

Hazeley Heath Grazing Trial 2010-2014

Summary of results

The Hazeley Heath grazing trial ran from 2010-2014 and involved small numbers of cattle in temporary grazing enclosures.

The grazing trial

A monitoring programme was set up to demonstrate the effectiveness and appropriateness of grazing at Hazeley Heath, its compatibility with recreational use and to help determine whether it is acceptable to stakeholders.

Small numbers of cattle were introduced to two temporary grazing enclosures during the summer months between 2010 and 2014. During this time, visitor surveys were carried out, plus various surveys to monitor overall site condition, vegetation, invertebrates, birds and small mammals. The results are summarised here.

Most visitors were local, many of them dog walkers, and around 75% were positive about grazing on Hazeley Heath.

Visitor surveys

Over 500 visitor surveys carried out during 2010, 2011, 2012 and 2014 suggested that the majority of visitors to Hazeley Heath were local, and that the most frequent activity undertaken was dog walking, with walking, horse-riding and cycling also undertaken. The majority of respondents (around 75%) were positive about grazing on Hazeley Heath and would be happy to see wider-scale grazing. However, a proportion of the visitors (up to 35%) avoided grazed areas, and changed their route to do so. By 2014, most respondents said they would prefer to keep electric fencing, with self-closing gates (but note that responses for the relevant questions were only recorded for a small proportion of respondents).

By the end of the trial, grazing had not changed the “unfavourable” condition of Hazeley Heath, although there were some positive changes.

Effects on the vegetation

Both ungrazed and grazed areas remained in unfavourable condition at the end of the trial, although the ungrazed area at Mattingley was described as improving in 2014, and the grazed area at Hartley-Wintney was described as favourable for the first time in 2013. On both grazed and ungrazed areas, the number of individual targets that were met was greater in 2014 than in 2009. Differences between grazed and ungrazed areas in the various targets assessed through condition monitoring suggest that the overall height and cover of grasses, sedges and rushes and the cover of bracken was generally less on the grazed sites. No other clear patterns were evident.

There was an indication that the diversity of heathland plants was greater within grazed areas.

Vegetation monitoring using paired quadrats inside and outside of the grazed plots suggested that the richness of heathland plant species might be greater in grazed areas, but this was not statistically significant. Observations suggested that the sward height was generally lower in grazed quadrats. The abundance of young birch and gorse varied according to site. Any overall patterns are likely to have been obscured by the variability of the vegetation between quadrats.

The number of specialist heathland butterflies was probably greater in grazed areas.

The overall number of invertebrate species was greater in ungrazed areas. Half of these were scrub or woodland species.

No differences were found in key breeding bird populations in grazed and ungrazed areas.

There were probably more grass snakes in grazed areas and more slow worms in ungrazed areas by the end of the trial.

Effects on invertebrates

Invertebrates were monitored through regular butterfly transects and through timed searches for invertebrates. Butterfly monitoring indicated that populations of the heathland specialist silver-studded blue were probably larger in the grazed plots. Numbers of grayling, another heathland species, were also slightly greater in grazed areas.

Timed searches for invertebrates in 2014 indicated that the number of invertebrate species was consistently lower in grazed areas compared to ungrazed areas when considering total species, number of rare species and number of species within individual taxonomic groups. However, half of the species were associated with open areas, while the remainder were associated with a variety of scrub and woodland habitats. There was a slightly greater proportion of species generally associated with grazed swards in the grazed areas compared to ungrazed areas.

Effects on breeding birds

Breeding bird populations were monitored each year for seven species of particular interest, including Dartford warbler, nightjar and woodlark. No clear patterns were found in the average number of pairs of each species before and after grazing was introduced. The low numbers of breeding pairs and over-riding impact of mechanical management may have obscured any potential differences between grazed and ungrazed areas.

Effects on reptiles

Reptiles were monitored using artificial refugia. Results at the end of the trial suggested that there was a significantly higher probability of encountering grass snake in the grazed enclosures and a significantly higher probability of encountering slow worm in ungrazed plots. The numbers of common lizard appeared to have declined very substantially in both grazed and ungrazed plots.

Constraints

The grazing trial was set up under two main constraints - the limitations imposed by the site's status as registered common land, and the need to continue mechanical restoration and maintenance. Therefore it was not possible to follow an ideal experimental design. Factors that need to be taken into account when interpreting the results include the lack of replicates (as the enclosures and adjacent ungrazed land were of different vegetation types, meaning results could not be extrapolated more widely), differences in mechanical management carried out in grazed plots and ungrazed plots, wildfire and lighter grazing pressure than initially intended. The effects of grazing (positive or negative) may have been over-ridden or conflated by varying levels of mechanical management and intrinsic differences in the vegetation.