

Making changes to a building

Any modifications to existing buildings, such as renovations, restorations, conversions or demolition, have the potential to negatively affect wildlife. Planning permission is required for most structural alterations to buildings. Planning authorities are required to take account of the presence of protected species (Directive 2001/42/EC, the SEA Directive). Planning conditions or agreements may be used to ensure the conservation status of protected species is maintained. It is the responsibility of the developer, or those responsible for the building activities in question, to ensure that impacts on wildlife are appropriately recognised and mitigated. Small scale changes to buildings may be outside the remit of the planning system, but nonetheless have the potential to cause negative effects to wildlife. In all cases, regardless of the extent of works and the planning requirements, works need to be undertaken within the legal requirements.



Here, selective pointing is being carried out to facilitate maintenance of access points for bats and birds. Certain gaps can be left without interfering with the structural stability of the building

Leisler's Bat



Careful removal of slates will ensure hibernating bats are discovered, and disturbance is minimised

The presence of wildlife in a building does not mean that works cannot be carried out. However, it does mean that careful consideration and planning is required to reduce the impact on any wildlife using the building. When planning a development, it is advisable to check for the presence of wildlife as early as possible so that any planning and licensing issues can be addressed before resources are committed. By following the steps outlined below, it is usually possible to plan and undertake works in a way that minimises impact to wildlife.

1. Understand and adhere to the legislation

- Is a derogation licence required?
- Who is responsible?

2. Understand what wildlife is present and the potential effects

- Consult professionals

3. Plan works to minimise negative effects to wildlife

Take account of:

- Timing of works
- Retention of existing sites used by wildlife, where possible

4. Provide alternative sites if required

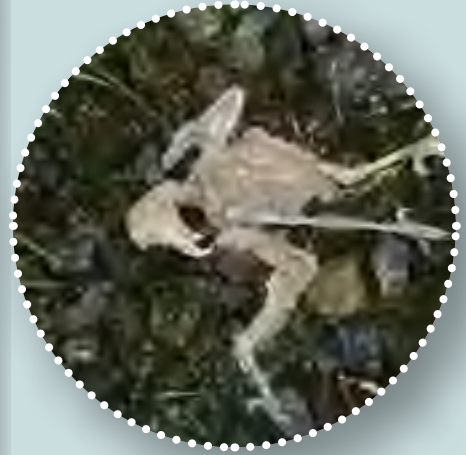
- Enhance existing features or build in space for wildlife
- Provide nest boxes, swift bricks, bat bricks etc.



How wildlife can be affected by modifications to buildings

With proper planning, changes to buildings can be made without significant negative consequences for wildlife. However, in cases where there is a lack of understanding of legal requirements and/or a lack of surveys to identify wildlife present, detrimental effects upon wildlife can and often do occur; examples of which are outlined below.

Wildlife in building	Works undertaken	Effects
Leisler's Bats roosting/hibernating in a small cavity in stone farm building	Restoration works including re-pointing carried out in November; no survey for bats was carried out	Roost is sealed with bats inside, bats die, roost is lost
Barn Owl nesting in chimney of derelict cottage	Cottage is demolished in August, without a survey for breeding birds	Young Barn Owls in nest are crushed when chimney collapses and nest is destroyed
Swift nesting under eaves of townhouse	Improvement works requiring scaffold erected around the building in July, but no survey for breeding birds was carried out prior to works	Adult Swift can't access nests due to scaffold and netting, young in nest starve



Barn Owl which was found within a demolished building

Case Study

Barn Owl nest in cottage which was being renovated

Barn Owls nested in the chimney of this cottage pictured, right), without the knowledge of the owner. Renovation works were carried out in June. Works included removal of the central chimney in which the owls were nesting. The Barn Owls were discovered during the works, but at that stage the nest had been rendered unsuitable. The site owner took immediate action, ceased works and contacted BirdWatch Ireland and the NPWS. An alternative nest site was prepared using existing materials available on site and in close proximity to the original nest. The three Barn Owl chicks, which were several weeks from fledging, were placed in the newly constructed nest site, which was monitored closely that night to ensure that the adults returned to feed the young. Works on the cottage were postponed until after the breeding season and all three Barn Owls fledged.



