



Excluding Wildlife from Buildings

**Practical guidance
for phased ecological
exclusion**



unitura



Preface

This manual has been prepared as a resource for ecological consultancies to assist in the selection of effective mitigation measures. The document is intended as a working document. It provides practical examples, working methods, and supporting information on how Unitura products can be used to meet statutory mitigation standards. The products and methods will be continuously improved and expanded. Ecological consultancies are free to incorporate texts, drawings, and methods into their own reports, provided Unitura is acknowledged.



Excluding Wildlife from Buildings – our method

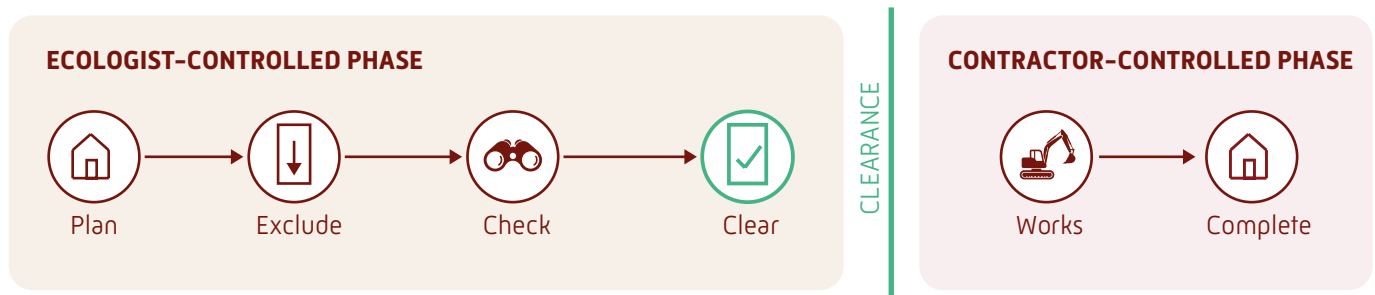
A phased approach to exclusion

Exclusion is more than a technical measure. It can also be used to create a clear separation between the ecological phase of a project and the construction phase.

In many UK projects, ecological risk is currently managed during the works themselves. An ecologist may supervise the removal of roof tiles, cladding or other building elements around a known roost, or remain present while demolition takes place. This allows animals to be dealt with if they are encountered, but it also means that ecological uncertainty remains present at the moment the contractor wants to progress with the works.

If bats or nesting birds are still present, activities may need to stop or be adapted. For the contractor this creates uncertainty in planning, labour and machinery. For the ecologist it means that important ecological decisions sometimes have to be made within the pressures of an active construction site.

We propose separating the process into two clearly defined phases: **first ecology, then construction**.



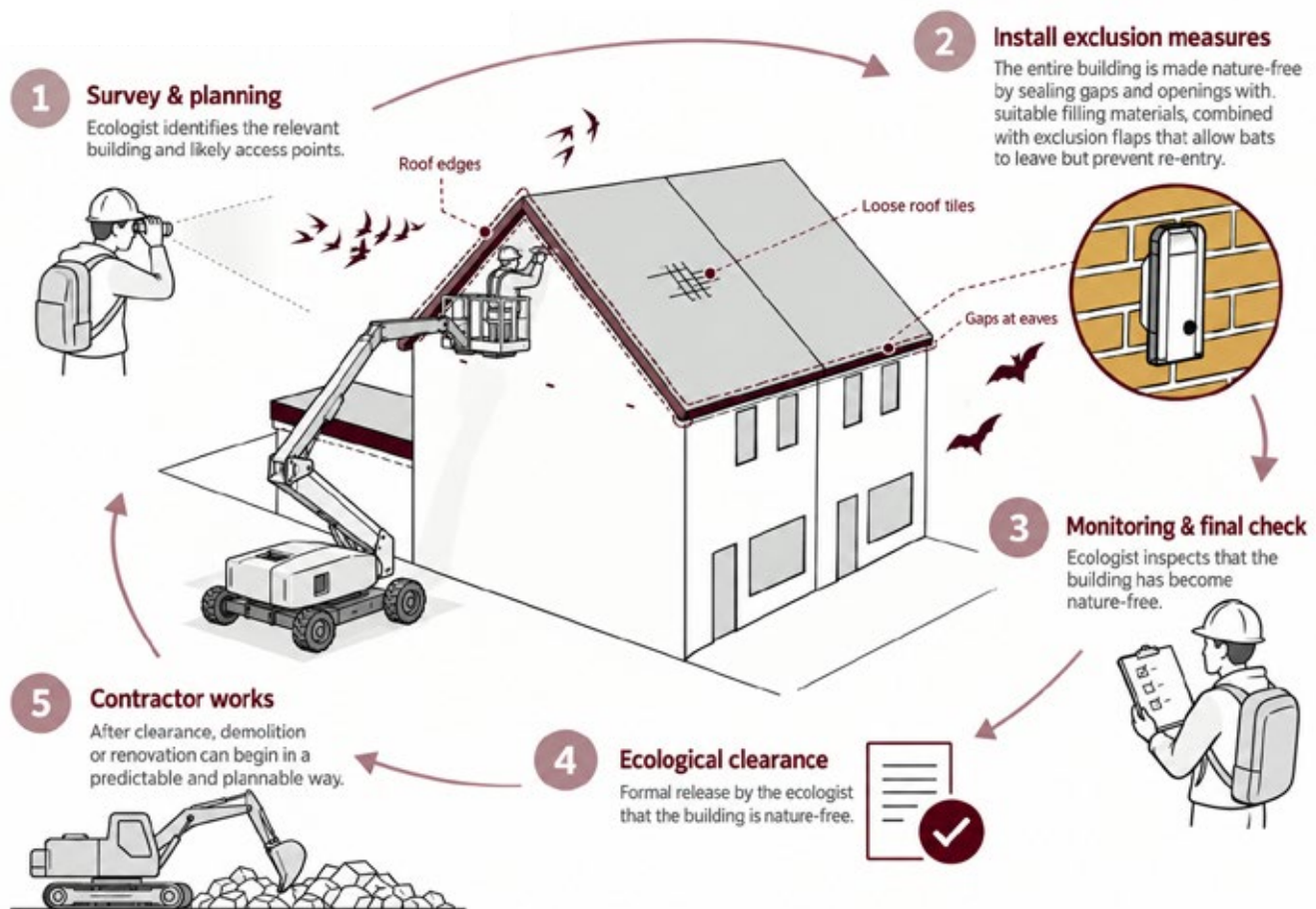
Phase 1 – The building is under ecological control

