

# Dormice

## Do I need a dormouse survey?

Any development where there is a reasonable likelihood of dormice being present and affected by the development will require a survey by a suitably experienced and licensed ecologist.

Dormice are found in a variety of habitats including deciduous woodlands, hedgerows, scrub and sometimes within plantation conifers or rural gardens.

If dormice are likely to be present, planning authorities will require a report that includes:

- details of habitats where dormice might be present;
- survey method undertaken to investigate potential presence of dormice;
- evidence of dormice presence, usually by nest tube survey and/or nut search; or confidence in assumed absence;
- the predicted impact that the proposal is likely to have on dormice and what can be done by way of mitigation to maintain the favourable conservation status of dormice;
- consideration of whether the impact is necessary and acceptable, including consideration of avoidance measures and alternatives; and
- a recommendation on whether a European Protected Species (EPS) licence will be required.

## Ecology, field signs and survey

Dormice (*Muscardinus avellanarius*) are found largely within the south of the UK and throughout Devon. They are small and golden in colour with a furry tail and large black eyes. They are nocturnal mammals that usually hibernate between October and March depending on weather. Dormice do not normally travel far from their nests and have a varied diet of fruit, nuts, pollen and insects. Habitats that provide a range of fruiting and flowering trees and shrubs at different times of year are favourable, however dormouse are found in habitats considered to be 'sub-optimal', such as species-poor hedgerows, conifer plantations, culm grassland and coastal scrub, where insects and possibly tree sap may sustain them for much of the time. **It**

**is therefore difficult to rule out their presence from rural areas where any woodland, scrub and hedges are present.** Dormice are arboreal and generally require good connectivity of the tree or shrub layer to enable dispersal, although they are known to cross open spaces on the ground.





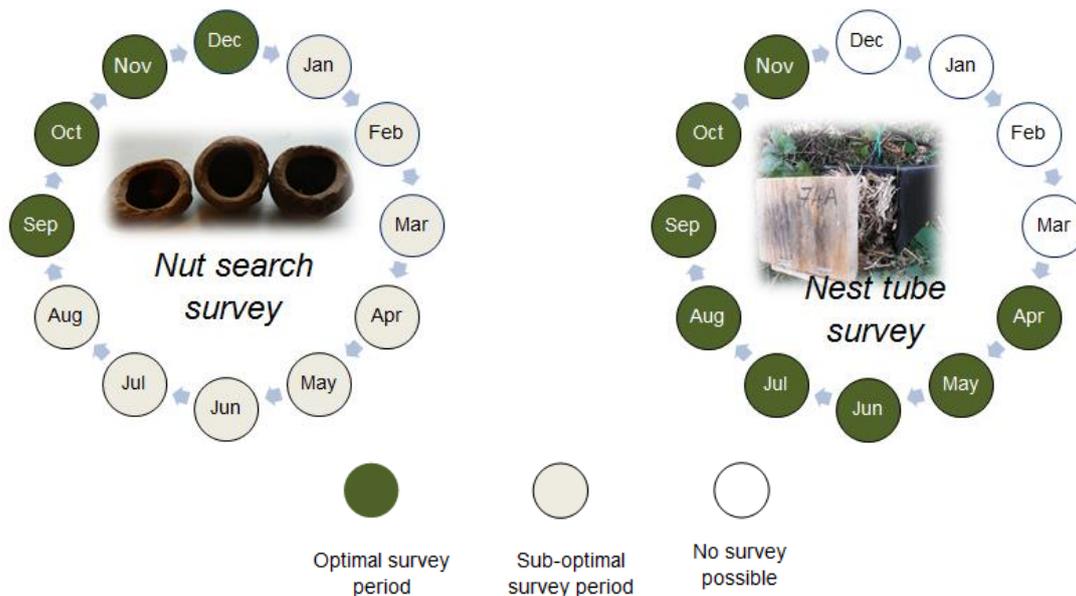
Dormice tend to build their summer nests in woody vegetation above the ground. Nests may be built in low shrubs as well as high up in tree holes, old birds' nests and squirrel dreys as well as artificial bird or bat boxes. Within a week they may use three different day nesting sites. Winter hibernation nests are built at ground level where it is cool and humid, such as amongst tree roots, in hollows under moss or leaf litter, under fallen timber or within the bases of hedgerows. Dormice are sensitive to climate and weather and will spend periods in 'torpor', a state of inactivity during cool or wet weather. Dormice are sensitive to changes in the landscape and habitats.

Threats associated with development include:

- habitat loss, damage and disturbance;
- habitat fragmentation and severance; including loss, damage or severance of hedgerows; and
- predation by domestic cats.

One survey method is to search for the presence of hazelnuts opened by dormice, although this is impractical if hazel is not locally present. Dormice open these nuts by making a neat round hole, leaving characteristic tooth marks around the outside edge of the hole, with a smooth inner rim. The optimal period for nut searches is between September and December when nut shells and tooth marks are fresh.

