel captures and red and grey squirrel sightings are kept up to date to keep track of their distribution and population within the stronghold. Combining this data with the standardised monitoring results further informs our knowledge of red and grey squirrel distribution. Figures 4 and 5 (below) show the current distribution of red squirrels and grey squirrels respectively in North Merseyside and West Lancashire using the combined data.

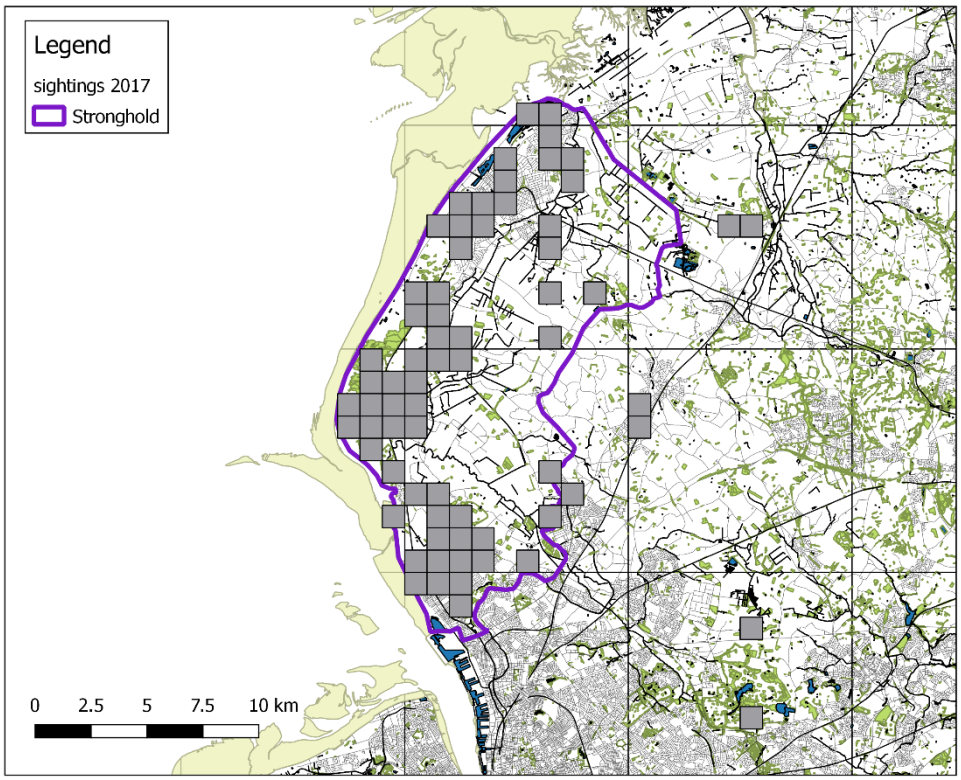

Figure 4. Grey squirrel distribution in the North Merseyside and West Lancashire. Map shows presence of red squirrels in 1km x 1km squares. Results complied from public sightings, control records and standardised monitoring from January 2017 to November 2017.

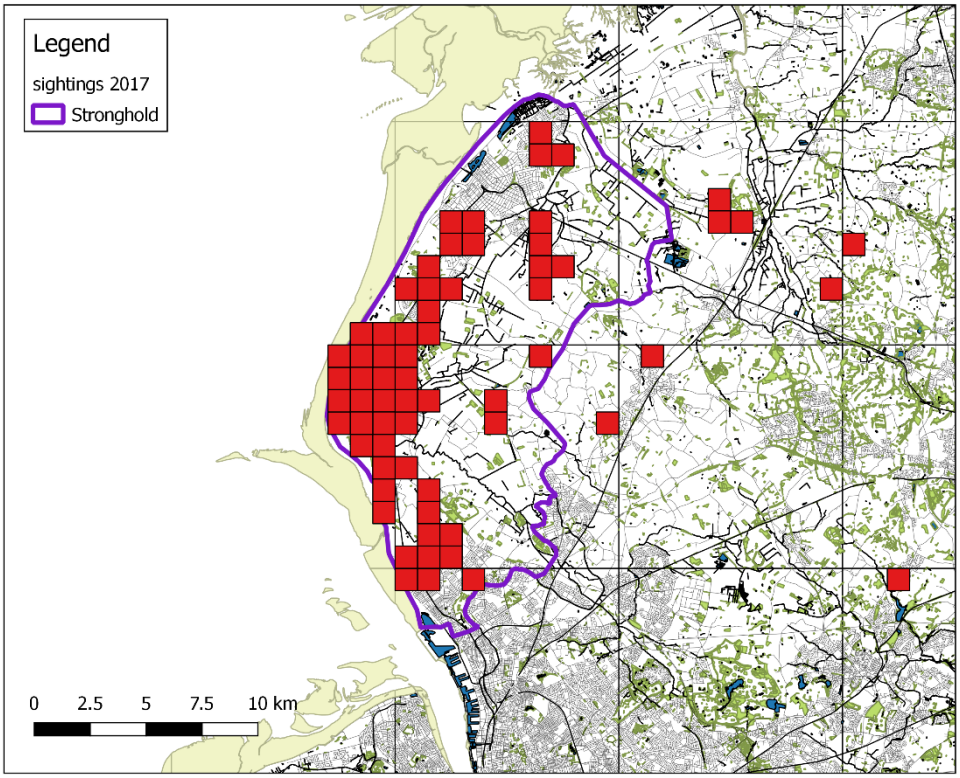

Figure 5. Red squirrel distribution in the North Merseyside and West Lancashire. Map shows presence of red squirrels in 1km x 1km squares. Results complied from public sightings, control records and standardised monitoring from January 2017 to November 2017.

Acknowledgements

Thank you to all the staff and volunteers who undertook the surveys and those who have informed us of their squirrel sightings. We also thank the many landowners who continue to grant access to their woodlands.

By Anna Starkey, Red Squirrel Volunteer, Seaforth. February 2018