The first phase is managed by the ecologist.

The building is assessed and an exclusion plan is prepared. During the appropriate ecological period, the complete relevant building is made 'nature-free', rather than only treating the exact roost locations identified during previous surveys. Potential access points are systematically closed using suitable filling and sealing materials. At selected locations, exclusion devices are installed so that bats can still leave the building but cannot return. For birds, other exclusion techniques may be required depending on the building and species involved.

This is an important principle. Animals do not necessarily remain at one precisely identified opening. If only a known roost entrance is closed, they may simply move to another accessible gap nearby. Effective exclusion therefore requires a building-wide approach in which all relevant access routes are considered. This principle is already central to the technical methods in this handbook.

The work can be substantial. On larger buildings this may involve access equipment, systematic façade-by-façade working and the installation of large numbers of exclusion flaps. The ecological team remains in control of this process.



Ecological clearance

Once the exclusion phase has been completed successfully, the ecologist can provide an ecological clearance and release the building for the planned works.

More control for the ecologist, more certainty for the contractor

For the ecologist, this approach provides much greater control over one of the most sensitive parts of the mitigation process. Exclusion becomes a defined ecological operation that can be planned, implemented, monitored and completed properly, rather than an activity taking place alongside demolition.

For the contractor, the main benefit is programme certainty. Ecological uncertainty is addressed before the main construction phase begins. This reduces the risk of unexpected stops and makes labour, machinery and construction sequences easier to plan.

Exclusion in Practice

Practical guidance for making buildings nature-free

Exclusion is a crucial step in the process. Nowadays, species-specific surveys are often carried out for individual projects. As a result, the locations of roosts and the species using them are often known with a high degree of accuracy. In general, the more survey work has been conducted, the more targeted exclusion measures can be applied.

However, caution should be exercised to avoid a false sense of precision. Never focus only on the identified roost; instead, always address the entire building or all comparable façades in the immediate surroundings. There is a significant risk that bats or birds will simply move to an adjacent crack, crevice, or opening if exclusion measures are applied too specific. For this reason, every building scheduled for renovation or demolition, where roosting sites can reasonably be expected, should be made 'unsuitable' for wildlife occupancy before works commence.

When should exclusion be carried out?

A building cannot be made 'nature-free' throughout the entire year. Exclusion can only happen during the least vulnerable periods of the expected species. The following period is optimal for each species (group):

Bats

Roosts are best excluded during warmer periods ($>8^{\circ}\text{C}$) outside the maternity period. Useuallly, this is the period from 1 August to 31 October. In addition, the months of March/April may also be regarded as a suitable period.

House Sparrows

In theory, roosts can be made unsuitable outside the breeding period from 1 March to 15 August. Experience shows, however, that exclusion carried out between September and the end of November has a much higher chance of success than exclusion carried out in January/February. This is because House Sparrows start preparing for the next breeding season from November onwards. Once male House Sparrows have definitively established their territory and nesting site, it is very difficult to drive them away from their nesting place. Late exclusion of large colonies (in January/February) is also unnecessarily stressful for House Sparrows.

Swifts and other breeding birds

Useuallly, exclusion can be carried out throughout the year, outside the period from 1 March to 15 August. If buildings are made nature-free during periods in which breeding attempts may still be expected in exceptional cases, it is necessary to carry out a physical inspection* beforehand. An example of such a period is the month of August. During this month, House Sparrows may still have late breeding attempts.

Because all treated species groups may be expected in many buildings, the period from 15 August to 31 October is the best period for exclusion. Alternatively, exclusion can be divided over two periods. In this case, birds are excluded during the winter period until the end of February, and bats during March/April.

Excluding buildings when breeding attempts may still be present

Some months may be suitable for exclusion, but only if it is certain that no active nests or other vulnerable functions are present. August, for example, is often suitable for Swifts and House Sparrows, as breeding has usually finished by then. However, this cannot be assumed in every situation. A physical inspection is therefore always required before exclusion can take place.

A physical inspection must be carried out as follows:

Step 1: Preliminary inspection from ground level.

Step 2: Inspection at height on the outside of the building (visual and acoustic, including the use of a bat detector).

Step 3: If there is still insufficient information, the relevant building element is inspected. This inspection is always carried out without damaging the building. A maternity roost can usually already be confirmed after Step 2, as the bats can often be heard within the cavity wall or beneath the roof.

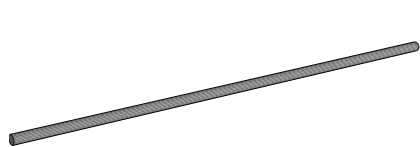
Process for making buildings nature-free in the presence of House Sparrows

As previously noted, the House Sparrow is a species that can be difficult to exclude. Where high densities of House Sparrows are present within a project area and works are scheduled to continue during the breeding season, the following guidelines should be observed:

- Carry out exclusion during the period from September to November (February is too late).
- Assume that some individuals may return despite the exclusion measures. Exclusion measures should therefore be checked regularly from 15 February onwards.
- Ensure that suitable alternative nesting provision is available in the immediate vicinity. Where appropriate, temporary nesting facilities may be installed on the excluded building, provided that a minimum distance of 2 m can be maintained between the nesting provision and the works being undertaken."

