

# Guidance for including bird boxes in residential development

## Which birds live in nest boxes?

There are a number of bird species that nest in cavities which could be accommodated in nest boxes included in the fabric of a building. Some of these species are rated as being of conservation concern e.g. House Sparrow, Starling and Swift; others, though not under threat, could also be considered to provide enjoyment to people e.g. Great Tits and Blue Tits.



*Action for Swifts*

Other species that may breed in nest boxes in an urban environment include Tawny Owl, Barn Owl, Kestrel, Peregrine, Stock Dove, Jackdaw, Black Redstart, Pied Wagtail, Spotted Flycatcher, Robin, Wren, Tree Sparrow, Swallow and House Martin. All of these species deserve help or are fun to have around, but we do not consider them here.

## Why install nest boxes?

Birds in the environment are good for people's well being. Swifts in particular are iconic summer visitors that brighten our skies with their high-speed aerial antics, but they are uniquely dependent on the built environment for nest sites. With extensive renovation of older buildings, and new builds which create a totally sealed space, Swifts can no longer access nooks and crannies in walls or voids under the eaves of buildings. Their only salvation is for us to provide large numbers of Swift boxes, especially in new build houses.

## What nest boxes are most suitable?

Any nest box, with a large enough entrance, can be a home for all of the species considered here. However, Starlings can make a mess, so, as with House Martin nests, one needs to be mindful of this when choosing a position.

A nest box designed primarily for Swifts, with an entrance too small for Starlings can accommodate House Sparrows, Great Tits and Bluetits but the converse is not true, nest boxes designed for these smaller species are not suitable for Swifts.

It is commonplace to specify 'sparrow terraces' to help House Sparrows but many will be occupied not by sparrows but by just one pair of Great Tits or Bluetits. Occupancy by sparrows is low, so they are not the most cost effective way of helping this species. On the other hand, many Swift boxes are occupied by House Sparrows; for example, at Edgecombe Flats in Cambridge, 71 Swift boxes contain 12 pairs of Swifts and about 40 pairs of House Sparrows. So a better strategy is to provide a greater number of Swift boxes and fewer sparrow terraces. Of equal importance to House Sparrows is the provision of suitable cover in the form of hedges and large shrubs in the vicinity of the nest boxes.

### How many nest boxes should be installed?

In the last 20 years, we have lost of the order of 100,000 pairs of Swifts in the UK. Occupancy rates of nest boxes are about 1/3rd so to recover just these losses needs 300,000 new nest boxes, many of which will be occupied by House Sparrows. New residential development provides a great opportunity to achieve this.

Best practice guidance is to provide an average of 1 nest box per dwelling (ref RIBA 2016). For example, Exeter City Council was the first to adopt this as a standard. As the main target species, House Sparrow and Swift, are colonial, it would be better to deploy 2 boxes in every other house, or even 3 in every 3rd dwelling. A useful guide is to install 2 to 4 Swift Bricks on a medium to large house, from 4 to 10 on a small block of flats, and 10 to 40 or more on a large site like a school, hospital or warehouse, or a major apartment development.

### Where should nest boxes be placed?

For Swifts and House Sparrows, nest bricks embedded in the fabric of the dwelling are best. See Figure 1 below. As for Great Tits and Bluetits it would be better to provide external boxes, possibly attached to walls, but even better on trees in the vicinity.

Of course, Starlings also need help but, since they are aggressive to Swifts, they should be situated well away from buildings where provision for Swifts has been made, eg on trees in gardens, parks or even on street trees if these are big enough.

