



## Badger Problems: Advice to people living in rural areas

Great Britain supports some of the highest densities of badgers (*Meles meles*) in Europe. It is therefore not surprising, since badgers are found on farmland, and often close to human habitation, that problems do sometimes occur. These can range from damage to agricultural land or crops, to undermining farm buildings or flood defences. The excavation of setts under roads and railways can be a risk to vehicles and human safety. Equally, normal agricultural, forestry or flood defence operations can sometimes have an impact on badger setts. Badgers are afforded legal protection, and penalties for offences can involve heavy fines or a prison sentence, so it is important that anyone working in the countryside is aware of how to work within the legislation.

### Badgers and the legislation

Badgers and their setts are protected under the Protection of Badgers Act 1992, which makes it illegal to kill, injure or take badgers or to interfere with a badger sett. Interference with a sett includes damaging or destroying it, obstructing access to it, causing a dog to enter it, or disturbing the badgers which are occupying it. However, there is provision in the legislation to allow action to be taken under a licence.

In Wales, two bodies have authority to issue licences under this legislation:



The Land, Nature and Forestry Division of the Welsh Government may grant licences for the purposes of:

- preventing serious damage to land, crops, poultry or any other form of property;
- preventing the spread of disease;
- maintenance or improvement of drainage works or flood defences; or
- any agricultural or forestry operation.

Natural Resources Wales may grant licences for the purposes of:

- science or education;
- conservation of badgers;
- development;
- any zoological garden or collection;
- ringing and marking badgers;
- preservation or archaeological investigation of scheduled monuments; or
- investigating any offences.

In many cases, Welsh Government Wildlife Advisers can advise on reducing the damage caused by badgers, without the need to take licensed action.

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## **Agricultural, Forestry and Watercourse Management Operations**

Licensed interference to badger setts is not only necessary where badgers are causing damage but also when agricultural, forestry or watercourse management activities in the vicinity of, or over, a sett may affect that sett. Ploughing, planting and harvesting of crops; tree felling and timber extraction and the construction or repair of flood defences are examples of such activities. Because of the protection afforded to badgers, work of this nature that causes interference must be licensed by the Welsh Government. If there is any doubt, advice should be sought from the Welsh Government (see Further Information).

### **Badger Damage**

Damage can be caused by both the foraging behaviour of badgers and their sett digging activities.

#### **Land, Crops and other forms of Property**

Ripening cereal crops, especially oats and wheat, may be flattened by badgers and some of the grain eaten. This damage is characterised by a 'criss-cross' pattern in the flattened crop and, in some cases, large areas can be levelled making it difficult to harvest. Similarly, maize or sweet corn may be pulled down and the cobs eaten, reducing the feeding value or making the crop unsaleable if it is for human consumption. High-value horticultural crops, including soft fruits, orchard fruits and grapevines can also be damaged. However, this is usually localised and seasonal.

Damage to grassland (pasture, silage and meadows) where the turf is rooted or pulled up to gain access to soil invertebrates is a common complaint. Again, this is often seasonal, with badgers exploiting high densities of grassland invertebrates such as chafer grubs or leatherjackets (cranefly larvae), which themselves may be harmful to the sward. If the sward root system is already

damaged by invertebrates, patches of turf may be rolled over like pieces of carpet. Rooting for earthworms, on the other hand, can occur all year round and although the individual 'rootings' are usually small (normally no more than 5-15cm in depth), they can affect large areas of a field. This may result in soil contamination of silage and potential hazards for both livestock and horses.

#### **Problem Badger Setts**

The excavation of new setts in open farmland, or the encroachment of setts from woodland or hedgerows onto agricultural and amenity land, can cause problems. Field boundaries can be damaged and parts of fields undermined. Tunnel collapses can result in damage to farm machinery and can be a danger to livestock. Spoil heaps outside setts can also be a nuisance, for example, when manoeuvring farm vehicles. Farm buildings, tracks and footpaths can be undermined by badger setts. There are particular concerns where setts are excavated beneath roads, railway or electricity pylons.

