



BTO

Looking out for birds



NEST BOXES

YOUR ESSENTIAL GUIDE



MATERIAL

Boxes should be made of waterproof insulating material, such as wood or 'woodcrete'. Boxes made from thin wood, plastic, metal or solid ceramic may overheat, which is dangerous for birds.

WATERPROOF

Make sure that water cannot get into the box where the roof is fixed.

WALLS

Box walls should be at least 15 mm thick to provide adequate insulation.

OPENING ROOF

A roof that can be lifted will allow access for cleaning and nest monitoring. An overhanging roof will make it harder for cats to reach in.

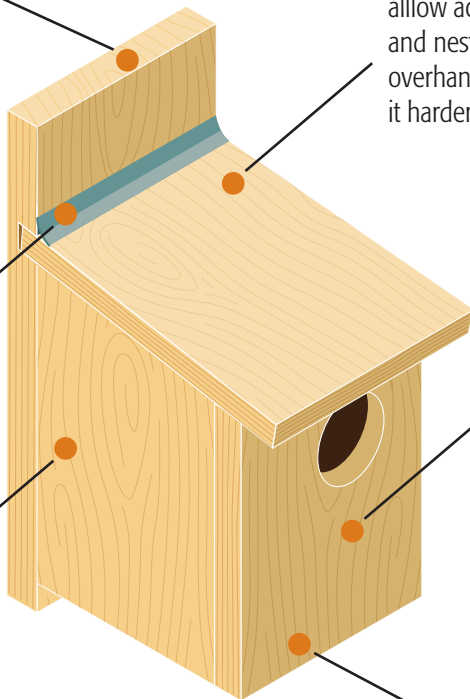
HOLE LOCATION

The hole should be at least 12 cm above the floor of the box to prevent predators reaching in.

FLOOR SIZE

The inside cavity should be a minimum of 15 cm across, and the floor should have small drainage holes in case water gets in.

Boxes should ideally look natural or inconspicuous.



BUYING A NEST BOX

With lots of different nest box designs on the market it can be difficult to decide which is the best one to purchase. The first thing is to think about the species that you wish to attract, since different species have different requirements. You'll discover more about this later in this guide.

There are some things that all good nest boxes will have, and you should look for these when purchasing a box (see diagram). There are also some things that you should avoid, most notably poorly-made boxes and those where the nest box is built into the roof of a bird table. Placing a bird box close to a bird table – or building it within the roof of the table – is a bad idea, reducing the chances that it will be used.

Avoid boxes that have a perch on the front; nesting birds do not need a perch and its presence makes it easier for predators to gain access.

BUILDING A NEST BOX

Making your own nest box is fun and rewarding. Wood is the best material to use. Soft woods, such as pine, are easy to cut and the natural resins ensure a long life. Hard woods, such as oak, will also be weather resistant but are hard to cut and may warp under certain conditions. Choose wood that is at least 15 mm thick.

Your basic tool-kit for making boxes will contain a handsaw, hammer, screwdriver, drill and drill bits. If you are using a rubber hinge to attach the roof then a heavy duty staple gun is useful. Use screws or nails to make the box, with glue used to provide additional strength.

Don't forget to drill drainage holes into the base and pre-drill holes in the back plate to allow attachment to a tree or building. It is important that the hinged roof can be opened easily for cleaning out the box at the end of the season and for monitoring visits. Use a water-based preservative on the outside of the box and leave the inside bare. There is no need to add any lining to the box.



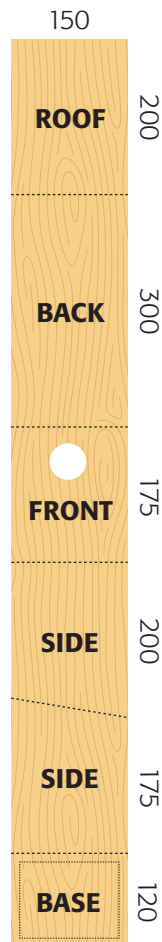
BLUE TIT NEST BOX

The Blue Tit is a familiar species that makes ready use of nest boxes placed within gardens, parks and woodland sites. A standard, small hole-fronted nest box, with an entrance hole of 25 mm diameter, works best for this species.

Although a Blue Tit may use a box with a larger entrance hole, there is the risk that it will be kicked out by a larger and more dominant species, such as Great Tit. Blue Tits are single-brooded, with most eggs laid during April and May.

Blue Tit boxes are best placed within suitable woodland habitat or a garden setting with a suitable tree or other structure onto which the box may be fixed. Avoid obvious sun traps, such as south-facing walls, and ideally place the box so that the entrance hole is facing north-east.