The Barn Owls were originally in the chimney. The new nest site is to the right of the chimney, in the top right of the image

Legislation

The Wildlife Acts 1976–2018 is the main Irish legislation protecting biodiversity. Almost all flora and fauna species, and the habitats in which they live and reproduce, are protected under these Acts.

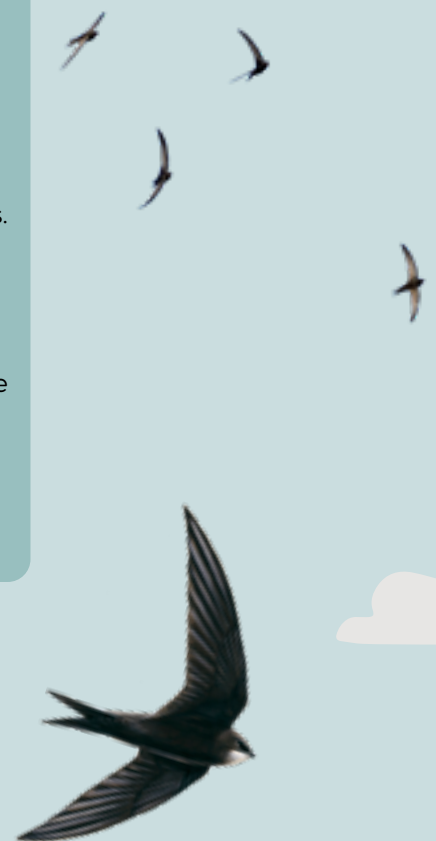
The European Communities (Birds and Natural Habitats) Regulations (2011–2015) transpose the EU Habitats Directive (92/43/EEC) and the EU Birds Directives (79/409/EEC) into Irish law. The EU Habitats Directive provides protection to threatened habitats, flora and fauna, including all bat species and their roosting sites in Ireland. The EU Birds Directive provides protection to all wild birds, their nests and eggs.

What does this mean for wildlife in buildings?

Breeding and resting places of protected wildlife are afforded protection under the Wildlife Acts and EU law. Therefore, disturbance to protected wildlife or their breeding/resting places may be an offence. If protected wildlife is discovered during works, activities must stop. For example, if a bat roost, bird's nest or Pine Marten breeding den is found during roof renovations, works should stop immediately to avoid committing an offence, and the advice of your local NPWS Conservation Ranger should be sought.

Key considerations for planning changes to a building

- Breeding and resting places of protected wildlife are afforded protection under the Wildlife Acts. Therefore, disturbance to wildlife or their breeding/resting places is an offence.
- A grant of planning permission does not constitute a licence or permission to disturb wildlife or interfere with their breeding or resting places.
- It is the responsibility of the developer and building owner to ensure that wildlife present, and any potential effects on wildlife, are taken into account, and that all works undertaken are within the legal requirements.
- If work is being undertaken on a building, and wildlife is discovered, a National Parks and Wildlife Service (NPWS) Conservation Ranger should be contacted immediately for advice.
- If works are to be carried out which could result in disturbance to wildlife (which may constitute an offence), a derogation licence is required from the NPWS (see below).
- If the proposed activity can be timed, organised and carried out so as to avoid committing offences, no licence is required.



What is a derogation licence?

An application may be made to the NPWS for a derogation licence to permit actions affecting wildlife or their breeding or resting sites that would normally be prohibited by law. The applicant must show that there is no satisfactory alternative and that the action will not adversely affect the conservation status of the species. If granted, a derogation licence may require mitigation measures. For example, destruction of a bat roost may only be facilitated if an alternative roost is provided.

When do I need a licence?

If the proposed activity can be timed, organised and carried out so as to avoid committing offences, a licence is not required. To ensure that no unlawful activities are undertaken, it is recommended that a licence/derogation is applied for if, on the basis of survey information, it appears that the site in question is used by protected species and that works would cause direct disturbance (e.g. disturbance to a female Pine Marten with kits), or would result in the loss of, or changes to a roost site for bats.

Case Study



Stone farm building repairs involving a Natterer's Bat roost, Co. Longford

During a bat survey (by ecologist Barbara McInerney) of an old stone farm building in Co. Longford, carried out prior to renovation works, numerous potential Natterer's Bat roost entrances were discovered. One of these was a cavity within the archway of a wall.

