

# Increasing populations of protected species

## The Ham lizard hibernacula, Lowestoft

### Introduction

The common lizard, *Lacerta vivipara* (shown in the picture), also sometimes known as the viviparous lizard, is a priority species in the UK Biodiversity Action Plan. Common lizards live on heathland and grassland. They hibernate in small holes underground, under rocks and other similar sheltered places.



Common lizard, *Lacerta vivipara*: a priority species in the UK Biodiversity Action Plan.

### Background

The area of grass and scrub known as 'The Ham' (situated in Lowestoft, Suffolk) covered an area of about 3 ha, one-fifth of which has now been lost to a road development. The remainder has been designated a site for suburban nature conservation.

Prior to clearance for the development, an area of scrub dominated by grassland and gorse *Ulex europaeus* was identified as supporting a small population of common lizards. In particular, an old, man-made bank, constructed of large blocks of hard core and rubble which had become partly vegetated, appeared to be especially favoured by lizards, and was undoubtedly used as a hibernation site. The bank lay within the new road line and was going to be destroyed but the remaining area of grass and scrub was to be retained. It was decided to create three new hibernation sites (hibernacula)

within the conservation area and to translocate lizards the short distance from the bank and other habitat lying within the road line to these new sites.

## Objective

The main objective was to replace the hibernation sites lost to road construction, using locally sourced building materials, so that the lizard population was not put at risk by the road building process. The hibernacula were built in late 2004 and the translocations were made in late 2004 and spring 2005.

## Funding

The work was undertaken by The Landscape Partnership in association with Breheny Civil Engineering and funded by Suffolk County Council.

## Materials and Methods

### Site creation

Three 20 m east-west running ditches were dug and the turf and soil heaped up alongside. The ditches were made with a long, south-facing axis to catch the sun, and were 1 m deep and 1.5 m broad (with approximately 70° sloping edges). Each ditch was lined with lengths of 15 cm diameter plastic piping. Narrow slits were cut crossways in the pipes to further aid drainage. Old bricks were laid between and along the edges of the pipes which were then covered with 5 cm of gravel. More rubble was carefully tipped into the trenches. Grass cuttings, mixed with some coarser vegetation, filled larger hollows and gaps. When the rubble was approaching ground level, at intervals of about 2 m, on each side of the ditch, 1-1.25 m lengths of 5 cm diameter plastic electrical conduit pipe were laid with one end leading into the hibernaculum and the other at the edge to act as entrance holes. These were laid at a slope of about 10-20° so that they were not too steep for animals to get out.

Old logs and branches were then laid facing inwards to the centre of the hibernaculum. More hardcore and vegetation cuttings were added to form a low mound. The soil from the trenches was mixed with grass/vegetation cuttings and heaped onto the mounds. It was packed down quite firmly, whilst ensuring that many small access gaps were left for lizards to enter. The original turfs were then re-laid on the hibernacula and also used to conceal any protruding entrance pipes. A nail was driven vertically through the front of each entrance pipe into the ground to form a single 'bar', thus restricting access to predators such as weasel and brown rat (although other 'natural' holes were present which they would still be able to enter) whilst still allowing plenty of space for lizards to enter.

## Translocation method

The majority of lizards were captured by the use of corrugated iron sheets or 'tins' and roofing felt mats which attract reptiles as they provide excellent basking sites under and on top. They had been laid out 1–4 months earlier and several had 'resident' lizards. By carefully lifting the tins or mats most lizards were caught by hand relatively easily and immediately carried over to one of the hibernacula and released. Care was taken to handle captives gently so that they did not shed their tail. To make sure as many lizards as possible were caught, on a warm day when they were likely to be active, the old, man-made bank was slowly demolished and the habitat where the new road was to be built was made unsuitable for lizards by cutting the vegetation and scraping off any rubble. Any lizards found were caught by hand and released onto one of the hibernacula.

## Results

About 70 lizards in total were caught and released in autumn 2004 (22 September to beginning of October) and spring 2005 (the first caught on 18 March).

Observations undertaken from March 2005 onwards have revealed that each hibernaculum has a number of resident common lizards and it is normally fairly easy to spot one or two if weather conditions are reasonable. Both adult and immature lizards have been observed basking on them. It is not known if these were the lizards that were translocated or whether these are individuals that were already present in the area. Either way the hibernacula are being used by at least some lizards and it is hoped that with time numbers will build-up. Small numbers of common frogs *Rana temporaria* have also been observed using the hibernacula as refuges.

## Discussion

It is not known if the entrance pipes were really of any use as no lizards have been seen using them. Their value probably depends upon the way a hibernaculum is built. The three on The Ham included much coarse hardcore and wood which has resulted in a 'natural finish', and many gaps and crevices which the lizards always seem to choose over the entrance pipes. Overall it is considered that entrance pipes are unnecessary if hibernacula are well designed and built so that there are lots of small 'natural' entrance points. As of summer 2005, the hibernacula were surviving well, had become well vegetated and had created interesting landscape features within the conservation area.

## Reference

Showler, D.A., Aldus, N. and Parmenter, J. (2005). Creating hibernacula for common lizards *Lacerta vivipara* The Ham, Lowestoft, Suffolk. *Conservation Evidence* **2**, 96–98. Access at [www.conservationevidence.com](http://www.conservationevidence.com)