#### **Flood Defences, Watercourses and Drainage**

Spoil from setts excavated on stream banks or ditches can partially or completely obstruct drainage channels, increasing the risk of localised flooding. Where setts are dug into coastal or floodplain defence embankments, they can weaken the bank creating a serious flood risk.

#### **Ancient Monuments**

Interference with a badger sett for the purpose of the preservation of archaeological investigation of a monument must be licensed by Natural Resources Wales. However, if a badger sett is causing damage to a monument, scheduled or non-scheduled, this is considered to be damage to property, and the Welsh Government is the licensing authority for any remedial work that may affect the badgers or their setts.

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## Predation

Badgers are occasionally reported to have been responsible for killing poultry or lambs and, in some cases, domestic pets such as rabbits and guinea pigs. They will certainly scavenge from sheep and lamb carcasses, and will also feed on afterbirths. However, the actual killing of lambs or poultry is difficult to quantify and is generally considered to be unusual behaviour for this species.

## Managing Badger Problems

Some seasonal badger problems, such as rooting, may be acceptable over the limited time period in which they occur. In addition, it may be possible to prevent access by badgers to vulnerable sites or structures by proofing

### Fencing

Fencing, either permanent heavy-duty chain-link or temporary electric fencing may be cost-effective in some circumstances. However, careful evaluation of damage should be undertaken to make sure that remedial action is worthwhile. Crop damage, for instance, is often greatest around the field edge and can look much worse than it actually is if viewed only from the field gate or headland.

### Electric fencing

Electric fencing is best used where there is a short-term risk of seasonal damage to crops. This can be operated either by a car battery or through a 12v transformer powered by mains electricity. In either case an Electric Fence Energiser conforming with appropriate British Standards is required.

Either rabbit-proof electric netting or a strained wire or 'polywire' fence may be used. For strained wire or 'polywire' fences a two-stranded or four-stranded specification may be used. For two-stranded fences the wires should be erected at a height of 8cm (3") and 20cm (8¾") above the ground. For four-stranded fences, the strands should be set at 10, 15, 20 and 30cm (4, 6, 8 and 12 inches) above ground level. Advice on the use of

electric fencing to protect crops against badger damage is given in the Welsh Government Advisory leaflet (WM15) – Badger problems: use of electric fencing to prevent agricultural damage.

### Proofing

Outbuildings, such as poultry houses, can be strengthened using heavy gauge wire fence to prevent access by badgers. Chain-link, weld-mesh, or similar should be used – 18 or 19 gauge rabbit netting or "chicken wire" is not strong enough. Badgers are good climbers, so where a freestanding fence is used, it should incorporate a supported overhang at the top, directed away from the area to be protected. The fence should be at least 125cm (48") high and be buried to a depth of at least 60cm (24"). Alternatively, the mesh can be lapped outwards on the ground surface for 50cm (20") to deter badgers from digging through.

An underground barrier sunk into a trench along a field boundary can prevent badgers expanding a sett from a woodland edge into a field. However, to be worthwhile, suitable fencing material must be sunk to a depth of at least 125cm (48"). Trenches of this depth can be dangerous and care must be taken to ensure that the trench walls are shored up or the trench is wide enough to be safe. If in doubt, advice should be sought from the Health and Safety Executive. The most effective fencing for this purpose is either galvanised or plastic coated chain-link fencing or galvanised steel weldmesh.

### Invertebrate Control

In addition to preventing access by badgers, it may be possible to reduce the damage to grassland by directly controlling the badgers' food species, notably invertebrates, many of which are damaging in themselves.

In Great Britain, earthworms are the badger's main food. Length of grass affects the accessibility of earthworms on the ground surface, so badgers prefer to feed in short grassland. This is why well mown lawns are often attacked.

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Leatherjackets, which themselves can damage grassland by feeding on the root system, are also an important seasonal food. Leatherjacket damage is often first noticed in the spring when the grass is beginning to grow. It has been estimated that they can cause a loss of one gram of dry matter per leatherjacket. Researchers in Northern Ireland have calculated the cost of leatherjacket damage there as £15 million per annum.