This arch required reconstruction. Therefore, to mitigate the potential loss of a bat roost and maintain the bats' entrance, a new chamber and entrance was included in the new wall. Throughout the building's restoration, the bats' needs were accommodated through use of bat tubes and bat bricks, inserted to replicate existing cavities.



How to tell if wildlife is present in a building

It is necessary to know if wildlife use a building in order to plan and mitigate for any changes to the site. An understanding of the species present, and the location of breeding or roosting sites, will inform any licence requirements – as well as the timing and scale of works – to ensure that activities are carried out within the legislation, and that disturbance to wildlife is avoided or minimised.



Many species that use buildings are discrete and difficult to detect. For example, bats and cavity-nesting birds are typically hidden from view. These species generally require specialist surveys to determine their presence. The type of building, the opportunities available for wildlife within the building, and the ease of inspection for the presence of wildlife in the building should inform the survey requirements. For example, in a modern, open farm building, it may be possible to thoroughly inspect for the presence of wildlife. In contrast, an old stone farm building with an inaccessible loft space and a range of opportunities for different species is likely to be more difficult to inspect for wildlife. Complex structures such as this are more important for wildlife, and their presence in such buildings is more likely to go undetected. Therefore, in buildings where wildlife may be present, but it is not possible to determine their presence, it is strongly recommended to seek expert advice or specialist surveys at the outset of planning the works.

When should I seek advice and/or specialist surveys?

Examples of sites where advice and/or specialist surveys are required to inform works include:

- a building which is suspected, or has potential, to be used as a roost by bats (at any time of the year)
- a building which is suspected, or has potential, to be used by protected wildlife (e.g. birds, bats, Pine Marten) for breeding and where the works may affect the species present during their breeding period.

Who can I seek advice from?

National Parks and Wildlife Service (NPWS): The NPWS is the Government's statutory nature conservation advisor and can advise on licence requirements, and in some cases on survey requirements and provide site-specific advice on wildlife in buildings.

A local authority **Heritage Officer** may also be able to provide guidance. Other organisations which may be able to provide advice on wildlife in buildings include: **Bat Conservation Ireland** (bats), **Vincent Wildlife Trust** (Lesser Horseshoe Bat and Pine Marten) and **BirdWatch Ireland** (birds).

An **ecological consultant** is required to perform a specialist survey.



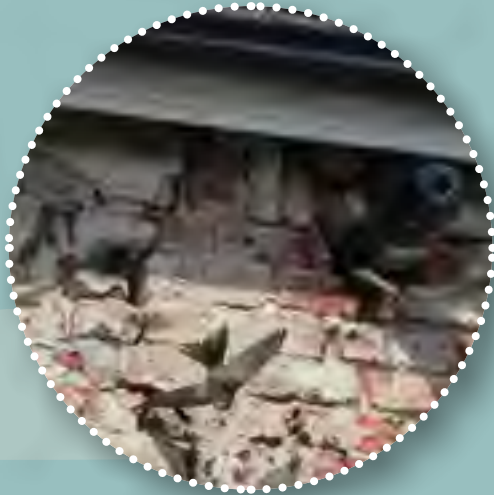
Signs that Barn Owls are using a building

Barn Owls' presence in a building can be difficult to detect. They are only active at night and are usually well concealed during the day. In buildings used by Barn Owls, there are usually signs which indicate their presence, such as the remains of small mammal prey, pellets, moulted feathers and whitewash droppings. However, depending on the nest location, signs may not be obvious. The 'snoring' calls made by young Barn Owls at night in mid to late summer provides one of the best indications that they are present and nesting.

Spot the owl. Barn Owls nested in the roof space of this new building. There were no signs to indicate their presence. They would have been overlooked were it not for a specialist survey which confirmed their presence from their 'snoring' calls at dusk.

Signs that Swifts are using a building

Swifts nest in small cavities and crevices and the nest itself will not be directly visible. Their presence in a building is usually most obvious from birds flying at the height of the building, screaming, and flying up to and entering suitable cavities. They are usually most active in the morning and evening, and long periods can pass (particularly in unsuitable weather) when Swifts may not be obvious.