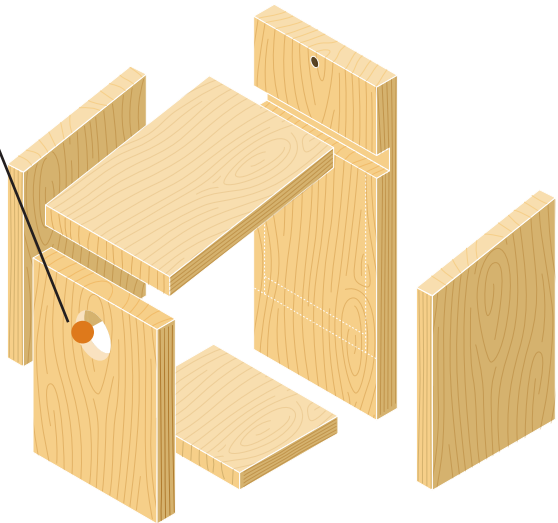
The box does not need to be positioned within cover, as Blue Tits like to scan for predators before leaving the box. Position the box 2–3 metres off the ground, higher if you think there is the risk of disturbance.



Plank size c. 150 x 1170 mm All measurements are in mm

25 mm
diameter for
Blue Tit (and
Coal Tit)

Exploded view showing how the box goes together



Blue Tit *Cyanistes caeruleus*

Clutch size: 8–10 eggs

Incubation: c. 12 days

Chicks fledge at: 16–22 days

Broods: 1 per year

Seasonality of nests with eggs (E) and young (Y), derived from Nest Record Scheme data.



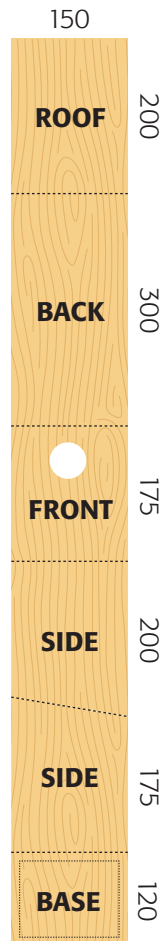
HOUSE SPARROW NEST BOX

The loss of suitable nest cavities appears to have played a role in the decline of this familiar species, so the provision of one or more nest boxes is something that you can do to help.

A standard, small hole-fronted nest box, with an entrance hole of 32 mm diameter, works best for this species. House Sparrows may make two or three breeding attempts during the breeding season.

House Sparrow nest boxes are best placed so that the entrance hole is facing north-east and is sheltered from the prevailing wind and rain. Avoid obvious sun traps, such as south-facing walls. The box does not need to be positioned within cover. Position the box 2–3 metres off the ground, higher if you think there is the risk of disturbance.

House Sparrows are colonial breeders, so consider placing several boxes in close proximity. Some people have found that leaving a piece of straw poking out of the entrance hole of a new box can encourage its use by House Sparrows.



Plank size c. 150 x 1170 mm All measurements are in mm

32 mm
diameter for
House Sparrow



House Sparrow *Passer domesticus*

Clutch size: 4–5 eggs

Incubation: c. 12 days

Chicks fledge at: 14–15 days

Broods: 2–3 per year

Seasonality of nests with eggs (E) and young (y), derived from Nest Record Scheme data.



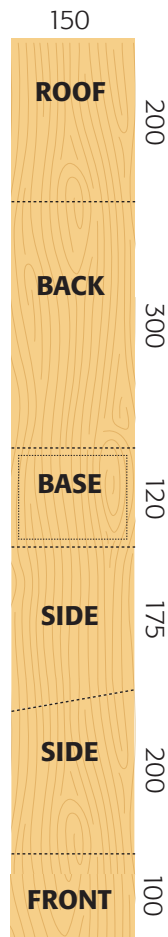
ROBIN NEST BOX

The familiar Robin is highly adaptable when it comes to nest sites, taking advantage of a wide range of opportunities. Nearly all of the sites used will involve some hole, hollow or recess and the species will readily take to a suitable nest box of the 'open-fronted' design.

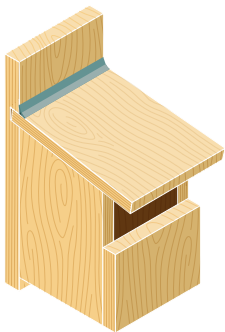
Robins are incredibly wary around the nest and will avoid entering the nest site if they suspect that they are being watched, both when building the nest and when feeding the chicks. Nest boxes are often re-used in successive years.

Robin nest boxes are best placed so that the entrance hole is facing north-east and is sheltered from the prevailing wind and rain. Avoid obvious sun traps, such as south-facing walls.