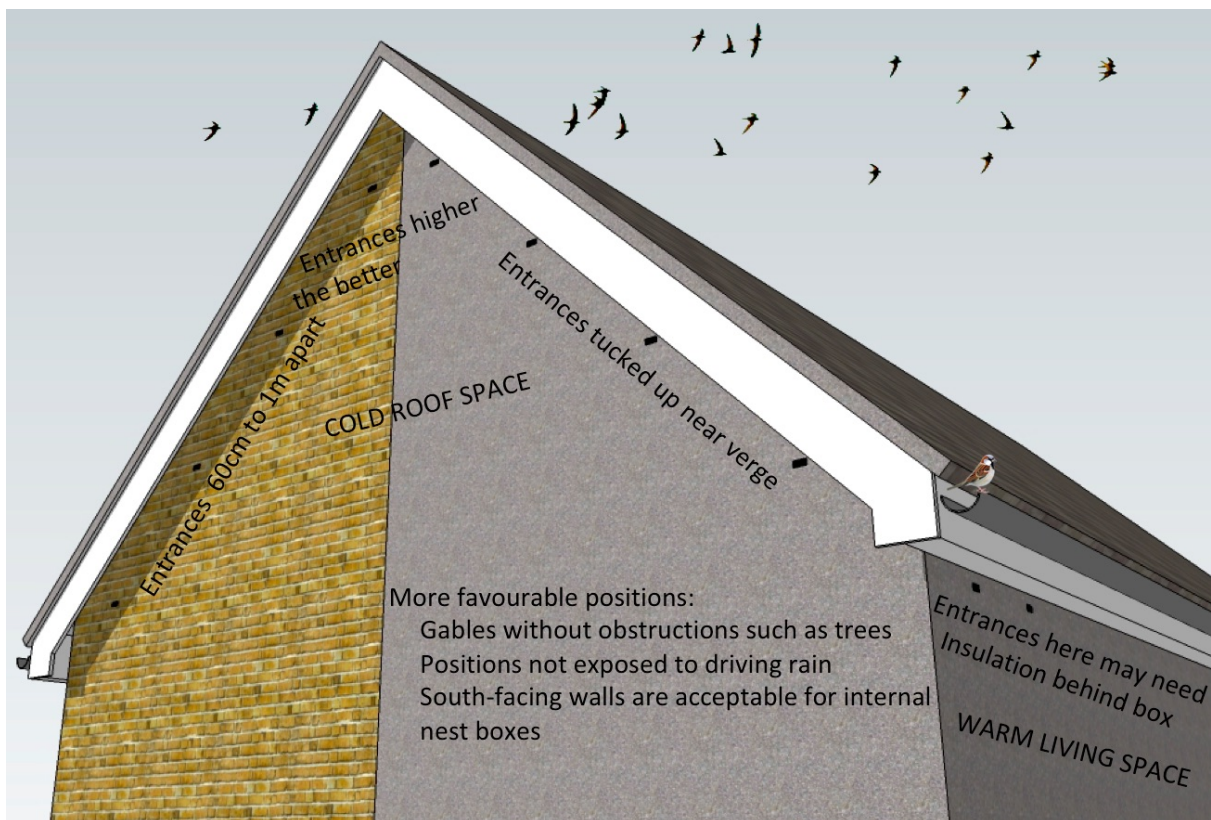


Figure 1: Recommended positions of internal nest boxes for Swifts and House Sparrows. Other possibilities include holes in soffits and fascias.

## **Building considerations**

As for the choice of nest box embedded in the fabric of the building, in brick walls, it is easier for bricklayers if the vertical dimension is 1, 2 or even 3 bricks high. A number of products sourced in Europe are not compatible with UK brick sizes, requiring more work for the bricklayer. In rendered block walls, this issue is not so important, as blocks are easier to cut.

Modern houses are built with a cavity: timber frame houses have a cavity of 50mm, conventional cavity walls have a cavity of 100mm or even 150mm. If it is desired that boxes do not penetrate beyond the cavity, then the depth needs to be compatible with the cavity. In a cold roof space, it may also be acceptable to span the cavity and to penetrate the inner leaf.

Anything placed in a wall, intruding on the cavity, has a risk of moisture incursion or cold spots. With appropriate positioning, both can be avoided (see Figure 1). Positions where significant amounts of driving rain may hit the wall above the nest box will need a cavity tray or should be avoided. (cavity tray = sloping water-proof membrane spanning the cavity)

Positions in a cold roof space have no risk of cold spots, but positions lower down, where there is heated living space inside will need a layer of insulation behind the nest box. (see Figure 1)

## **House owner reactions**

It should be noted that concerns that house owners might be averse to having birds breeding in their walls were dispelled by Sarah Roberts of Gloucester University.

(See [actionforswifts.blogspot.com/2018/06/the-attitudes-of-housing-occupants-to.html](http://actionforswifts.blogspot.com/2018/06/the-attitudes-of-housing-occupants-to.html))

Her research clearly demonstrated quite the opposite. Swifts are very clean and don't leave the piles of droppings that some other birds do.

## **Summary**

- Bird boxes in residential development are an easy win for Biodiversity Net Gain.
- Bird boxes suitable for multiple species are to be preferred.
- Swift nest boxes can also accommodate House Sparrows, Great Tits and Blue Tits
- An average allocation of 1 bird box per dwelling is recommended.
- As the primary target species, Swifts and House Sparrows, are colonial, 2 boxes in every other or 3 boxes in every third dwelling are preferred.
- In brick walls, bird box products compatible with UK brick sizes are to be preferred
- Bird boxes should be installed as high as possible. High up in a gable end is particularly good, no lower than 4 metres, 5 metres or above is better.
- Internal nest boxes do not overheat on south-facing walls
- Obstructions in the flyway in front of a nest box should be avoided, especially trees.
- Attention needs to be paid to the potential for moisture incursion and cold spots
- Although external nest boxes can be an option, internal nest bricks are to be preferred for reasons of security, thermal stability, and aesthetics.
- External nest boxes for Great Tits, Blue Tits and Starlings are more suitably placed lower down on a wall or on mature trees in the vicinity.

## References

Available Swift bricks PDF: [tinyurl.com/swiftbricks](https://tinyurl.com/swiftbricks)

Sarah Roberts 2017: The Attitudes of Housing Occupants to Integral Bird and Bat Boxes  
[actionforswifts.blogspot.com/2018/06/the-attitudes-of-housing-occupants-to.html](https://actionforswifts.blogspot.com/2018/06/the-attitudes-of-housing-occupants-to.html)

RIBA 2016: *Designing for Biodiversity*, Second Edition, Kelly Gunnell, Brian Murphy and Dr Carol Williams

Action for Swifts, January 2019

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