INTERIM GUIDANCE
Version 2
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Guidance on managing woodlands with sand lizard and smooth snake in England

1. Background and purpose of document

The Habitats Directive[1] aims to conserve various species of plant and animal which are rare across Europe, and it requires Member States to provide legal protection for these species. Most of the protected species which are found in the UK (European Protected Species, or EPS) are associated with woodland, in particular dormice, otters, many of the species of bat, great crested newts, smooth snake and sand lizard. The EU Directive was transposed into UK law by the Habitats Regulations in 1994. However, the Regulations were amended in August 2007, and this has removed the 'incidental result' defence under which many forestry operations were carried out.

This document is one of a series providing guidance for woodland managers and operators on how to conserve these European protected species and reduce the risk of anyone committing offences under the Habitats Regulations. It focuses on the sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*).

Guidance is given on routine and on-going forestry and woodland operations and activities. For more unusual operations, such as development, construction or land-use change (i.e. removal of forest), you should seek further advice from the Forestry Commission (FC). Similarly, whilst it covers low-key recreational usage, expert advice should be sought for more unusual or intensive activities in woodlands.

This guidance should be used in conjunction with wider guidance on forestry and woodland management, and should not be followed in isolation. Sources of more detailed information on conserving the species are given in the final section.

The FC and Natural England (NE), with assistance from relevant conservation organisations, have produced this suite of guidance to help you understand the legislation. Following the guidance will show that you have taken all reasonable steps to comply with the Regulations. If the guidance has been followed, but you nevertheless do inadvertently cause damage, disturbance or harm to this protected species, a prosecution is unlikely to be considered to be 'in the public interest'[2]. However, you are reminded that it remains your responsibility to ensure all your actions do comply with the law.

This is 'interim' guidance that will be reviewed in the light of experience over the first 6 months after publication. We therefore welcome suggestions from users during that period on how it could be improved.

[1]The formal title is: Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora.
[2] The public interest test is used by the regulators to decide whether it is appropriate to take a matter any further bearing in mind all the circumstances of the case.

2. Complying with the Habitats Regulations

There is an inherent difficulty in complying with the Habitats Directive, because whilst habitat management is often needed to conserve rare species, carrying out such management could contravene the strict protection that the Directive requires. This contradiction is recognised in a guidance note issued by the EC (see reference list below). This recommends that Member States produce codes of conduct, or guidance, and that these should: *"offer flexibility, i.e. while recognising that absolute protection for all individuals of a species cannot be guaranteed, ensure that any harmful action takes full account of the conservation needs of the species/population concerned".* The EC also states that anyone complying with such codes of conduct should be protected from prosecution, but conversely there must be a legal process for enforcement in cases of non-compliance with the legislation.

Conserving rare species present in a wood requires a careful and well-planned approach to woodland management. Ensuring that the requirements of the Habitats Regulations are also satisfied is an additional challenge. A systematic approach will be required in order to minimise the risk of committing an offence. This guidance is structured around the following six stages:

- Is a protected species **present** in the wood?
- What woodland **habitats** does this species use?
- What activities and operations could potentially cause **damage, disturbance or harm** to the species?
- What operations can go ahead as **'good practice'**?
- When, and how, should I seek a **licence**?
- What else can I do to help **conserve** this species?

The phrase 'causing damage, disturbance or harm' is actually a simplification, and it is important to understand the precise offences that can be committed. These can be summarised as follows:

- *Damaging or destroying the breeding site or resting place of a protected species (even if unintentional or even when the animal is not present)*
- *Deliberately killing or injuring a protected species or destroying its eggs*
- *Deliberately disturbing a protected species in a manner that:*
  - *either significantly affects it's ability to survive and breed;*
  - *or, as a consequence, significantly affects the local population.*

In the Directive, the term 'deliberate' is interpreted as being somewhat wider than just intentional and could be thought of as including an element of recklessness.

You should be aware that there is the potential for more than one protected species in your woodland, which for example may support protected reptiles and bats, and you will need to follow the good practice guidance for each of the species present.