Some tips for identifying the presence of birds in a building

- ✔ Look out for regular activity; birds entering and exiting a building during the breeding season (typically March to August)
- ✔ Breeding behaviour (courtship, display, copulation) associated with a building
- ✔ Signs in or around the building (nest material, droppings, egg shells, food remains)
- ✔ Birds carrying nest material or food to a potential nest in a building
- ✔ Defence behaviour (alarm calling, mobbing) in vicinity of building
- ✔ Adults or young calling in the building
- ✔ Nests of some species will be visible (e.g. House Martin)
- ✔ Droppings under cavities and perches
- ✘ Never approach or disturb breeding birds or their nests

Some tips for identifying the presence of bats in a building

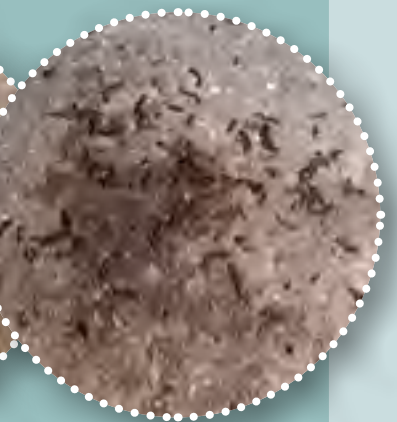
- ✔ Bats flying in and out of the building indicates the presence of a roost
- ✔ Bat droppings under windows, walls, sills and roost spaces
- ✔ Bat droppings crumble to dust when touched, unlike rodent droppings
- ✔ Bats can leave moth wings and insect remains beneath roosts
- ✔ Bat roosts can be associated with a slight ammonia-like smell
- ✔ Chattering noises from bats may be heard at dusk and dawn, or throughout the day during warm weather
- ✔ Lesser Horseshoe bats are visible when they roost, as they hang upside down in the open; other Irish bat species are unlikely to be visible because they tend to tuck themselves away from view
- ✘ Do not disturb bats, or cause any disturbance to bat roosts

Signs that bats are using a building

Bats can roost in many different parts of a building, including in between broken tiles, ridge tiles, roof joists, roofing felt, wood cladding, within the fascia board, the soffit, the eaves and in the attic space. Droppings are sometimes obvious under roost sites.



Lesser Horseshoe Bats roosting in an open roof space may be visible, whereas other species may be hidden from view