Chafer grubs cause similar problems. Large populations can build up, especially on neglected permanent grassland. Grass roots are severed by the grubs, and as badgers root for them, the turf is sometimes rolled up like a carpet.

Badger rooting may, therefore, only exacerbate an already existing problem. The removal or reduction of these insect pests may reduce the associated badger damage. Ploughing and reseedling will reduce chafer and leatherjacket populations, but it is of course expensive, and may not always be practical. Please note that under the Environmental Impact Assessment (EIA) (Agriculture) (Wales) Regulations 2007, you are required to submit a screening application to your Divisional Office before ploughing, reseedling or fertilising semi-natural areas or uncultivated land (e.g. unimproved grassland including hay meadows, lowland and coastal heathland, moorland and upland rough grazing, scrubland and wetland). Harrowing and rolling may help reduce the grubs near the soil surface and so reduce badger damage. For serious infestations, chemical control may be an option. However, this may be impractical on a large scale, and the effects on other beneficial invertebrates (and those species which may feed on them) should be considered. Further advice on the control of insect pests should be sought from an Entomologist/ Agronomist. In addition, farmers within Agri-Environment schemes must discuss any proposed action with their Project Officer.

## Badgers and Tuberculosis

The link between badgers and bovine tuberculosis (TB) infection in cattle is complex. However, it makes sense to minimise direct contact between the two species where possible. Badgers are known to enter buildings and even to climb into feeding troughs, and cattle are often inquisitive about badger setts. Advice to farmers on minimising the risk of TB is available on the Welsh Government website.

<https://gov.wales/bovine-tb>

## Licensing

Any action which interferes with a sett requires a licence. A sett is defined in the Protection of Badgers Act 1992 as “any structure or place which displays signs indicating current use by a badger”. The term “current use” is open to interpretation but does not simply mean that badgers are actually present at the time of inspection. If there is any doubt, further advice should be sought from Welsh Government Wildlife Advisers.

Use of a sett by badgers can be assessed by various methods, such as examining sett entrances for prints and hairs or by placing thin sticks or twigs across the entrances. These will be knocked aside by any badgers going in or out of the entrance. If a problem sett is in current use, a licence must be applied for before any interference with the sett can take place.

## Agricultural and Forestry Operations

Licences are issued to allow farmers to carry out normal agricultural operations over badger setts. These are usually valid for one year. Licence conditions are aimed at minimising damage to the sett. For example, ploughing is usually limited to a depth of no more than 30cm (12 inches). Licence monitoring by Welsh Government Wildlife Advisers has shown that active sett entrances, initially blocked by such actions, are quickly re-opened by the badgers.

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Similarly, licences can be obtained to permit forestry operations, such as thinning, clear felling or replanting, in the vicinity of setts. The Forestry Authority's Forest Practice Guide No. 9, "Forest Operations and Badger Setts" gives guidance on carrying out forest operations near setts and advice on whether a licence is needed. Advice can also be obtained from Welsh Government Wildlife Advisers.

### Sett closure

Licences may be issued to allow either part or the whole of a problem sett to be closed down to prevent serious damage to land, crops, poultry or any other property. To avoid trapping badgers underground, the badgers are excluded from the sett first by using one-way badger gates. The gates, normally constructed of wood, are fitted to sett entrances. They only open outwards allowing badgers to exit but not re-enter the sett. Detailed advice on how to make and use these gates is given in the Welsh Government leaflet WM10 - Using one-way gates on badger sett entrances.

Where attaching gates to individual sett entrances is impractical, they can instead be installed in an electric fence surrounding the entire sett.

Proofing with strong wire fence may be necessary to prevent badgers from returning to a sett from which they have been excluded.