Exclusion materials

The following materials can be used to exclude birds and bats from virtually any building.

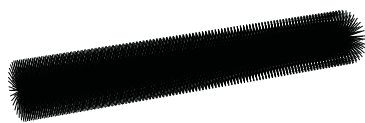


Filling foam

For sealing narrow gaps.

Properties

Material:	Polyethylene
Diameter:	20 mm
Length:	1000 mm

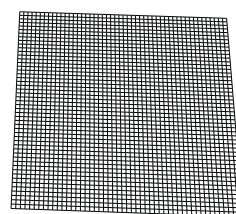


Exclusion brush

For sealing the long sides of pitched roofs.

Properties

Material:	Polyethylene
Diameter:	160 mm of 90 mm
Length:	1200 mm

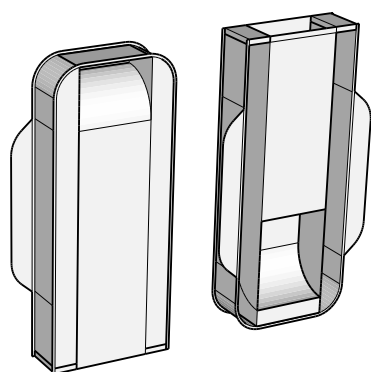


Roof net

For covering tiled roofs*.

Properties

Material:	Polyethylene
Mesh size	7x6 mm
Width	4 m
Length:	< 500 m

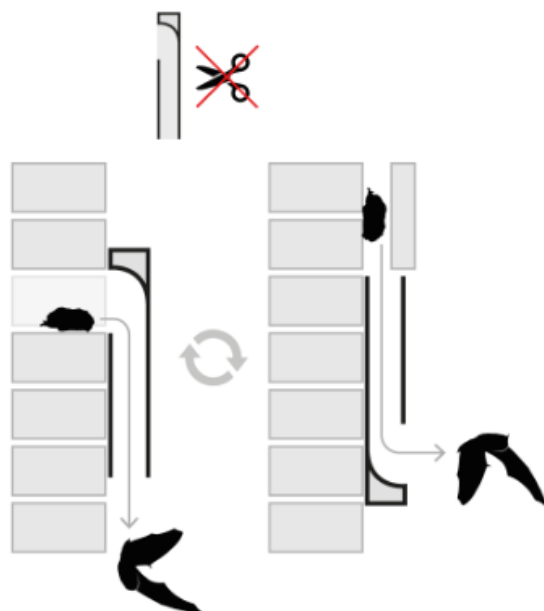


Exclusion flap EF3

For excluding both large and small bat species. The exclusion flap can easily be rotated, allowing it to be used in almost any situation.

Eigenschappen

Material:	Rigid plastic
Passage diameter	66x58 mm
External dimensions	21x12x3 cm



Do not cut, rotate

This exclusion flap is unique because the flap no longer needs to be cut when installed beneath, for example, roof tiles or bargeboards.

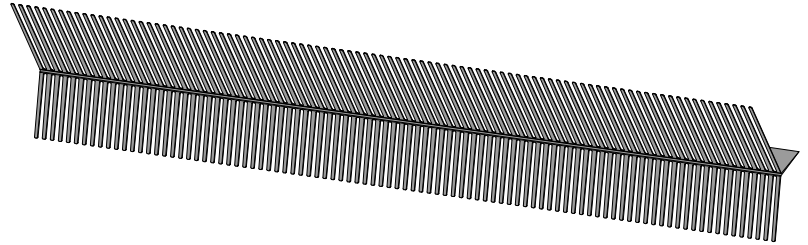
New!

Exclusion comb

For sealing roof tile edges.

