## Response to Local Plan Issues and Options Consultation

### Q. 14 How do we achieve biodiversity net gain through new developments?

By Dick Newell, Action for Swifts & John Willis, Fulbourn Swifts Group

## Executive summary

Provision of integral swift boxes achieves Biodiversity Net Gain at low cost. Swift boxes are the nearest there is to a general-purpose bird box for small cavity-nesting species including house sparrows, starlings, bluetits, great tits and occasionally other species such as house martins and tree sparrows.

While measurable Biodiversity Net Gain relates to the provision of green habitat, the birds attracted to such habitat need somewhere to breed in urban, suburban and rural environments alike.

Swifts, in particular, need help; they have declined at an average rate of 5.4% per annum over the last 10 years and by 60% in the last 25 years.

Integral swift boxes also provide roosting space in winter for small birds, insects such as butterflies and the occasional bat.

The Royal Institute of British Architects (RIBA) recommends a 1:1 ratio between bird nest/roost boxes and dwellings in new development. Surveys show that 75% of householders think that integral bird boxes are a good idea, 25% are neutral and <1% are not in favour.

Birds in the urban environment are good for people's mental health and well-being.

### Background

As noted in your Issues and Options Documentation, National Policy requires new developments to achieve biodiversity net gain. This process will include mitigation measures where wildlife would be impacted, enhancement of existing habitats such as native hedgerows and where possible the introduction of habitats and features to encourage additional wildlife such as birds, bats or bees.

The health benefits of bringing nature and green spaces close to homes is well known. This can take the form of small open spaces, trees, hedgerows of native species, shrubberies and climbing plants to provide nectar for bees and other invertebrates and food for birds. It is also to provide nesting sites for birds close to the dwellings and ensure that there are ‘corridors’ for hedgehogs, small mammals and amphibians under garden fences.

This is highlighted in Government Guidance on the NPPF issued on 21 July 2019 (see below):

https://www.gov.uk/government/news/brokenshire-orders-house-builders-to-protect-wildlife

https://www.gov.uk/guidance/natural-environment

Paragraph 23 of this Guidance headed 'How can biodiversity net gain be achieved?' includes at the end of the first sub paragraph 'Relatively small features can often achieve important benefits for wildlife, such as incorporating 'swift bricks' and bat boxes in developments and providing safe routes for hedgehogs between different areas of habitat.'

**Swifts**

Swifts migrate to the UK from Africa every summer and they spend their life almost entirely on the wing and only come into land when nesting. They feed, sleep, collect nesting material and mate in flight. They hunt for insects over meadows, woods and open water and can travel many kilometres to do so. In typical nesting behaviour, small groups of birds fly very fast along the roof tops at the level of the eaves, screaming as they go – one of the iconic sights and sounds of summer.

**Decline of Cavity Nesting Birds**

Cavity nesting birds include swifts (largely building dependent in the UK), sparrows and starlings (urban birds). These species have nested for generations in older houses in holes and cavities under the eaves and in walls. However, they are in dramatic decline – sparrows and starlings are Red Listed and although swifts are only Amber Listed this is on a technicality as data is required over 25 years and at the time of the last assessment this data was not available for swifts.

Swifts have declined at an average rate of 5.4% per annum over the last 10 years and by 60% in the last 25 years, so the swift may well move from the Amber to the Red list at the next BoCC revision in 2021. The most recent estimate is that in 2016 there were around 59,000 pairs of swifts in the UK. In addition, according to the International Union for Conservation of Nature (IUCN) criteria the swift is classified as ‘endangered’ in the UK.

Although sparrows suffered a big decline some years ago, the population has been more stable in recent years and it is estimated that there are over 5 million pairs – almost 100 pairs of house sparrows to every pair of swifts.

One big factor in the decline of all three is likely to be the loss of nesting sites through building renovation and insulation and more rigorous standards in new build homes. The inclusion of special nest bricks in new houses is therefore an important step in helping to halt this decline.

For further information on the plight of the swift see Day et al (2019) (reference 1) and:

https://actionforswifts.com

https://swift-conservation.org

**Proposed Choice of Box Size and Type**

Swift boxes are frequently used by other cavity-nesting small birds such as house sparrows, starlings, great tits and bluetits and occasionally tree sparrows and house martins. A local example is at Edgecombe Flats in Cambridge. In 2010 Cambridge City Council, with help from Action for Swifts, installed 71 external swift boxes on their properties at Edgecombe Flats. In the first year, two pairs of swifts moved into boxes and small increasing numbers were observed in subsequent seasons. When a survey was carried out by the RSPB in 2016 it was found that the boxes had been occupied by 12 pairs of swifts, with evidence of many pairs of house sparrows and a few great tits!

http://actionforswifts.com/2016/08/edgecombe-flats.html

At Fulbourn (see Case Study) starlings and sparrows regularly use the swift boxes and in 2016 there were also 5 pairs of house martins recorded.

