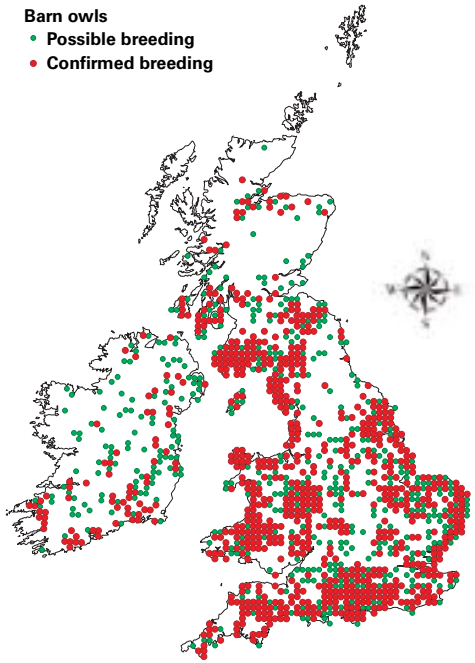
for birds
for people
for ever

FARMING FOR BIRDS

Barn owl



Distribution map showing the presence of breeding barn owls in Britain and Ireland 1988-91 (courtesy of BTO)

Nick Sampford (Barn Owl Trust)

The barn owl's presence is most easily detected by its ghostly image hunting at dawn or dusk, or its eerie shrieking call.

The barn owl is primarily a farmland bird, hunting for small mammals over rough grassland and along field edges. Barn owl population decline is largely a result of reduced food supply caused by changes in farming practices. The loss of old barns and increased road deaths are also significant in many areas. Barn owls can be encouraged by providing prey-rich rough grassland and artificial nest sites.

WHAT DO BARN OWLS NEED?

Nest and roost sites

They are traditionally associated with old barns and hollow trees but take readily to nestboxes placed in modern farm buildings, trees, or spaces provided in barn conversions.

Food and habitat

They primarily eat voles but also regularly include mice, shrews and rats in their diet. Their prey occurs at highest densities in rough grassland – tall, tussocky grass with a thick litter layer. Grass that's too short, lacks a litter layer, or is overgrown with scrub is far less suitable for barn owls.

David Ramsden (Barn Owl Trust)

ANNUAL LIFECYCLE OF A BARN OWL

January	February	March	April	May	June	July	August	September	October	November	December
Hunts up to 5 km from nest site.	Pairs roost at intended nest site, male courts and feeds female.		Egg laying and incubation, male hunts within 2 km of nest.		Rearing young & young fledging, pair hunt within 2 km of nest.		Young disperse. Adults' home-range size increases.				Hunts up to 5 km from nest site.

WHAT IS A LITTER LAYER?


Kevin Keatly (Barn Owl Trust)

It's simply a layer of horizontal grass 7–10 cm (3–4 in) deep at the base of the sward, providing cover for harmless small mammals such as voles, shrews and mice. A deep litter layer enables these animals to reach the densities needed to ensure barn owls can survive and breed within an area.

To create a litter layer, simply allow grass to grow tall through the spring and leave it to collapse in the autumn. The collapsed (horizontal) grass will be shaded out by the following spring's growth thus forming the litter layer as shown. Maintenance usually involves topping at a height of 13 cm (5 in) or occasional light grazing by cattle.

Grassland margins supported by agri-environment funding can provide new foraging opportunities for barn owls. The litter layer at the base of the grass can be seen to harbour small mammal tunnels. The grass and litter layer combined should be around 20–30 cm (8–12 in) tall.

NESTBOXES FOR BARN OWLS


Nick Sampford (Barn Owl Trust)

In some modern landscapes there are few nesting opportunities for barn owls. This has made the provision of artificial nest sites a crucial part of any conservation initiative. Luckily, barn owls readily use nestboxes which are relatively easy to make and erect. Deep boxes can help maximise the success of a nest.

The type of box you wish to use will depend upon your location. If you have an outbuilding at least 3 m (10 ft) high that is not subject to irregular loud disturbance you may wish to erect an internal box. This is the cheapest and simplest option. If you don't have a suitable building, then mounting a box in a prominent tree is another choice. However, in many areas such trees are now scarce and boxes mounted on telegraph poles can work very well but are not so safe for emerging young.

IMPORTANT NOTE: If your site is within 1 km of a motorway, dual carriageway, or similar trunk road please DO NOT provide nestboxes. Barn owls that attempt to live close to modern trunk roads generally don't survive long.