Bat droppings can accumulate under roosts and may be obvious

A hole **this size** is all bats need to access a roost



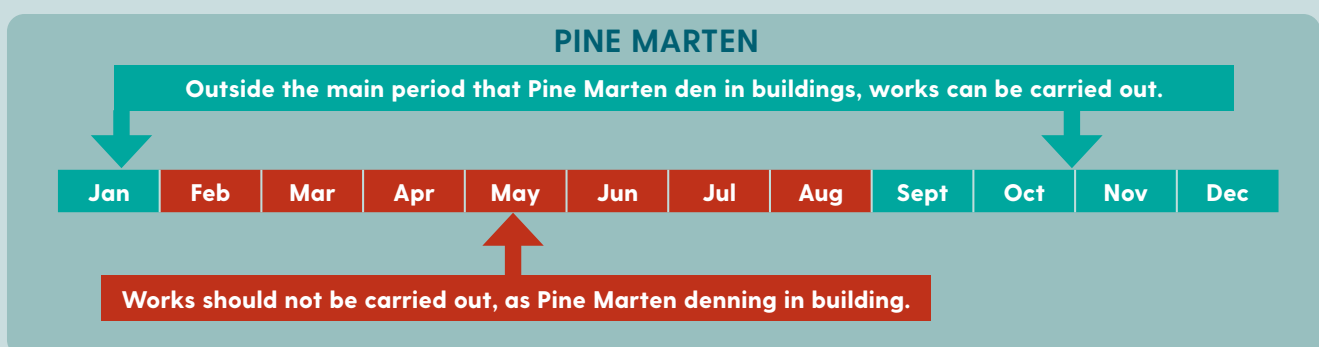
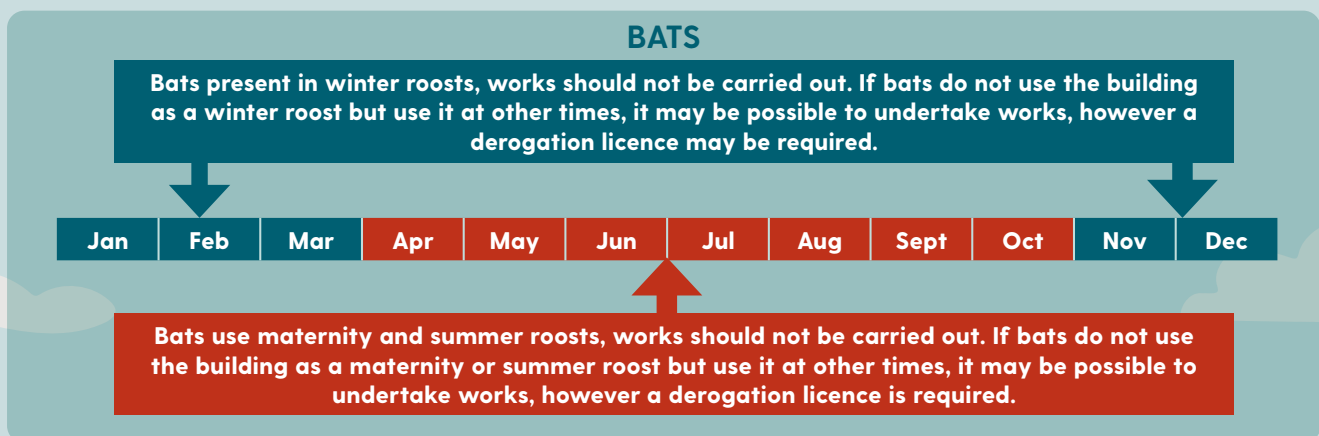
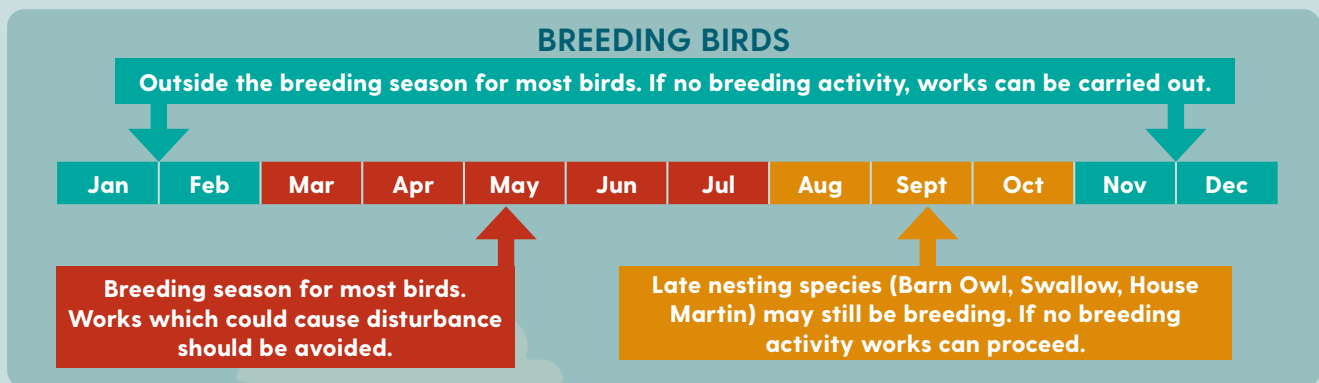
Planning works on a building with wildlife

It is possible in many cases to undertake works on a building used by wildlife without negative disturbance or impacts to species present. This can only be done with due consideration to the legal requirements, and with an understanding of the species present (see above). Planning the timing of works to avoid disturbance, and ensuring that important features of the building are retained for wildlife, are both essential to reduce direct and long-term impacts.

Timing of works

Wildlife generally use buildings for breeding in the spring and summer months, and roosting in the autumn and winter. All wildlife is sensitive to disturbance when breeding, and bats are also sensitive when roosting and during hibernation. Therefore, works which have the potential to cause disturbance should not be carried out during sensitive periods. These include breeding periods, and the winter period if the building in question supports over-wintering bats. If it can be confirmed that wildlife is not present in a building, works can be carried out at any time.