3. Are sand lizard and/or smooth snake present in the woodland?

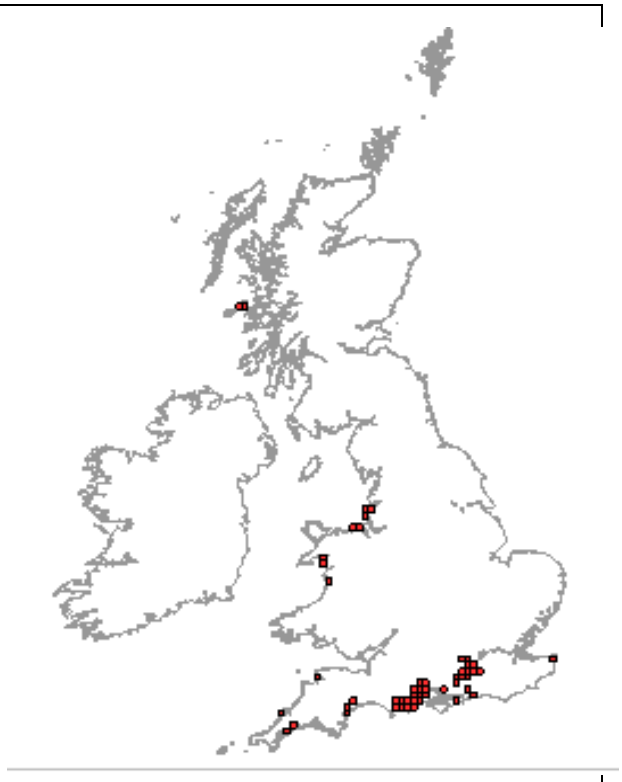
There are several ways of determining the likelihood of sand lizard and/or smooth snake being present in your woodland:

a. Is your woodland within the current known range of either species?

The maps below show the known distribution of the sand lizard and smooth snake. You will see that both of these species are very localised in their distribution. Please note that not all recent occurrences of sand lizard and smooth snake may be mapped.

Smooth snake

Map Source: National Biodiversity Network copyright C Crown Copyright. All rights reserved NERC 100017897 2004 Picture: Tony Gent



Sand lizard

Map Source: National Biodiversity Network copyright C Crown Copyright. All rights reserved NERC 100017897 2004 Picture: Forestry Commission

b. Are there records of sand lizard and/or smooth snake in your woodland?

The National Biodiversity Network (NBN) is available on the web and can be checked for presence of smooth snake and sand lizard near or in your woods. The interactive maps www.searchnbn.net/interactive/map.jsp?srchSp=NHMSYS0000332360, and www.searchnbn.net/interactive/map.jsp?srchSp=NBNSYS0000005070 , can be used to zoom to your area of interest (please note that not all recent occurrences of the species may be shown on the maps. A lack of records does not necessarily confirm absence of these species). Further records may be available from the Local Biological Record Centres (list at: www.nfbr.org.uk), Natural History Societies, and local amphibian and reptile groups (contact details through national representative body: www.arg-uk.org.uk). The Herpetological Conservation Trust or your local County Wildlife Trust representative may also be able to give site specific information on likelihood of protected reptiles being present in your woodland.

c. Is there field evidence of sand lizard and/or smooth snake in your woodland?

Sightings of animals - Smooth snake and sand lizard hibernate during the winter months but are usually active for the rest of the year (see calendar of species activities). During the active season they can be observed basking in sunny, sheltered locations close to vegetation cover. Smooth snakes are less often observed basking in the open than sand lizards, and are more typically found under refuges or wrapped around clumps of heather or in grass tussocks. Suitable sites tend to have a south or south-westerly aspect and are on well-drained substrate. Areas of wetter habitat e.g. purple moor-grass bogs will also be used especially during the hottest period of the summer. Searching is best carried out in April, May and September, when the air temperature is between 9-18°C and on dry, calm days. Searching on south-facing banks in March and April may reveal animals that have just emerged from burrows used for hibernation. When not basking, the species shelter in dense vegetation in sunny locations, under debris and in underground holes (mammal burrows, tree root systems, etc). Searching these sites by turning over potential refuges e.g. logs and rocks, may result in disturbing the animals and therefore is not recommended unless carried out by a licensed specialist.

Signs - Reptile skins (sloughs), that are periodically shed, can indicate reptile presence though it may be difficult to identify which species without training. Sloughs tend to be found next to rough vegetation, rocks and logs that have been used to rub against.

Breeding indications - sand lizard eggs are usually laid in burrows dug in areas of open sand with a southerly aspect and about 50cm from vegetation cover. Searching such areas in May-June may locate females preparing to lay eggs, or the burrows themselves. Searching such areas in September may reveal hatchlings. It is not recommended to dig up sand to search for egg shells as this might damage breeding sites. The smooth snake does not lay clutches of eggs, this species is ovoviviparous (eggs are produced but the young hatch out of these internally and are born live).

For more information on surveying for smooth snake and sand lizard see Froglife (1999) Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10, Froglife, Peterborough, www.froglife.org/InfoFAS.htm, and the Sand Lizard Conservation Handbook.

