

6. Resolving Management Conflicts

6.1. Background

Reptiles are one of many interests that site managers need to consider. Conflicts involving reptiles tend to arise most commonly in the following situations:

- Management is for general habitat maintenance, without reference to particular species requirements.
- Management focuses on particular species whose needs contrast with those of reptiles.
- Restoration from one state to another (usually from one with high tree or scrub cover to a more open habitat).
- Public access is a major factor in determining management.

These conflicts often come to light during management planning, but they may also be drawn to the attention of site managers by concerned site visitors and local specialist interest groups.

6.2. Precisely what is the conflict?

To help resolve these conflicts, it is often helpful to analyse the nature of the problem, or perceived problem. The following table lists the main classes of negative effects of habitat management or restoration (this is not exhaustive). The population-level impact will vary according to the circumstances. For example, the killing of five adult females would be insignificant to the viability of a moderately sized slow-worm population, but could be critical for a small, isolated sand lizard population. Advice here is given to help site managers to explore potential conflicts. Bear in mind, too, that this table considers the impacts from a simple reptile conservation viewpoint, regardless of legal issues, which should also be considered.

Effect	Example management operation	Effect on individuals	Impact on population
Direct harm to individual reptiles (instantaneous)	Strimming a limited proportion of long vegetation during active season	Death of small proportion of population	Normally low
Forced change in behaviour (short-term)	One-off burn of 0.2 ha patch of moorland in winter, in area used for basking	Reptiles temporarily move to alternative area for basking, possibly less suitable or more risky	Normally low
Increased risk of predation (short-term)	Annual flailing vegetation to ground level in area used for early spring basking	Reptiles more easily detected by predators, because of loss of cover, hence more are predated	Moderate
Long-term reduction in complexity of habitat structure, forcing altered behaviour (medium to long-term)	Introduction of high intensity grazing of heath-grass mosaic	Thermoregulation, courtship and other behaviour interrupted. Prey abundance and/or diversity reduced. Reptiles under stress, lowering reproductive success	High
Creation of habitat that is maintained in a state less suitable for reptiles (long-term)	Cutting back scrub to less than 5% cover, and then retaining at that level	Less refuge and edge habitat, reduced complexity, less prey. Reptiles under stress, lowering reproductive success	High
Harm to hibernating reptiles	Mechanised site clearance e.g. heathland restoration	Death during clearance, or later due to lack of cover	High

6.3. Factors to consider in reaching a resolution

As any management conflict will be particular to the site concerned, this handbook cannot offer a simple solution that will apply in each case. Rather,

the following list of factors should be discussed with all interested parties and the possible remedies considered.

Factor	Remarks
Lack of information about reptiles on site	Undertaking major shifts in management is unwise until the presence and distribution of reptiles is known. For small sites, this means a straightforward survey. For very large sites, this may be impractical. In such cases it may be acceptable to survey representative habitat patches, combined with a habitat suitability survey (see 13. <i>Survey and Monitoring</i>).
Method or outcome?	Is the conflict over the precise method being used, or the desired habitat outcome (i.e. the desired state of the habitat – effectively, what it should look like). Generally, it is more important to focus on the outcome. If the management plan envisages a site that would look very poor for reptiles, then this is a problem regardless of the methods proposed. The methods themselves can often be changed in some way to be acceptable for reptiles.
Timing of management	This may be critical. Often shifting the timing by just a few weeks may resolve the conflict. (See calendar in 5. <i>Principles and Planning</i>).
Equipment	Sometimes there can be concerns about the kind of equipment used, or the way a method is applied. The reason for any concern should be explored and, if found to be of concern, an alternative sought.
Location	As reptiles are often unevenly distributed, with small areas being of disproportionate importance, management impacts on particular patches can be of concern. This is especially the case for breeding and hibernation areas. Shifting the area targeted for management will often resolve the problem.
Intensity	Sometimes the method itself is acceptable if simply applied with lower intensity. This might mean, for example, cutting less frequently, grazing with fewer animals, or removing less scrub.
Scale	Obviously, negative effects on one small area are less concerning than negative effects across a whole site. The species concerned is especially important here, as a less mobile species such as viviparous lizard is more likely to be harmed by a small impact on its core habitat than say grass snake, which can range over longer distances. For example, if the conflict would involve reducing habitat quality in an area used by grass snakes only for intermittent dispersal, it may not be very serious, and perhaps could be resolved easily by providing alternative connectivity.
Population viability	Large, continuous populations, as occur on large unfragmented sites, may be able to tolerate negative, localised effects of management. Small, isolated populations need much greater consideration as they have inherently lower viability. Generally, sand lizards, smooth snakes and adders are the most sensitive species, as they tend to exist at lower population densities and/or with higher fidelity to small habitat patches, compared to the other species.
Species specific concerns	Some elements of their ecology render each species vulnerable to particular actions. Grass snake populations, for example, will decline or vacate an area if their main egg-laying site becomes unsuitable or inaccessible.
Positive effects	Often, a management operation causing concern will also have some positive impacts for reptiles. These benefits may come about only some time after the management has taken place. It should be considered whether the long-term benefits outweigh the immediate negative effects.
Needs of other (non-reptile) species	What are the precise needs of the other species, and how do they conflict with those of reptiles? Is the conflict between the method or the outcome?
Funding constraints	Funds to undertake management, or more commonly restoration, sometimes mean that site managers must work to a tight timetable. The needs of reptiles and other species should be considered at an early stage to avoid last-minute compromises. Even if there is a pressing urgency then major efforts should still be made to accommodate reptile requirements.