We have provided guidelines below on the main periods of breeding and roosting for wildlife which use buildings. The timing of breeding can vary, and it is essential to ensure that works on the building are planned based on the site-specific conditions.



Retaining breeding and roosting sites

Changes to buildings which are carried out and timed appropriately should not cause disturbance or direct negative effects to wildlife. However, changes to buildings may result in the loss or reduced suitability of breeding and roosting sites. Works should aim to retain breeding and roosting areas and access to these sites where possible. This will minimise the impacts to wildlife and allow continued use of the building after the works are completed.

Key considerations for maintaining the suitability of buildings for wildlife

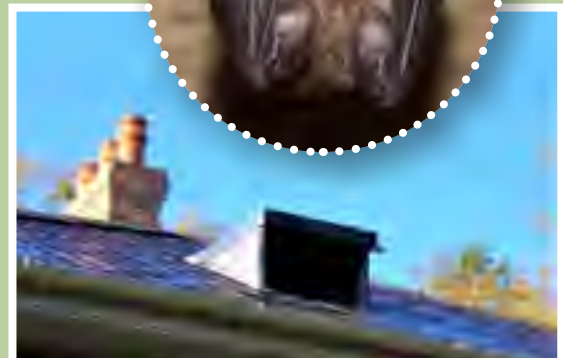
- ✓ Map breeding and roost locations prior to works
- ✓ Map access points to breeding and roost locations prior to works
- ✓ Maintain breeding and roost locations where possible
- ✓ Maintain access points wherever possible
- ✓ Create additional opportunities for wildlife (for example, additional crevices/entrances, or nest/bat boxes) where applicable
- ✓ Consult with NPWS and/or a suitably qualified ecologist where mitigation is necessary
- ✗ Don't interfere with entrances to nesting/roosting sites, or the sites themselves, if they are being used by wildlife
- ✗ Don't destroy, cover or remove an entrance used by wildlife unless absolutely necessary. Only do this when wildlife are not occupying the site affected
- ✗ Don't carry out works which may interfere with a bat roost unless operating under a derogation licence

Case Study

Flahive's Lodge and Lesser Horseshoe Roost, Glengarriff Nature Reserve, Co. Cork

Flahive's Lodge at Glengarriff Woods Nature Reserve, Co. Cork, functions as an office for NPWS staff. Prior to renovation works carried out during the winter of 2006, the building was derelict. Lesser Horseshoe Bats roosted in the roof space which was accessed through a broken window. The renovation works included improvements to the building for bats, and numbers of Lesser Horseshoe Bats have gradually increased, from fewer than 12 prior to the renovation works, to 300 in the summer of 2019.

The renovation works included a standard roof construction, with slates (a good material for maintaining a relatively warm temperature), a new access point, sheeted plywood on the floor under where the bats roost (to allow easy clean-up of droppings) and an extra-well insulated attic to eliminate noise (so that humans don't disturb the roosting bats, and the bats don't disturb the working humans!).



Avoiding conflict with wildlife

Most wildlife which use buildings do so without issue and often without the knowledge of the inhabitants or building owner. However, in certain circumstances, the presence of wildlife in a building is undesirable and can cause problems. Wildlife in a building can give rise to issues of hygiene, noise, smell and sometimes structural damage, and some species can behave aggressively when breeding. In most cases, conflict between people and wildlife can be resolved or prevented. However, this requires an understanding of the problem and related legislation, and oftentimes requires expert advice.



The occupation of a building by wildlife is usually seasonal and temporary. Exclusion of wildlife from areas where their presence is problematic is often the most effective solution. Exclusion measures can only be implemented when there is no potential to harm or disturb breeding wildlife and roosting bats (see information on legislation). In some cases, exclusion can be straightforward (e.g. blocking an entry point to a building); in others it may be more complex (e.g. specialised netting) and require professionals. In all cases, advice should be sought from NPWS before proceeding with any actions which could cause disturbance.

In certain circumstances a derogation licence can be granted for the removal or control of wildlife, such as in situations of overriding public interest and safety (see information on derogation licences). For example, if a bat roost exists within a roof which requires immediate repair to mitigate a hazard for people occupying the building in question, the works may be facilitated under a derogation licence.