Calendar of smooth snake and sand lizard activities:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

Note:
Hatchlings may be active until late October.
Dates given are guidelines relating to the typical active period for these species. Whether or not they are active when you carry out operations will depend on local temperature conditions and do vary considerably. For example, a particularly early or late spring will normally mean reptiles emerge earlier or later respectively; southern populations will generally be active for longer in a given year than northern ones.

If you suspect that smooth snake and/or sand lizard are using your woodland and you intend to carry out management your survey will need to have identified the areas of concentrated usage (foci) which will contain the resting/breeding/hibernation sites. Identifying foci can be difficult and you may wish to consider engaging local specialists, for example, a local reptile

group may be interested in carrying out a site visit in your woodlands and assist in determining presence of these species and identifying foci.

Once foci have been identified these will need to be mapped and incorporated into both your operational plans as well as your long-term woodland management plan. You may chose to avoid the areas identified, or alternatively proceed with management in these areas in accordance with the good practice described in this document.

If by self-assessment and survey (using the information above) or specialist survey you are confident that smooth snake and/or sand lizard are not using your woodland then no further action is necessary (other than keeping a record of your decision and the information used to reach it, (for example a specialist survey) and the operation may proceed. If smooth snake or sand lizard or fresh signs of them are discovered during operations (especially from likely breeding or resting places), you should immediately stop work, review your plans and employ the 30m buffer prescribed in the good practice (see Section 6). If this is not possible, contact the FC for further advice. It is therefore important for operators to remain vigilant for smooth snake and sand lizard while undertaking work.

4. What woodland habitats do smooth snake and sand lizard use?

The smooth snake and sand lizard use areas of heathland, scattered scrub and rough grassland. Sand lizards also use frontal sand dune habitats. Both species may also use woodland habitats, in particular woodland edges and ride edges, grassy glades, clearfelled or young restock sites and open pine stands within plantation woodlands. The more open the habitat the larger the populations of smooth snake and sand lizard are likely to be. Such conditions are more likely within stands prior to canopy closure (0-15 years) or after thinning (40+ years). Areas with closed canopy are usually avoided, though the immediate edge may be used where it adjoins favourable open habitat. Areas of concentrated usage or ‘foci’ tend to be associated with unshaded, south-facing areas with varied local topography such as slopes and gullies, complex vegetation structure and vegetation edges. Sand lizards feed on invertebrates whereas smooth snakes feed on other reptiles and small mammals. Sources of further information may be found in the further reading list.

Further information and advice on habitat requirements of these species is available from The Herpetological Conservation Trust, also see further reading list.

5. What activities and operations could cause damage, disturbance or harm?

Sand lizards and smooth snakes are unable to move around woodland quickly, for instance to flee from a threat. Foci can be difficult to locate and the use of habitats by these species away from the foci can be very difficult to predict. Therefore the foci identified through survey represent the core areas that need to be conserved for these species. As such, woodland management activities – such as timber harvesting, scarifying, mowing, planting and excavation – in close proximity of foci constitutes a high risk of causing them damage, disturbance or harm and will therefore require careful thought. The level of risk will depend on several factors:

- **Distance from the foci:** any machine working within 30m constitutes a significant risk, whereas if you are you working more than 100m from the foci there is a very low risk.
- **Intensity of operation:** scarifying is both intensive and affects the whole area treated, whereas at the other end of the scale, driving a forwarder once through an area to extract timber will have a much lower risk of causing damage or harm.

- **Nature of the habitat:** a relatively bare and plain forest floor below a conifer canopy (15-30yrs) will contain few potential resting places compared to a recent restock site or a well-thinned stand of trees (conifer or broadleaf) which may contain many individual animals.
- **Time of year:** from the calendar it can be seen that both species hibernate for approximately 4-5 months over the winter, using underground features or burrowing beneath dense vegetation and deadwood. Depending on the proposed operation, these species should be at lower risk at this time of year.

6. Good practice guidance for woodlands with sand lizard and/or smooth snake

The overall outcome of management should be a mosaic of suitable habitats, which are inter-connected and will provide a continuity of habitats over time. The key principle is to limit operations in proximity to foci to ensure that the disturbance to these species of reptile is restricted. The undisturbed areas act as reserves or 'refugia' from which the population of sand lizard and smooth snake can recolonise the worked areas as they become more suitable.

Good practice for managing woodland with sand lizard and/or smooth snake
This good practice guidance for routine woodland operations should maintain or improve the habitat for sand lizard and smooth snake and minimises the risk of harming individuals or damaging their breeding sites or resting places. If you follow this good practice, and carry out the operations as described here, we would not expect you to require a protected species licence.

