

8. Habitat Restoration and Re-Creation

8.1. Habitat restoration

Former reptile sites, which have been neglected for long periods or damaged in some way, can normally be restored to a suitable condition. Sites suitable for restoration are those that may still support recognisable remnants of the original vegetation and wildlife.



Areas like this require special care during habitat restoration, as relatively open patches may support remnant reptile populations (Jim Foster)

Restoration should always be preceded by a detailed site survey to identify areas that may still harbour reptiles and to ensure that other sensitive species are not harmed during restoration work. This is an issue of particular importance with respect to heathland and mire restoration. The scale of some restoration projects necessitates the use of large, powerful machinery, often resulting in the wholesale removal of vegetation and topsoil. In using such approaches there is a high risk of direct harm to reptiles and damage to their relict habitats. To ensure that large-scale restoration projects minimise such risks, the following steps are recommended:

- Prior survey of areas targeted for restoration to identify habitat occupied by reptiles, or to identify areas of low to high quality reptile habitat.
- Mapping these areas to ensure that heavy plant or other operations do not damage them.
- Undertaking special precautions. In areas of medium to high risk, for example switching to hand-tools.

Often only a small proportion of a restoration site will be occupied by reptiles. Usually they will be found in the more open, less tree-covered areas, and these will normally be of least interest for major mechanical clearance. Hence, excluding such areas from mechanised clearance (they should be clearly

marked for contractors) will have little impact on the amount of land restored. The maintenance of patches of habitat used by reptiles is also likely to increase the structural diversity of a restored site, to the benefit of other species as well.



The dense tree cover in the background offers little value for reptiles and can be removed with few precautions. The edges are of potentially high value, however, and care is required when planning restoration or management works here (Jim Foster)



At first sight, major works such as large-scale gorse clearance can appear harmful to reptiles. It is important to consider the previous state of the habitat, in this case dense gorse stands with little value as reptile habitat (Jim Foster)

8.2. Habitat re-creation

There can be opportunities to re-create habitat from where it has been completely lost to another land use (such as agriculture, forestry or mineral extraction), or to invasive species (such as rhododendron) or to succession.

Forestry Commission policy (Forestry Commission, 2010) recognises the potential wildlife benefits of converting woodland to open habitat. Reptiles are Biodiversity Action Plan priority species that may potentially benefit from such measures.



Many formerly open areas have reverted to secondary woodland following cessation of heathland management. Large-scale restoration can bring major gains for reptiles, by creating more open habitat. Careful planning helps maximise the benefits and minimise the risks (Jim Foster)



Topsoil, litter and arisings piled at the edge of a restoration site, sheltered by a belt of trees on the northern side, create a habitat feature favourable to reptiles (John Baker)



Mature plantation with no understorey offers no real value for reptiles, and so such areas should be low risk (and high priority) in open habitat re-creation projects (Jim Foster)

To re-create heathland from pine plantation, the crop should be commercially cut and arisings removed. It may be necessary to bulldoze the area to remove excess nutrients, litter layer and bracken rhizomes, which can prevent natural re-vegetation from the existing heather seed bank. Litter and arisings may be used to create brash piles within cleared areas, or windrows along the south-facing edges.



An area formerly entirely shaded by pine plantation, now cleared and showing the scope for new reptile basking banks once the heath begins to regenerate (Jim Foster)

On mineral sites the seed bank is often lost so forage harvesting of heather seed (for example from fire-breaking adjacent sites) is often needed to restore habitats. This should be spread over a layer of compacted sand. Nursery species (e.g. native pioneer grass) are often necessary to stabilise ground conditions and allow heather germination, which will in time succeed the nursery crop.

Reptile habitat can sometimes be created, or re-created, on grassland sites simply by reducing the density of grazing stock, or excluding it from some areas which can then be managed by winter mowing or allowed to develop scattered scrub cover. Enriched grassland sites may require removal of topsoil and re-seeding with seed mixes appropriate for the habitat type. County Wildlife Trusts may be able to provide advice with regard to sources of seed.