Properties

Material:	recycled LDPE
Height	200 mm (100mm per side)
Length:	1200 mm

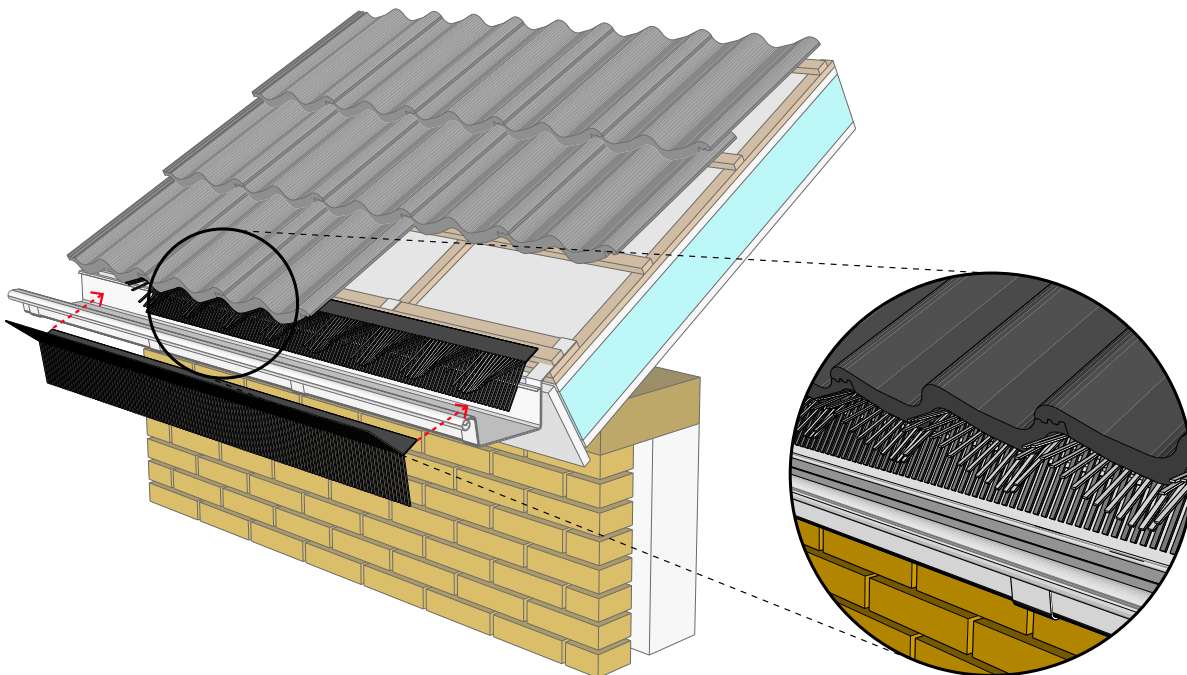
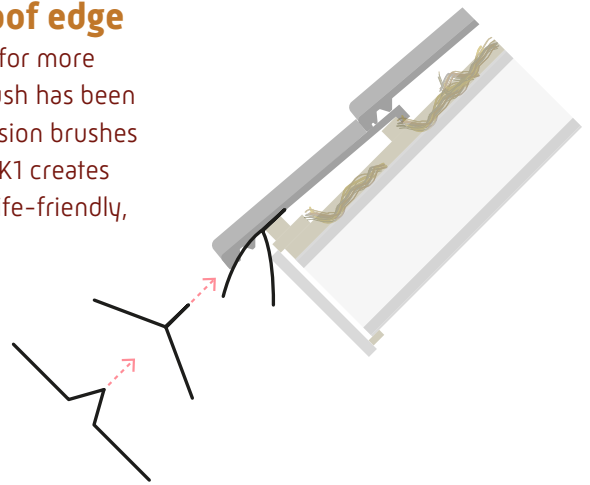


Improved exclusion of House Sparrows at the roof edge

New from Unitura is the WK1, a specially developed roof edge guard for more effective House Sparrow exclusion. Until now, the WB1 exclusion brush has been the standard solution for this application. In practice, however, exclusion brushes do not always provide a reliable seal against House Sparrows. The WK1 creates a more effective barrier at the roof edge while also being more wildlife-friendly, thanks to its smooth edges and reduced risk of injury.

Other advantages are:

- Reusable;
- Easy to recycle;
- Easier (more compact) to transport;
- Easy to connect lengthwise.



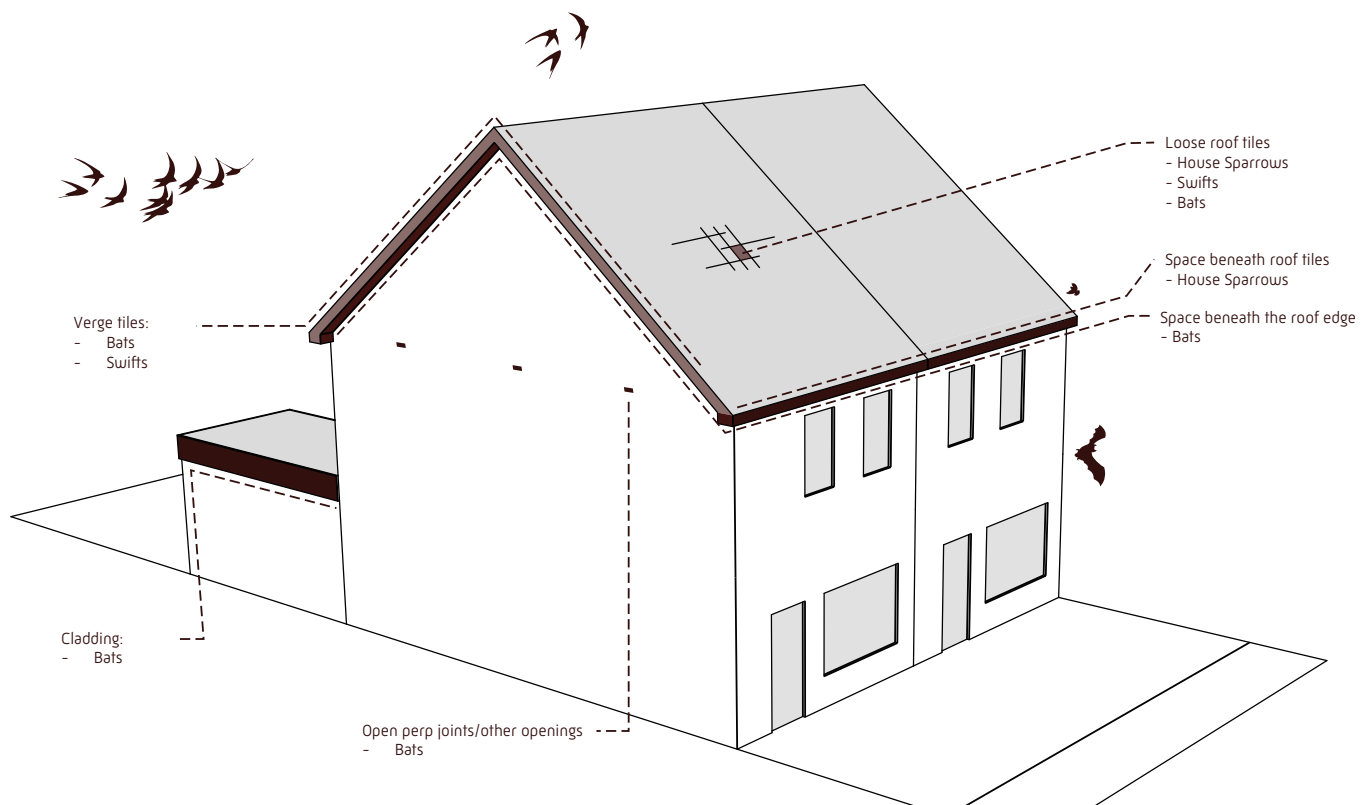
Exclusion methods

"Making a building unsuitable for birds and bats is always a bespoke process. A physical inspection of the building is required to identify which building elements are currently being used, or have the potential to be used, as nesting or roosting sites. However, many of the same principles and exclusion methods can be applied across different building types. The sections below provide an overview of the methods and procedures commonly used for ground-based dwellings and apartment buildings.