Herring Gull

The Herring Gull population has declined significantly, however, there has been an increase in birds nesting in urban areas; particularly coastal towns and cities. This is likely due to reduced feeding opportunities in their natural habitats along the coast. Conflict between Herring Gulls and people does occur, mostly in July, which is when the chicks are just starting to leave the nest. Adult gulls will vigorously defend their chicks from a perceived threat, which is often humans. As with most conflicts with wildlife, we are responsible. With some changes in behaviour, we can find a solution. Effective exclusion implemented outside the breeding season is usually successful in preventing Herring Gulls from nesting in problem areas and allows us to live together without conflict.



Herring Gull with young on an urban roof-top

Pine Marten

Due to the scarcity of natural denning sites in woodlands, Pine Martens are increasingly using buildings because they offer good insulation and protection against bad weather and predators. Pine Martens can also be attracted to bins or outbuildings in search of food. The presence of a female marten and her kits in a building can give rise to problems of smell and hygiene, and possibly also structural damage. Due to the risk of a female marten abandoning her kits if disturbed, no action should be taken to exclude or deter a Pine Marten from a building without first contacting the NPWS. Any action to remove the martens without first consulting your local ranger could constitute an offence under the Wildlife Acts. For further information and advice, visit pinemarten.ie.



Pine Marten kit in attic space



Case Study

Urban office and Herring Gulls, Co. Dublin

Wildlife Management Services specialise in providing effective and humane solutions to wildlife and human conflicts. They are regularly contacted for advice on deterring roof-nesting Herring Gulls, particularly in Dublin City. Typically, business and building owners contact them once the gulls have already started nesting; however, the best time to address a problem concerning gulls is before their presence becomes an issue.

Workday, a company on May Lane, Co. Dublin, identified a potential hazard relating to Herring Gulls and took appropriate steps to prevent problems. During the development of a rooftop amenity area for their staff, Workday recognised that the area would likely be attractive to gulls. They contacted Wildlife Management Services in advance of the nesting season, prior to opening the rooftop area.

A specialist tensioned bird proof net was installed over the perimeter area of the rooftop garden to restrict access and prevent gulls from nesting. The garden itself is regularly used by staff, which naturally discourages gulls from nesting. Workday have left a separate section of flat roof (which is located away from the garden) free from gull-proofing, and the gulls nest here without issues.



Netting to exclude Herring Gulls



The rooftop garden at Workday fitted with netting to exclude nesting Herring Gulls



A natural solution to a natural problem

Nest boxes have been installed on buildings in Dublin City centre by Wildlife Management Services to encourage Peregrine Falcon to breed, with the secondary aim of deterring Herring Gull from using these same buildings.



Improving buildings for wildlife

Renovation and repair works can result in the loss of important sites for wildlife. Retaining existing breeding/roosting sites used by wildlife will result in the least disturbance to wildlife. However, if a breeding or roosting site must be lost as part of repair works, it is often possible to provide alternative sites tailored to the species affected.

The wildlife-value of existing buildings can also be improved, by creating new breeding places within or on the building. When designing new-builds, it may be possible to include accommodation for wildlife within the structure of the building.

Case Study

Accommodating Barn Owls in a new building

On first glance, this building in Co. Kerry may not appear to be suitable for Barn Owl. It certainly looks very different to the derelict buildings more commonly used by breeding Barn Owl. However, Barn Owls have nested here successfully for several years, thanks to the purpose-built nesting space which was included in the design. Several nest cameras within and outside the nest allow the residents an intimate insight into the lives of their nearest neighbours.



Providing alternative sites

If replacing breeding/roosting places as part of building works, it's best to include these sites within the building, at or adjacent to the original site (depending on the requirements of the species). If existing wildlife sites are to be lost or altered, it is important to provide alternative sites well in advance of works. Incorporate alternative sites designed for wildlife affected into the renovation plans where needed. Most cavity-nesting bird species will use specialised nest-boxes, and all bat species except Lesser Horseshoe Bat will use bat-boxes. The **Useful Resources** section of this booklet provides links to resources which provide information on the breeding and roosting requirements of species associated with buildings, as well as information on the design and construction of boxes. In cases where it isn't possible to accommodate sites for wildlife within the building in question, bird and bat boxes can be installed on the outside of the building, or on nearby trees or structures. Pine Marten den boxes should be installed at a distance from the building, on a suitable tree. Each species has unique requirements, but with the right advice, it should be possible to accommodate the wildlife in question.