Pole-mounted box

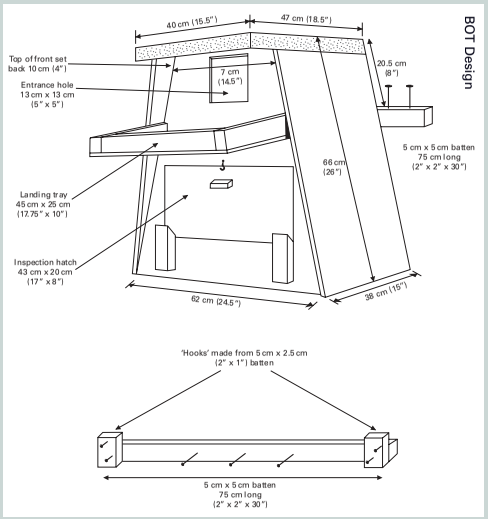
Where there are no suitable buildings or large trees, boxes can be mounted on substantial poles – old telegraph poles are ideal. However, pole-boxes involve more work and expense than other types, and it's impossible for young to climb back into the nest if they fall. In spite of these drawbacks, in areas of very rich habitat without buildings or trees, pole-boxes are certainly worth providing and can significantly boost barn owl numbers.


David Ramsden (Barn Owl Trust)

Tree-mounted box

The barn owl is not a woodland bird; suitable trees are large isolated trees, ideally more than 100 m (110 yd) from any wooded area. Try to mount the box at a height that is safe from human interference – 3 m (10 ft) or higher is ideal. There are two types of tree box: one has its entrance hole at the bottom and must only be used within the main body of the tree to allow adventurous owlets to exercise safely; the other type has its entrance hole at the top and is designed for erection on the side of a vertical tree trunk (see drawing below). In both cases the box entrance hole needs to be visible to a passing owl.


David Ramsden (Barn Owl Trust)

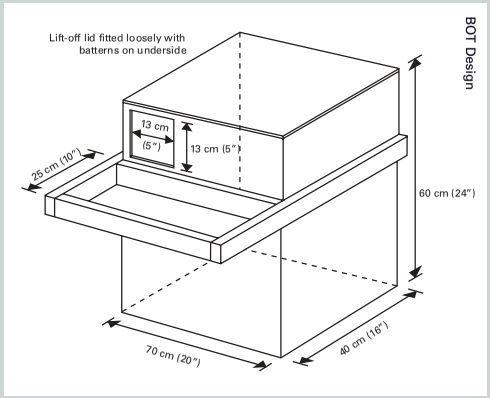



David Ramsden (Barn Owl Trust)

Internal box

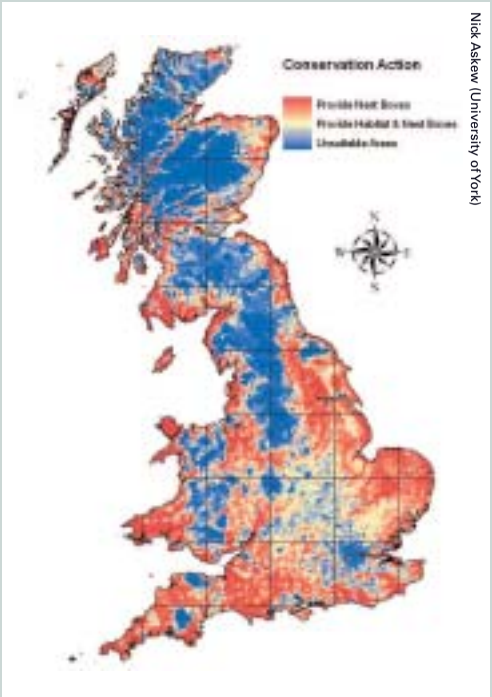
Contrary to popular belief, barn owls don't need an isolated quiet site. Provided that there is somewhere for them to hide at high level, they will roost and nest in busy farm buildings, occupied houses, and even in rural industrial units. As well as providing a nest place, nestboxes give the birds somewhere to hide, enabling them to live with all kinds of regular activity. They find it difficult to tolerate irregular disturbances.

Almost any type of rural building is suitable for a nestbox provided that the entrance opening and nestbox are at least 3 m (10 ft) above ground level. In traditional buildings the box is usually attached to a wooden roof truss and in a big modern sheds it is generally fixed to the wall.



Are you in a good barn owl area?