Nest tube and nest box surveys are another method of investigating the presence of dormice. Nest tubes are small plastic tubes with wooden trays that dormice will use to build their summer nests in. Wooden nest boxes may also be used but are more expensive than nest tubes and more difficult to fix in shrubs and hedgerows, although they may be more appropriate in woodland habitats and for long-term monitoring. Nest tubes are effective between **April and November** and it is recommended that **at least 50 nest tubes** are deployed in suitable habitat and left for several months over the survey season. An adequate 'thoroughness' score must be achieved, which is dependent on how many tubes are used and over how many months they are deployed (refer to the [Dormouse Conservation Handbook](#), page 27). Best practice is to set out nest tubes before the survey season and check them every month between April and November, as dormouse nests may be destroyed by other small mammals, such as wood mice. Using a high concentration of nest tubes over a shorter time period to achieve the required minimum thoroughness score is not best practice and may have implications if a EPS licence is required (see below). Adding a small number of nest boxes to a standard tube survey could increase the chances of detecting dormice at a site or reduce the time taken to do so.



## Legislation and licensing

Dormice and their habitats are protected under the [Conservation of Habitats and Species Regulations 2010 \(as amended\)](#), the [Wildlife and Countryside Act 1981 \(as amended\)](#), and are a [European Protected Species \(EPS\)](#). It is an offence *inter alia* to:

- deliberately capture, injure, kill, or disturb dormice;
- intentionally or recklessly obstruct access to any structure/place used for shelter or protection; or
- damage or destroy a breeding site or resting place.

The Regulations contain provision to permit, by means of a licence, certain activities that would otherwise be prohibited. A scientific 'disturbance' licence is required to carry out nest tube/box surveys due to the possibility of a dormouse being disturbed. Richard Green Ecology Ltd is experienced in undertaking dormouse surveys using suitably licensed surveyors.

Activities likely to result in disturbance or killing of dormice or damage to their habitat will usually require a ['development licence'](#) from Natural England. In order to obtain a licence it must be demonstrated that:

- the project is for the purpose of preserving public health or public safety or other reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- there is no satisfactory alternative; and
- the action will not be detrimental to the population of the species.



Dormice are also a [UK Biodiversity Action Plan](#) (BAP) species, which identifies them as a priority for conservation. Planning authorities must have regard to their conservation in fulfilling their duty under the [Natural Environment and Rural Communities \(NERC\) Act 2006](#).

Before making an EPS development licence application, planning permission will need to have been granted and sufficient and current survey data must be gathered. Avoidance measures and mitigation (see below) should be undertaken to reduce impacts on dormice and avoid the need for a licence where possible. Such measures will be also required as a condition of a licence.

### **Avoidance and mitigation measures**

Mitigation measures should be proportionate, depending on the type and extent of impact and population affected. Most preferable is avoiding any impacts on the dormouse population. Options may include:

#### **Avoidance**

- designing the scheme to avoid or minimise loss or severance of habitat. An example could be the use of directional drilling under a hedgerow to install a pipeline rather than creating a gap in a hedgerow;
- timing of vegetation removal between October and April (to avoid dormouse breeding period); and
- undertaking ground disturbing activities between April and October (to avoid the hibernation period).

#### **Mitigation**

This may be required in advance of development commencing, and may involve:

- planting of new areas of native trees, hedgerows and shrubs to provide cover and foraging habitat;
- enhancement of existing habitats to improve them for dormice, e.g., conversion of coniferous woodland to broadleaved, or increasing structural or species diversity of existing woodland and scrub, especially including species such as hazel, honeysuckle, oak and bramble and aiming to provide sprawling branches to provide aerial pathways, as well as a thick and diverse under-storey structure;
- ensuring arboreal connectivity of trees or providing alternative hedgerow connections where severance of habitat occurs;
- installation of dormouse nest boxes and monitoring schemes; and
- translocation of dormice and/or biodiversity off-setting/compensation at another site.

Translocation of dormice should only be undertaken as a **last resort**. The best option is to ensure that a sufficient area of suitable habitat is retained on the site to support a viable population in the long-term. Strong ecological links to adjoining habitats, for example along hedgerows, should also be provided and managed for dormice.

It is recommended that most hedgerows be cut at three yearly intervals, with some left to grow for at least seven to ten years. It is important that only a minority of hedgerows are cut in any one year. Coppicing, or (better) laying, should be used to restore hedgerows that become gappy.

Compensation should ensure that once completed, there should be no net loss of dormouse habitat. In fact, where significant impacts are predicted there will be an expectation that compensation will provide an enhanced habitat (in terms of quality or area) compared with that to be lost. Compensation should also remedy any loss of connectivity brought about through the development.

For more detailed information on mitigation techniques please refer to the [Dormouse Conservation Handbook](#).

### Where should I go for further information?

- [Devon Biodiversity Action Plan - Dormouse](#)
- Natural England (2006) [Dormouse Conservation Handbook](#).
- Natural England (2012) Standing Advice Species Sheet: [Dormice](#).
- [Natural England – EPS Licensing](#)
- [Peoples Trust for Endangered Species](#)

### Important note

Legislation, survey guidelines, species distribution and best practice mitigation may be subject to change and this note may not necessarily include the latest information. It is therefore recommended that other sources of information be consulted or professional advice sought as necessary.



Example of a good (tall and thick) hedgerow for dormice



Example of a poor (gappy) hedgerow, although dormice may also be present in bramble