Ground-based dwellings

The following roost types are commonly encountered. Please note that this is not an exhaustive list of all possible roost locations, but rather an overview of the most frequently encountered examples. These include the following roost types [see also the illustration below]:"

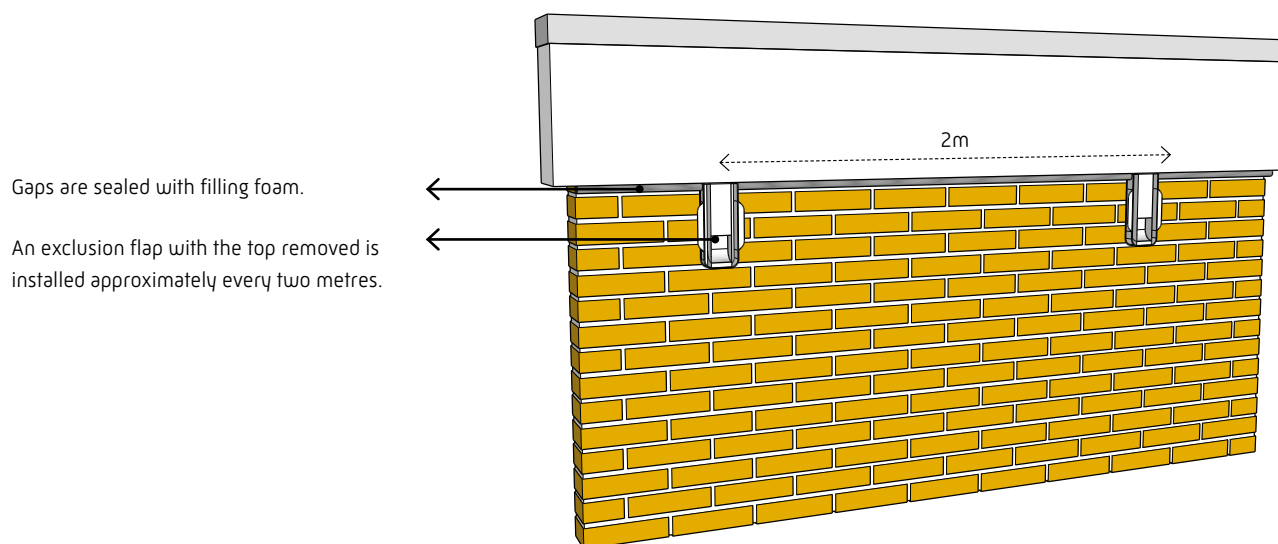
Spaces beneath roof edges:	Bats
Spaces beneath roof tiles, eaves side:	House Sparrows, Swifts (via the underside of the gutter)
Spaces beneath roof tiles, gable end:	Bats, Swifts
Spaces beneath loose roof tiles:	Bats, Swifts, House Sparrows
Spaces behind cladding/bargeboards:	Bats
Space beneath roof edge:	Bats
Open perp joints/openings:	Bats
Roof tiles at the gable end:	Bats, Swifts
Space beneath roof tiles:	House Sparrows (sometimes Swifts)
Loose roof tiles:	House Sparrows, Swifts, Bats
Cladding/bargeboards:	Bats