- **Known foci** – avoid undertaking any mechanised operations within 30m of known foci.
- **Felling/thinning** – in woodlands with some heathland vegetation, ensure felling/thinning uses an integrated harvester/forwarder operation wherever possible to minimise ground damage and thereby impacts on any potential reptiles.
- **Timber stacking** - avoid stacking timber within 30m of known foci or on sensitive ride edges and ensure that it has been removed within 6 weeks otherwise it may become a resting place for sand lizard and smooth snake. Stacking carries a very low risk if done during winter in areas not used for hibernation.
- **Ground preparation** – undertake any brash raking in the first winter after felling, and not within 30m of known foci. Where brash has been left for more than 1 year, it is likely to have become well colonised by reptiles and should not be raked, scarified or burnt.
- **Planting** - when planting be sure to protect known foci from shading by trees (both present and future).
- **Bracken spraying** - minimise the use of tractor-mounted herbicide spraying on recent re-stock sites. Spot-spraying would be an ideal alternative to avoid disturbance and harm by the vehicle, as well as maintaining good habitat between the spots for prey species for these reptiles.
- **Rabbit gassing** - to avoid poisoning sheltering reptiles, rabbit gassing should only be undertaken away from known or suspected foci and when reptiles are active (March-September).
- **Mowing** - restrict mowing to short sward areas when within 30m of known foci.
- **Road & track maintenance** - avoid maintenance during period of egg incubation (sand lizard), and similarly avoid prolonged use of heavy machinery in proximity to such breeding sites at this sensitive time of year (when the risk of disturbance is high).
- **Changes in recreational usage** – locate any new paths or recreational infrastructure at least 30m from known foci.
- **Trees on foci** - where necessary for conservation purposes, in winter hand-cut (and either stack or remove by hand) trees that are significantly shading known foci.

- **Sand scrapes** – where necessary for conservation purposes, create small sand scrapes using a rotovator or small excavator in late April/early May to provide fresh egg-laying sites for sand lizards. Individual scrapes to have a minimum size of 2x5m, and the total amount of such areas may range from 2-10% of site area on heathland and/or woodland.

7. When and how should I seek a licence?

Carrying out any operations that 'exceed' the thresholds or do not comply with the good practice guidance above constitute an offence or carry a significant risk of committing an offence. Some possible examples are:

- Any operations using machinery within 30m of known foci.
- Planting on established foci.
- Raking/scarifying/burning brash beyond the 1 year post-felling period.

You can apply for a protected species licence to carry out such operations, but your application will have to be able to demonstrate that it meets all of the following three 'tests':

- The work is being done in order to conserve wildlife, ensure public safety or to help deliver the Government's woodland strategy and provide public benefits;
- There is no satisfactory alternative way of achieving the same outcome; and
- The overall package of work will not be detrimental to the population of sand lizard and smooth snake.

An application form can be obtained from your local FC office. This will guide you through the process and the information you need to provide. To meet the third 'test' you may have to carry out additional work to improve the habitat and 'compensate' for any short-term adverse impacts on sand lizards and smooth snakes. The FC will carry out initial checks but NE will make the ultimate decision and grant the licence.

If the package of work you are proposing does not meet these 'tests' then it will not be possible to grant a licence. You are strongly advised not to proceed with operations that involve a high risk of committing an offence without a licence.

8. What else can I do to help conserve the sand lizard and smooth snake?

The following operations should improve your woodland for dormice and some of these are likely to be essential if you are applying for a licence:

- **Maintaining permanent open ground habitats.** Removal of invasive scrub and light grazing of restored heathland to maintain a diversity of structure, including scattered scrub to provide the open but sheltered conditions required by the species. Mowing of rides and glades maintains suitable vegetation height. The rotation of timber stacking areas along the length of a ride edge can provide habitat manipulation/bare ground provision.
- **Providing temporary open ground habitats.** Suitable open conditions can be provided within plantation woodland managed in rotation, on a clear-fell patchwork. Ground preparation for restocking by natural regeneration, usually by scarification, often creates optimum habitat.
- **Providing sites for shelter and hibernation.** If brash is left on site permanently, leave in piles or stacks in sunny areas to create hibernation and sheltering opportunities.

It is possible that grant aid may be available under the England Woodland Grant Scheme to support such work to further the conservation of sand lizard and smooth snake.

Sources of further information and references

Anon (2007) *Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC*, European Commission, February 2007, available at: http://forum.europa.eu.int/Public/irc/env/species_protection/library?l=/commission_guidance/final-completepdf/_EN_1.0_&a=d

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