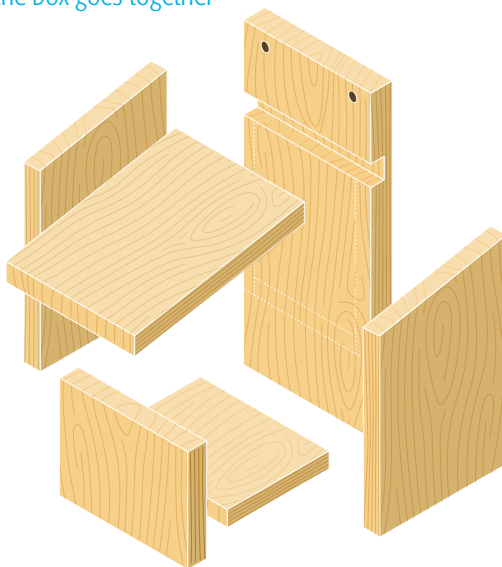
The box should be placed within the cover of a climber or overhanging vegetation. Robins typically nest quite low, usually less than 2 metres off the ground, but can nest much higher.



Plank size c. 150 x 1095 mm All measurements are in mm



Exploded view showing how the box goes together



Robin *Erithacus rubecula*

Clutch size: 4–5 eggs

Incubation: 13–14 days

Chicks fledge at: 13–14 days

Broods: 2 (3) per year

Seasonality of nests with eggs (E) and young (y), derived from Nest Record Scheme data.

	J	F	M	A	M	J	J	A	S	O	N	D
E												
Y												

MONITORING YOUR NEST BOX

Putting up a nest box is very worthwhile, but you can increase its value by recording how it is used. This is known as nest monitoring and is something that is coordinated through the BTO Nest Record Scheme. Information on nesting birds – such as the number of eggs laid and chicks reared – is essential if we are to understand why bird populations change and how they are affected by, for example, a changing climate.

BTO Nest Recorders provide this valuable information for the nests of a broad range of bird species. Nest Records from gardens are needed to help us understand the impacts of urbanisation.

You can find out more about the BTO Nest Record Scheme via the BTO website (www.bto.org) and there is a particularly helpful 'starter pack' that you can request.



YOUNG CHICKS, MIKE MAINWARING / BTO

LOOKING AFTER YOUR NEST BOX

Nest boxes should be cleaned out annually, between 1 September and 31 January. Be aware, however, that birds may occasionally breed particularly early or late in the year, so do check the nest contents first.

Removing old nests may be beneficial for nesting birds as it can reduce the number of nest parasites (such as fleas) present the following breeding season.

The use of a water-based preservative on the outside of the box – leave the inside bare – can help to extend the life of a box. You may find that you need to use the preservative every few years.



GETTING MORE INFORMATION

Much of the information presented in this short guide is taken from the BTO publication 'Nestboxes: your complete guide', which is available from BTO. This 162 page book contains step-by-step instructions for constructing nest box designs for a broad range of species, from tits and sparrows to owls, Kestrel, Swift and House Martin. It also contains a section on wildlife gardening.

The cutting plans provided in this guide are also available – with more detail – as downloadable PDFs from www.bto.org.

You can find a wealth of information about nest boxes and the birds themselves on the BTO website. There are pages with information on status, breeding ecology and movements, together with identification videos that you can use to improve your identification skills. If you have a query regarding birds then contact us by email (info@bto.org), phone (01842-750050) or post (BTO, The Nunnery, Thetford, Norfolk, IP24 2PU).



DOING MORE IN YOUR GARDEN

There is so much that you can do to make your garden wildlife-friendly. In addition to providing nest boxes, you can plant flowers, shrubs and trees that are good for wildlife, providing a source of berries and seeds. The BTO has produced various guides and articles on wildlife-friendly gardening, and there are plenty of resources available online too, at www.bto.org

You can also make a significant contribution by participating in one of the BTO's garden-based 'citizen science' surveys. The biggest of these is the weekly BTO Garden BirdWatch scheme, through which several thousand homeowners chart the changing fortunes of birds and other garden wildlife. Find out more at www.bto.org/gbw

BTO science is telling us more about gardens and the wildlife that they contain. By participating in the BTO's work you can make a difference for birds and other garden wildlife.



DOING MORE IN YOUR GARDEN

As well as visiting gardens to nest, many birds are attracted by the food available at garden feeding stations. While this food is virtually never used to feed chicks in the nest – most songbirds feed their young on insects and other invertebrates – it is a valuable resource for newly independent young once they have fledged.

Research shows that gardens do not hold the densities of insects that are seen in woodland habitats, and this can make it difficult for small birds to find sufficient numbers for their chicks. By taking a wildlife-friendly approach to your gardening, perhaps by planting suitable bushes and flowers, you can help to improve things for parent birds, busy searching for insect prey.

By continuing to provide suitable seeds in your feeders, such as sunflower hearts, you will be helping to feed adult birds during the breeding season, freeing up more insects for their chicks.



BTO is an independent charity. We seek to understand more about birds with the help of our members and volunteers.

Our goals are to:

- enable more people to participate;
- deliver impartial and relevant science;
- inspire and empower.

Find out more about
joining our community.

www.bto.org/join



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