Techniques to be applied

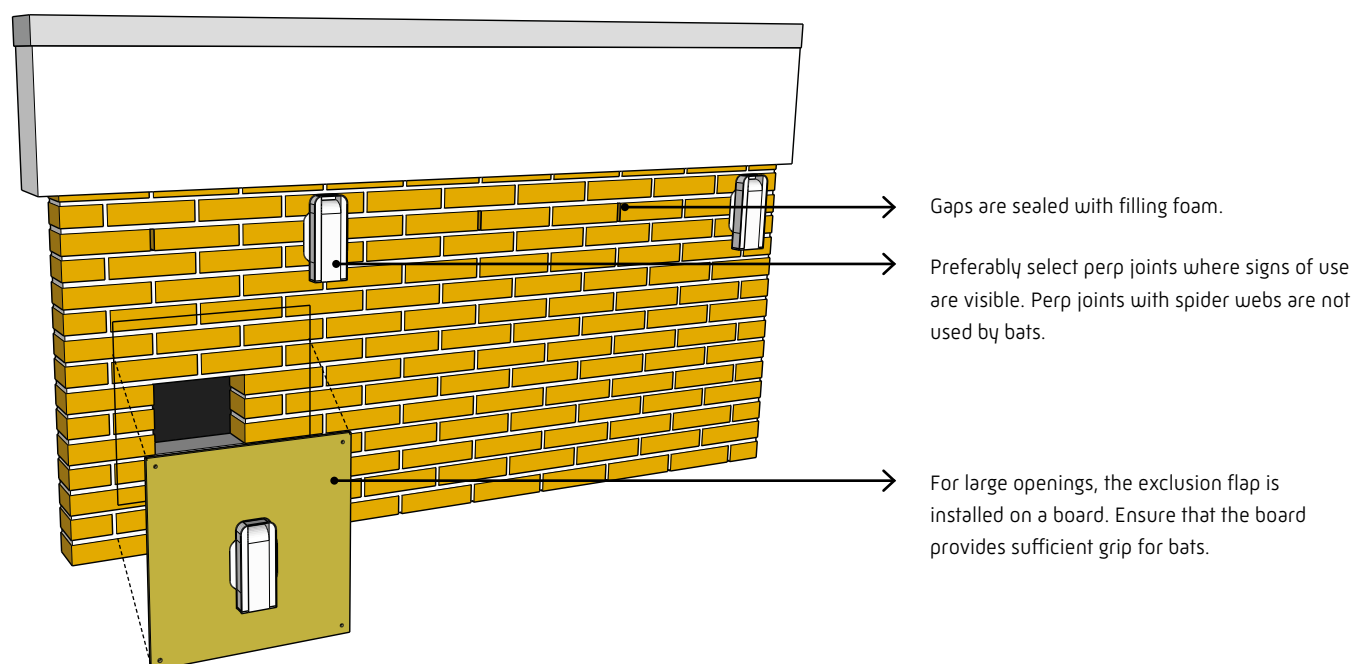
Narrow gaps accessible to bats

Narrow gaps are commonly found beneath bargeboards, roof edges and cladding, providing access to cavities used by bats. These gaps are excluded by sealing them with filling foam or another suitable sealing material. An exclusion flap is installed within the seal at intervals of up to two metres, allowing bats to leave the roost. Where the gap is located directly above the exclusion flap, as shown below, the top section of the flap is trimmed so that bats can enter the flap from above before exiting the building.



Openings in walls accessible to bats

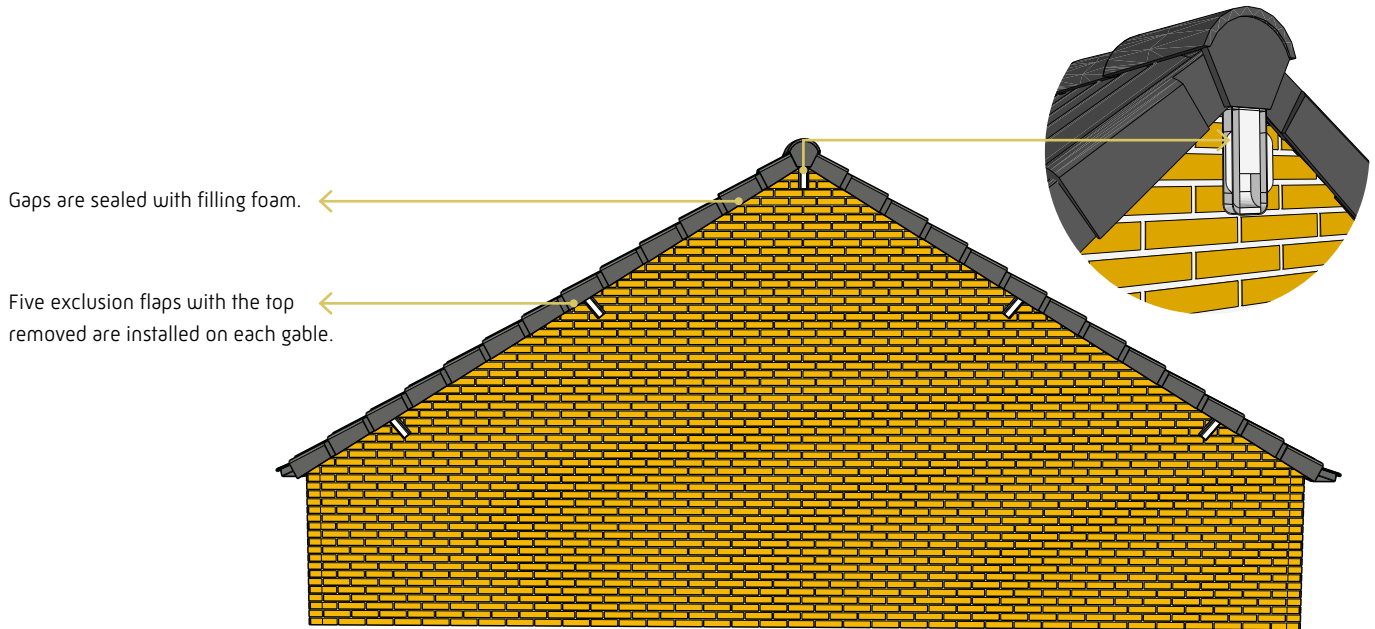
Open perp joints, ventilation grilles and other openings that provide access to the cavity wall can be made unsuitable for bats by sealing the openings with filling foam or another suitable sealing material. An exclusion flap is installed over every third perp joint, or at intervals of up to three metres. Where larger openings need to be excluded, the exclusion flap is attached to a backing board. The board must provide sufficient grip for bats to climb onto the flap and leave the roost.



Gable ends of tiled roofs

Gable ends with verge tiles are made unsuitable for birds and bats as follows:

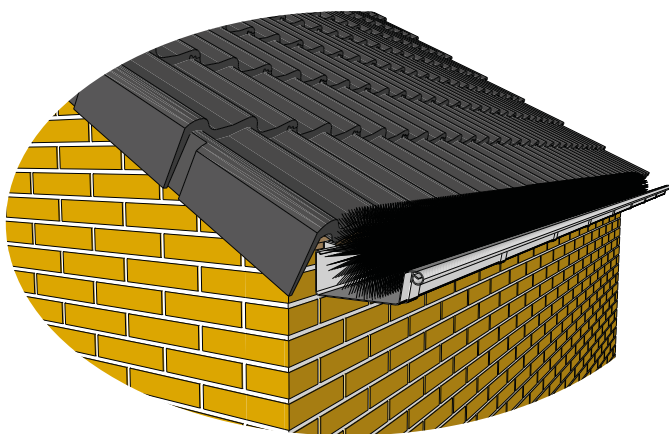
- The gap-shaped spaces are sealed with expanding foam or another sealing material. Please note! If the seal remains in place for longer than four months, it may begin to sag.
- Five exclusion flaps are installed in the seal on each gable end to allow bats to leave. For this application, the top of the exclusion flap is cut off so that bats can crawl through the flap from above.