At a Duchy of Cornwall development at Tregunnell Hill in Newquay, where an average of 1 swift box per residential home was installed, within a couple of years one third of the boxes were occupied by sparrows together with a pair of swifts:

https://www.rspb.org.uk/our-work/rspb-news/news/stories/the-duchy-of-cornwall-giving-swifts-a-home/

Sparrow boxes are smaller and usually produced as 3 nest chambers in one unit (sparrow terrace) – these are too small to be used by swifts or starlings – and there is evidence that they are rarely used by more than one pair of sparrows. Occupation by a single pair of great tits or bluetits is more common. While they are colonial breeders, single boxes at least a metre apart may be preferable for both sparrows and swifts.

Nest cups for swallows and house martins may be best left to new residents to provide, as many people may be put off by the level of fouling from these species. The most popular nest box likely to be purchased by families would be a tit box and given that tits will use swift bricks there seems little point in making specific provision within a scheme.

In general, it is not considered a sustainable practice to place boxes in trees on new housing developments because of the problems of long-term maintenance and the potential for vandalism. Boxes within the building structure are strongly to be preferred rather than those fixed externally to the walls, as these would need longer term maintenance and their appearance can deteriorate relatively quickly. Exceptions could be for specialist species such as owls where boxes made of durable materials should be securely fixed into healthy mature trees in wooded areas.

We conclude that swift boxes are the nearest there is to a general-purpose bird box for small cavity-nesting species including house sparrows, starlings, blue tits, great tits and occasionally other species such as house martins and tree sparrows.

**Case Study - The Swifts Development, Fulbourn**

This project involved the incorporation of 276 swift nest boxes (more than 1 per household) into the new houses during the re-development of the 1960s built Windmill Estate, which was home for over 150 families, as well as a large colony of swifts. Phased re-development over a number of years enabled the swifts to start to colonise the new boxes while some of the old nest sites were still available and being used.

Within 6 years (to 2014) a colony of swifts that was potentially threatened by the re-development had become well established in the new housing areas with over 50% of the 168 internal boxes being used (reference 2). It is interesting to note that of the 108 external boxes less than 5% were in use. It is estimated that this project now houses over 100 pairs of Swifts.

Overall it is one of the most successful nest box projects in the UK and in 2011 Rob Mungovan of SCDC received the Institute of Ecology and Environmental Management ‘Tony Bradshaw Best Practice Award’ for the project.

In the 2014 survey it was also noted that 17 swift boxes (15 external and 2 internal) were being used by starlings and 9 internal boxes were used by house sparrows.

**Proposed Level of Nest Box Provision in New Developments**

In the SCDC Biodiversity SPD (2009) in Chapter 3 on 'The Development Process' the following points from page 34 are particularly relevant:

*3.77 Biodiversity Issue B7 - Biodiversity Provision in the Design of New Buildings*
*1. That on all major housing developments 50% of the dwellings will have features such as bird, bat or insect boxes provided in close association with the properties. On all other sites suitable provision for biodiversity enhancements shall be negotiated to achieve a similar standard.*

At least a 1:1 ratio of nest bricks per dwelling is generally accepted now as good practice – a level of provision outlined in the award-winning Exeter City Council Residential Design Guide SPD (2010). Stephen Fitt of the RSPB South West Regional Office has been working with Exeter Planners over a period of 10 years on the implementation of the biodiversity requirements of this guide and there is acceptance that in many cases the most suitable box type for all cavity nesting birds is the swift brick.

A similar standard was adopted by the Town and Country Planning Association and the Wildlife Trusts in 2012 (reference 3) and The Royal Institute of British Architects (RIBA) in 2013 (reference 4).

The Duchy of Cornwall adopted the same principles in 2015, and a good example of the provision of a general type of integral box for all cavity nesting birds is the Nansleden development by The Duchy of Cornwall in Newquay:

https://www.rspb.org.uk/our-work/rspb-news/news/stories/the-duchy-of-cornwall-giving-swifts-a-home/

The Cornwall Council Biodiversity Guide (2018) (reference 5) gives prescriptive measures for the provision of bat and bird boxes, again at the rate of 1 nest place per new dwelling. This document also includes a case study on Nansleden mentioned above.

https://www.cornwall.gov.uk/media/38341273/biodiversity-guide.pdf

The recent Oxford City Council Technical Advice Note on Biodiversity (reference 6) gives an 'expected provision' of bird nest sites for building dependent birds (i.e. swifts) at a rate of 1 per house and 1 per 2 flats, with separate provision for bats at a rate of 1 per 5 houses. Provision of such nest boxes in schools, student accommodation and hotels is addressed by a ratio of 1 per 250 $m^2$ floor space.

https://www.oxford.gov.uk/info/20067/planning_policy/745/planning_policy_-_technical_advice_notes_tan

We conclude that provision of integral boxes, such as swift boxes, at a ratio of at least 1:1 per dwelling is the modern standard to accommodate a range of cavity nesting birds in new developments.