Factor	Remarks
Public access	Generally reptiles are capable of tolerating public access, but there may be concerns if there are especially high volumes close to key areas, or if the access is likely to result in a major increase in, for example, fire risk, habitat damage or persecution. Routing access away from such areas, at least at certain times, may be sensible.
Public perceptions of site appearance or management	It is important to have good relations with neighbours and site visitors. Sometimes, however, there can be differences in opinion about what a site should look like, or how it should be managed. Particular problems tend to occur with tree clearance on heaths, and installation of fences. Early, detailed consultation and information programmes can help.
Relative status of reptiles, compared to other interest features	It is rare that reptiles are the sole conservation interest of a site. Hence, very few sites are managed entirely for optimal condition for reptiles. There are usually other species or habitats, whose needs also need to be considered. When there is a genuine conflict then compromise should consider the relative conservation significance of each interest. This would involve looking at conservation status, site designation criteria and legal protection. If reptiles outside the site are locally abundant and at little threat, then other interests may take a higher priority in site management objectives. In such cases, site managers must be able to justify the resulting reduction in reptile status, taking all factors into account.
Management to reduce risks to site integrity	Sites can be at risk from many threats that require management intervention, e.g. fires, drying out (in the case of bogs). Occasionally they can conflict with reptile requirements, but can be considered and resolved in the same way as other management conflicts.
Impact of no management intervention	Leaving a site unmanaged will normally mean that conditions decline for reptiles. However, this can be a false dilemma, since the choice is often not between just two options, but three: (1) no management, (2) the possibly damaging management causing concern, and (3) an option not yet determined, that is beneficial to reptiles and consistent with site conservation objectives.



With reduced grazing pressure and carefully planned scrub management on this chalk downland, a range of vegetation heights has been allowed to develop (Jim Foster)

Once the issues are properly understood, resolutions will normally emerge. The following table shows some common types of remedy, with examples.

Remedy	Example
Modify site management objective	Plan to remove most scrub on a chalk downland site left unmanaged for 30 years. The original plan focused on objectives for grassland habitat and butterfly interests. Following concerns over the loss of important reptile refuge and edge habitat, however, the objective was altered to achieve 30% scrub cover, present in scattered blocks and maximising south-facing edge.
Modify management timing	Mowing heather around hibernation site in March. Concern that individual reptiles were at risk of direct mortality. Timing of mowing was changed to November.
Modify management method	Large-scale mechanical heathland restoration. Concern over damage to existing patches of high quality grass-heather mosaic, where small, relict reptile populations persisted. Method of tree/scrub removal altered to either chainsaw/hand-tools where feasible, or long-reach (10 m) machine. Access routes to clearance area limited to only one (or as few as possible) to minimise damage by machinery.
Modify location	Proposal to burn 1 ha of moorland on a south-facing slope. Local surveyors regularly report viviparous lizards and adders there in March. Hence decided inappropriate to burn regardless of timing, since the burn would leave substantial habitat in poor condition for several years. Remedy: move the burn site to an area less suitable for reptiles 500 m away. Consider other options for moorland management at original site.
Modify management objective, location and method	Bog/acid grassland site, proposed to be grazed to keep in good condition. Concern over impacts on reptiles because the grazing regime is intended to eliminate large stands of <i>Molina</i> . Remedy is to either change the objective, to maintain the damp area as dominant, dense <i>Molina</i> stand, or change location of management by placing exclusion fence around a 4-ha area with the most important habitat patches for reptiles, so that livestock impacts are avoided.
Risk assessment	Large-scale mechanical heathland restoration on a very large site where it is impractical to survey all areas for reptiles. Remedy: carry out reptile survey of five sample patches, representative of main habitat types; assess habitat suitability over whole site; combine maps of suitability and survey results; modify management objectives to improve quality and connectivity of potential reptile habitat across site; implement sensitive restoration methods in high risk areas.
Prioritise reptile management objectives in defined area	Grass-heath mosaic managed for general access and nature conservation purposes. Plans to build new access track, and to manage for species preferring short swards. However, small, relict adder population discovered, one of only three in the whole county. Management objectives on core adder areas given high priority because of this. Access track re-routed to avoid adder hibernaculum; mowing intensity reduced to encourage better grass structure; trees shading banks cut back.
Demote reptile management objectives in priority in defined areas	Presence of natterjack toads. Management objective for natterjack toads is for very low sward, which is contrary to reptile requirements. However, due to rarity of natterjacks in the local area (compared to the reptile species present), the management objective was considered acceptable for part of the site. Management objectives in other areas of site, away from natterjack breeding ponds, were favourable for reptiles.