### Fox Control

Foxes may sometimes use badger setts either as permanent homes or for temporary refuge. Any attempt to deal with a fox suspected to be located in an active badger sett must be carried out in line with the Protection of Badgers Act 1992 and the Hunting Act 2004. Among other things, this legislation makes it an offence:

- To interfere with a badger sett (in order to dig out a suspected fox) unless licensed to do so;

- To 'stop' a badger sett for any reason. (to prevent a fox gaining access to it for refuge) unless licensed to do so;
- To enter a dog into a badger sett (in order to flush out a suspected fox) except where this is done in line with the tightly drawn conditions of the exemption in paragraph 2 of Schedule 1 to the Hunting Act 2004, which allows the use of a single dog below ground to flush out wild mammals in order to protect birds kept for shooting (the "gamekeepers' exemption"). A licence must be obtained before a dog can be introduced into a badger sett under this exemption.

The responsibility for issuing badger licences to undertake fox control in Wales is split between the Welsh Government and Natural Resources Wales (NRW). Welsh Government issue licenses where fox control is to protect livestock and penned game, whereas NRW issue licenses where fox control is to protect released game and wildlife.

### Dogs Trapped in Badger Setts

It is an offence to deliberately introduce a dog into a sett unless licensed to do so. Where the dog is being used to hunt a wild mammal, the requirements of the "gamekeepers' exemption" in the Hunting Act 2004 must also be complied with.

However, some dogs, often terriers, may enter badger setts of their own accord. Before interfering with a sett to retrieve a trapped dog, a licence must be obtained from the Welsh Government. A licence will only be necessary if the sett displays signs of current use by badgers. (For further information on assessing sett activity, see Licensing).

Licences will only be issued where there is reasonable certainty that the dog can be located within the sett, and where there is evidence that the dog is still alive and can be retrieved. Digging into a sett is not without risks; the collapse of tunnels can endanger the dog and risk human safety. Most dogs emerge unscathed, and of their own accord, within 48 hours, so a licence would not

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normally be issued before this time had elapsed. Welsh Government Wildlife Advisers can advise on the most suitable course of action in these cases.

Unfortunately, the Welsh Government cannot offer a service that is available 24 hours, seven days a week. If a dog does become trapped in a sett over a weekend and immediate advice is required, dog owners could contact their local Police Wildlife Crime Officer or the RSPCA. Help in determining whether the sett is active may be sought from local badger groups. If the dog has not emerged from the sett by the end of the weekend and a licence is required, the Welsh Government should be contacted (see Further Information). The time elapsed before contacting the Welsh Government should not have a material effect as, dogs can survive for several days without food or water and action would normally be delayed for 48 hours to allow the dog to emerge by itself.

#### Further Information

- For further advice on resolving badger problems and on licensing procedures please contact a Wildlife Management Adviser, e-mail: [Wildlife@gov.wales](mailto:Wildlife@gov.wales) or Tel: 0300 061 5920.
- Other Welsh Government publications on badgers and a range of leaflets on wildlife topics are available on line at: <https://gov.wales/wildlife-habitat-conservation>.
- For advice in relation to badgers, cattle and tuberculosis please contact your local Animal Plant Health Agency (APHA) Office.
- Both the APHA and Welsh Government websites have useful publications to help cattle farmers and other animal keepers in Great Britain to combat TB.
- The Forestry Commission's Guidance notes: "Forest Operations and Badger

Setts – Forestry Practice Guide 9” is available free of charge from Forestry Commission Publications, PO Box 25, Wetherby, West Yorkshire LS23 7EW Tel no 0870 121 4180 or can be downloaded from their website: <https://www.forestryresearch.gov.uk/documents/6938/fcpg9.pdf>

- Information on badger licences issued by Natural Resources Wales is available on their website: <https://naturalresources.wales/permits-and-permissions/protected-species-licensing/uk-protected-species-licensing/badger-licences-issued-by-natural-resources-wales-and-the-welsh-government/?lang=en>

They have also published a booklet entitled “Badgers: Guidelines for Developers”. For all enquiries please phone their Enquiry line 0300 062 3000.

- Screening application forms under EIA can be obtained from your Divisional Office:
  - Government Buildings, Spa Road East, Llandrindod Wells, Powys LD1 5HA Tel. 01597 823777
  - Sarn Mynach, Llandudno Junction, Conwy LL31 9RZ Tel. 0300 062 5034
  - Government Buildings, Picton Terrace, Carmarthen SA31 3BT Tel. 01267 225300