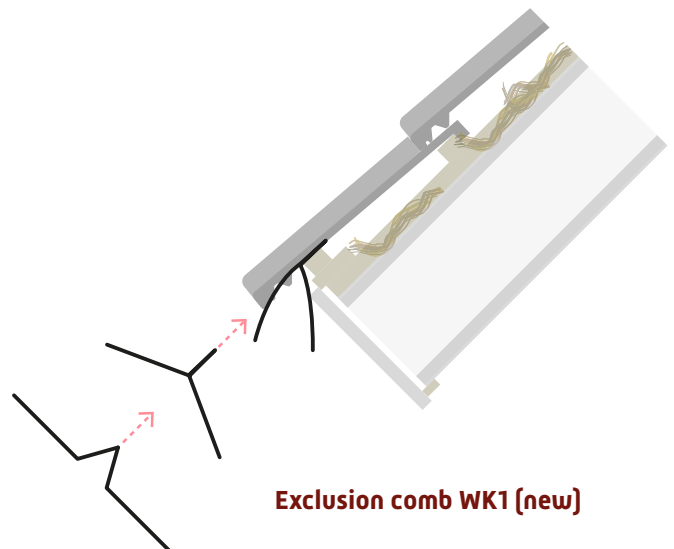
Roof edges of tiled roofs

The eaves side of a tiled roof is often used by House Sparrows. This space can be made unsuitable for House Sparrows (and bats) as follows [two options]:

- Exclusion brush WB1 [old]: Special gutter brushes, developed to exclude birds, are placed in the gutter. Immediately before the works begin, the brushes can easily be removed.
- Exclusion comb WK1 [new]: A special exclusion comb inspired by the design of a bird comb. The exclusion comb has extra-long, flexible fins, allowing even highly irregular and older roofs to be sealed tightly. The design is distinguished by its ease of reuse.



Exclusion brush WB1 (Brush)

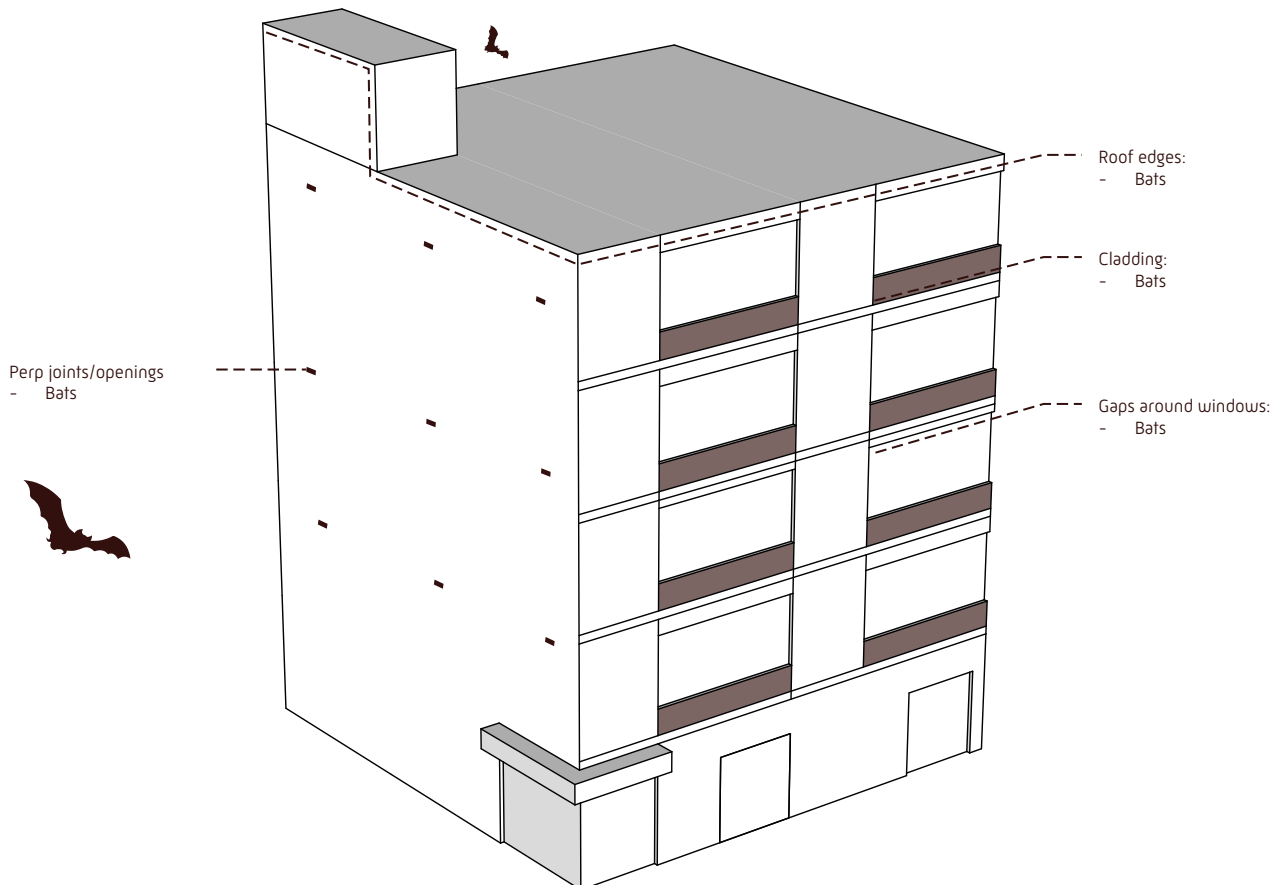


Exclusion comb WK1 (new)