Case Study

Creating space for Swifts

Dermot Doran had never observed Swifts from his house in north Kildare before he installed external nest boxes with a caller system (under licence) in 2014. He observed Swifts investigating the nest boxes for the first time in the summer of 2016. In 2020, he had attracted eight pairs which nested in the boxes.

The sound of screaming Swifts is now something he looks forward to each summer, and with special nest cameras fitted inside the nest boxes he is able to view the Swifts' nesting activity over the course of the breeding season. This shows how simple measures can be taken to provide benefits for wildlife, in a way which allows us to appreciate it from the comfort of our own homes!



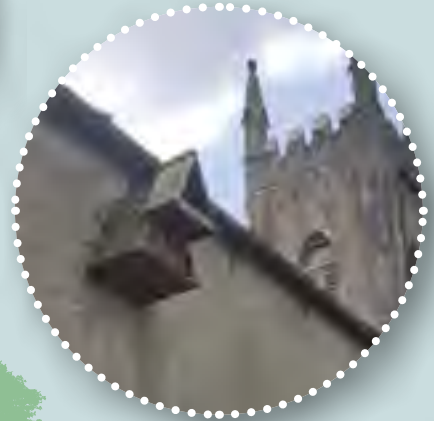
Swift boxes at Dermot Doran's house in Johnstown, Co. Kildare



Swift boxes installed at build stage provide suitable nest sites in this new building



This Barn Owl nest box fitted to the exterior wall of this church provides a safe and secure nest site.



Useful Resources

National Parks and Wildlife Service

Wildlife legislation: <https://www.npws.ie/legislation>

Derogation licences: <https://www.npws.ie/licences/disturbance>

Contact NPWS or your local ranger: <https://www.npws.ie/contact-us>
or LoCall 1890 383 000 (from Republic of Ireland only)

Information on birds in buildings and bird boxes

BirdWatch Ireland: <https://birdwatchireland.ie/>

Barn Owls: https://www.dublinczoo.ie/wp-content/uploads/2020/01/Barn-Owl-information-and-conservation-advice-booklet-_For-Web.pdf

Barn Owl video: <https://www.youtube.com/watch?v=YESLEPyNPK8&t=251s>

The Barn Owl Trust (UK): <https://www.barnowltrust.org.uk/>

Swifts: <http://www.swiftconservation.ie/wp-content/uploads/2019/06/Saving-Swifts-Guide-by-BWI-2019.pdf>

Swift video: <https://www.youtube.com/watch?v=Z5YzYJcJWfM>

Information on bats in buildings and bat boxes

Bat Mitigation Guidelines (NPWS): <https://www.npws.ie/sites/default/files/publications/pdf/IWM25.pdf>

Bat Conservation Ireland: <https://www.batconservationireland.org/>

Vincent Wildlife Trust: https://www.vincentwildlife.ie/download_category/bats

The Heritage Council: <https://www.heritagecouncil.ie/publications?q=bat>

Information on Pine Marten in buildings and den boxes:

Vincent Wildlife Trust & NPWS: <https://pinemarten.ie/>

ADVICE AND ASSISTANCE FOR EXCLUDING WILDLIFE FROM BUILDINGS:

Wildlife Management Services: <http://www.wildlifemanagement.ie/>

TRADITIONAL FARM BUILDINGS GRANT SCHEME:

Heritage Council: <https://www.heritagecouncil.ie/projects/traditional-farm-buildings-grant-scheme>

RECORDING WILDLIFE SIGHTINGS:

National Biodiversity Data Centre: <http://www.biodiversityireland.ie/>

REPORT WILDLIFE CRIME:

National Parks and Wildlife Service: www.npws.ie/contact-us

Wildlife Crime Ireland: <http://www.wildlifecrime.ie/>

REPORT INJURED AND SICK WILDLIFE:

Irish Wildlife Matters: <http://www.irishwildlifematters.ie/animals/contacts.html>







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