**Choice and Location of Swift Bricks**

There is now a good range of swift bricks on the market and developers can choose models best suited to blend in with their external finishes. It should be noted that for ease of

installation those swift bricks compatible with UK brick sizes would be ideal. Also, there are types available, which are designed to be more easily retro-fitted to existing structures for projects where there is an element of refurbishment as well as new build.

A useful Guide sponsored by Action for Swifts, Swift Conservation and the RSPB lists the models of swift bricks available in the UK (reference 7), and there is also Guidance for the placement of swift bricks in residential developments (reference 8)

**Enforcement**

Our experience of monitoring the installation of bird boxes at Northstowe and elsewhere in South Cambridgeshire has highlighted to us the difficulty of enforcement. Where there are complex schemes across a development to provide biodiversity net gain how can one be sure that they have been put in place, and even more so how are they to be maintained long term? - these are housing developments not nature reserves! Perhaps it is better to focus on providing a pleasant green environment around people's homes with obvious features like integral bird boxes, bee and bat boxes, green infrastructure and hedgehog corridors, and have developers provide funds for more complex natural schemes off site where ongoing maintenance can be assured more easily.

**Green Infrastructure**

In order to provide a pleasant environment to support the health and wellbeing of residents it is important to retain and provide green infrastructure in the area immediately around new houses rather than houses being marooned in an area of hard landscaping separated from islands of higher value green space around the edges.

Retention of existing natural hedgerows and trees and planting of new native trees, hedging and shrubs close to the dwellings will provide a suitable environment for people, birds, animals and invertebrates. These should link to the wider green corridors to encourage wildlife to live within and move through the development and to and from adjacent habitats.

While swifts will travel far, if necessary, to find food, the enrichment of the habitat close to homes will attract a wider range of birds into gardens. For sparrows in particular hedges and shrubs for shelter are important close to potential nest sites.

Boundaries should be permeable and ideally planted with hedging or fences with small gaps at the base to permit the movement of hedgehogs, amphibians and small mammals. Suitable shrubs and herbaceous planting can be used to encourage insects and bees.

**Community engagement**

An MSc study (reference 9), which involved interviewing residents of housing developments with integral swift bricks installed, found that 75% of the people thought that the bricks were a good thing and 85% said that their decision to buy a house would be unlikely to be negatively influenced by the presence of such a brick.

From the start of the re -building of The Swifts Development, Fulbourn, the community – householders and villagers – were kept aware of plans for installation of swift boxes and Fulbourn Swifts Group was formed. Members of this group, including some residents of The Swifts estate, have monitored the progress of the swift colony and are involved in swift conservation projects locally. Such groups contribute to community cohesion and help to promote social wellbeing. Across the UK there are over 80 citizen groups participating in The Swifts Local Network raising awareness, raising funds, installing nest boxes, providing

education and generally supporting the conservation of swifts and other aspects of biodiversity under threat.

A good example of what can be done by a developer is provided by The Duchy of Cornwall, which is planning to install between 5,000 and 8,000 swift boxes on new developments across the south of England over the next 30 years and a new citizen science survey has been instigated, which will involve residents of three new developments in Cornwall observing and reporting on the species that take up the nest boxes in their neighbourhood:

https://www.rspb.org.uk/our-work/rspb-news/news/stories/the-big-birdbox-survey/

**Conclusions**

The inclusion of versatile swift bricks, which can be used by a range of species, in all new developments (including small infill) in line with current best practice (at least 1:1 ratio) is a sustainable and cost-effective way of contributing to gains in biodiversity and bringing nature close to people. This should be part of a wider environmental plan which includes the provision of green infrastructure near to the houses so that species such as sparrows can benefit from shelter (hedges and shrubbery) and foraging areas.

The need to incorporate just one box type across the whole site could also provide advantages for the builders and help to address compliance issues.

Developments of flats, offices, hotels and other commercial premises should also be required to make provision for these boxes to encourage a variety of species on those sites.

There should be separate provision for special birds such as owls, bats and solitary bees according to the nature and location of the site being developed.

**References**


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