Apartment buildings

The following types of roosts are commonly encountered. Please note! These are not all possible roosts, but the most common ones. The following roost types are commonly found, see also the illustration below:

Spaces beneath roof edges:	bats
Spaces behind cladding:	bats
Openings around windows:	bats
Perp joints/openings in the external wall:	bats



Techniques to be applied

Narrow gaps and openings accessible to bats

In apartment buildings, roosts are almost exclusively used by bats. Standard apartment buildings contain various building elements that provide suitable roosting opportunities. The most common locations are:

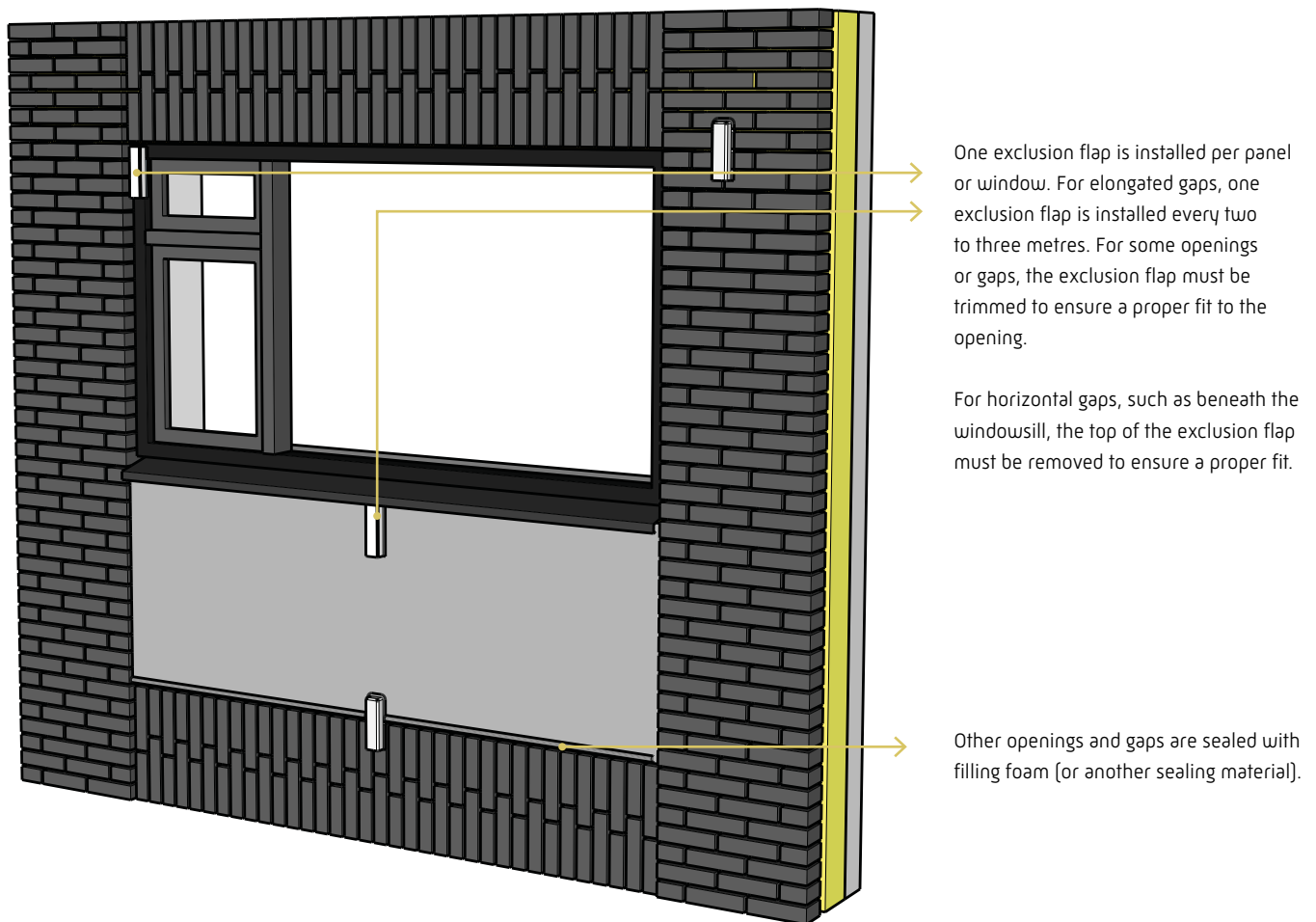
- Cavity walls, accessed through openings in the brickwork, such as open perp joints, ventilation grilles, openings around rainwater pipes and gaps around window frames.
- Shallow roosts behind cladding, accessed through narrow gaps.
- Roosts within the building structure, accessed through narrow gaps between concrete panels.

Tip: For complex buildings, it can be helpful to mark completed sections of the façade, for example with pavement chalk. This makes it clear to both the exclusion contractor and the person carrying out the final inspection which sections have already been completed and which still need to be checked.

Gaps, cracks and perp joints

In almost all cases, roosts are accessed through narrow gaps or small openings. Almost all of these roosts can be excluded using one of the following methods:

- Where cladding, trims, lead flashings or similar building components can be easily removed, these are removed or folded back to provide access to the roost.
- Where roosts are concealed within cavity walls or structural voids and are only accessible through narrow gaps or small openings, exclusion flaps are installed in combination with filling foam or another suitable sealing material.





Where construction meets nature



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