The map below shows an estimate of the suitability of Britain for barn owls. Red areas are generally suitable and nestboxes should be provided as a priority along with extra habitat where needed. Yellow areas generally need habitat creation as well as nestboxes. Blue areas are generally unsuitable for the species – mainly urban and upland locations. To zoom in and check the suitability of your local landscape visit www.barnowltrust.org.uk



Nick Askew (University of York)

Legal Protection

It is illegal to disturb breeding barn owls and professional advice should be sought before any work is undertaken which may impact upon the birds.

HOW CAN I ENCOURAGE BARN OWLS?

Nesting habitat

- Protect and maintain existing nest sites in buildings or tree holes.
- Existing nest sites can be supplemented with nestboxes of various types (see reverse).
- It is a good idea to erect boxes in pairs – within 500 m of each other – at a density of about one 'box-pair' per km^2.
- With many barn owls killed each year by cars, it is strongly advised not to mount a box within 1 km of a major road.

Grassland margins supported by agri-environment funding can provide new foraging opportunities for barn owls.

Summer and winter food

- **ELS** **OELS** **HLS** **SA** A pair generally hunts within 2km of the nest site during the breeding season, and requires rough grassland in the form of blocks and/or wide strips along field margins, woodland edges or watercourses. The ideal amount of rough grassland to aim for is 31-47 ha in pastoral areas, 14-21 ha in arable areas or 17-26 ha in mixed farming areas.
- Rough grass strips should be at least 2 m wide (ideally 6 m) and it is preferable for blocks of rough grassland to be linked by hedges or grass strips. Livestock should be prevented from grazing the grass strips.
- Rough grassland can be established using a grass-seed mix that includes tall, tussock-forming species (eg cocksfoot and timothy) along with shorter, softer grasses (eg Yorkshire fog, fescue and bent species).
- During the first year, new grass should be left to grow tall and collapse in the autumn thus forming the litter layer above which the second season's growth will appear.
- Following establishment, areas should be topped, or lightly grazed every second or third year.
- Cutting should be undertaken in the autumn with the cutting blades set at 10 cm (4 in) or higher.
- Where possible, cut rotationally within the landscape (eg cut each ditch-side in alternate years).
- Take care to protect barn owls from secondary poisoning during rodent control and be aware that bait-covering does not reduce the risk. Contact the Barn Owl Trust or visit their website for detailed information.

- **SA** Leave 25% of fixed set-aside uncut for up to three years to develop a tussocky sward and allow a population of small mammals to build up in the litter layer.

- **ELS** **OELS** **HLS** Retain areas of extensive grassland and maintain with low inputs of fertiliser.

KEY

= all farms = arable and mixed farms = pastoral farms

ELS = Entry Level Stewardship **OELS** = Organic Entry Level Stewardship **HLS** = Higher Level Stewardship **SA** = Set-aside

You can get further information on this and other ways of managing your farm for wildlife from:

RSPB
Agricultural Adviser, The RSPB, UK Headquarters, The Lodge, Sandy, Bedfordshire SG19 2DL
Tel: 01767 680551
www.rspb.org.uk/farming

The Barn Owl Trust
Waterleat, Ashburton, Devon, TQ13 7HU
Tel: 01364 653026
www.barnowltrust.org.uk

FWAG
Farming and Wildlife Advisory Group, NAC, Stoneleigh, Kenilworth, Warwickshire CV8 2RX Tel: 024 7669 6699
www.fwag.org.uk

RSPB regd charity no 207076

BOT regd charity no 299835

223-0911-06-07

PRIORITY ACTION

- Erect nestboxes in pairs (within 500 m (550 yd) of each other) at a density of about 1 pair per km^2.
- Create tussocky grassland (with a deep litter layer) as either marginal strips at least 2 m wide or as blocks of habitat. The ideal amount of rough grassland is 31-47 ha in pastoral areas, 14-21 ha in arable areas and 17-26 ha in mixed areas within 2 km of a nestbox.

See also the RSPB advisory sheets on:

- Beetle banks
- Buffer strips on cultivated land
- Buffer strips on grassland
- Reversion of arable and temporary grassland
- Set-aside management

See also the Barn Owl Trust advisory sheets on:

- Habitat management
- Nestboxes for use in barns & other buildings
- Nestboxes for use on vertical tree trunks
- Nestboxes for use within the branches of very large trees
- Rodent control
- How to prevent drowning

For answers to all of your farm wildlife enquiries, visit **www.farmwildlife.info**

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