

GUIDANCE ON BIODIVERSITY AND AERODROME SAFEGUARDING

This guidance is based on regulatory documents and will be updated along with regulatory changes. These documents are:

- [CAP 772 "Wildlife Hazard Management at Aerodromes"](#) issued by the Civil Aviation Authority (CAA)
- [CAP 168 "Licensing Aerodromes"](#), also issued by the CAA
- ["Advice Note 3 Wildlife Hazards around Aerodromes"](#) published by the Airport Operators Association (AOA).

The purpose of this guidance is to provide information to developers, architects and construction management companies (and others) suggesting practical solutions to enhance biodiversity without elevating the existing or creating new aerodrome safeguarding risks.

The following sections describe the responsibilities and challenges from an airport perspective, by identifying concerning species, key challenges and offering site specific mitigation advice to all interested parties. It is worth to mention that the below guidance is not exhaustive and there may be other ways to promote biodiversity. The airport is always willing to discuss other alternatives.

The aim of wildlife hazard management for aerodromes is to prevent or reduce the risk of bird strikes (bird-aircraft collisions). Proposed developments and land sites that could potentially attract birds may be asked to make specific amendments so that features attractive to birds are minimised or eliminated through the design. The three key general bird attractants are food, water and shelter.

As outlined in CAP 772, all UK airports including LCY are responsible for wildlife hazard management within their 13km radius (starting from the middle of the runway) as wildlife movements can pose risk to aircraft operating in the area, and this risk should be managed and monitored appropriately by the aerodrome. London City Airport supports the development of East London, including enhancing biodiversity across the region, and is committed to providing guidance on how this can be achieved whilst maintaining aircraft safety.

The airport is situated in an urban area within the Royal Docks. The risk level and profile are somewhat unique, due to the bespoke operational characteristics of the airport. The urban setting with numerous buildings means that green/brown roof and/or solar panel finishes are the main interest from an aerodrome safeguarding perspective. In addition, aircraft operating to/from LCY are using a 5.5-degree approach angle instead of the usual 2 or 3 degrees used at other airports, meaning that these aircraft are flying higher and longer, descending later for landing. This already reduces the level of risk as most of the bird strikes occur at low altitude,

during take-off or landing. Therefore, the airport is particularly interested in developments within the close vicinity of the airport boundaries and those located under the take-off climb and/or approach surfaces. The below section summarises some of the identified bird strike risks such as concerning species, landscaping, building and roofing.

Concerning species:

Almost all species are a threat to aircraft, but medium to large size birds and those exhibiting flocking behaviour are particularly concerning. These species are able set up flight lines to the nest which may cross the approach flight path. This risk is significantly lower over 2000ft. Gulls and feral pigeons exploit flat roof spaces and ledges to roost or nest and unsecured buildings can be attractive to feral pigeons. Green roofs can also provide an attractive habitat for hazardous birds. The number of birds likely to be found nesting, roosting or loafing on a roof less than 100m² are not likely to be significant though this may not be the case for sites very close to the airport or aircraft flight paths.

Landscaping:

The location and density of landscaping and amenity planting associated with developments will have an impact upon the potential risk it poses. It may provide nesting and roosting habitats if suitable tree and hedgerow cover is provided. Water features could attract water birds. Large unbroken blocks of planting are more likely to attract roosting, nesting or feeding birds than small blocks or widely spaced trees.

Buildings and roofing:

Roosting and nest sites on ledges and in buildings can be utilised by these species posing a risk each time they arrive or depart. Feral pigeons exploit ledges, especially if sheltered by an overhang whilst starlings and jackdaws will occupy open holes crevices or roof spaces if they can gain access. Gull breeding colonies have become established on flat roofed buildings close to airfields. When assessing schemes, consideration should be given to the existing environment in which the development sits. It should also consider any existing attractive habitat removed because of the proposed development.

Mitigation advice

- **Landscaping:** recommended to avoid large grass covered areas and ecologically diverse meadows within 1km of the airport.

Tree planting guidance

- Landscaping proposals often include tree and bush planting across the regenerated site. The below guidelines are outlining the acceptable level of density in the vicinity of the airport.
- **Acceptable within 4km circle around the airport:** tree planting at centres of 4m or greater (excluding oak, beech, scots pine). Berry fruit bearing planting dispersed subject to max 15%.

- **Acceptable beyond the 4km circle around the airport:** no limit on tree planting at centres or berry/fruit bearing planting. Roosting, nesting within 1km especially under approach.
- Dense or sheltered vegetation has the potential to become a starling roost, therefore staggering plants in rows or spreading them out to prevent roosting is essential. Moreover, avoiding fruiting and berry-bearing trees, shrubs and any species with the potential to attract birds is desirable. Dispersing bird-attracting plant species within other unattractive species is another acceptable method. Using male only plants to prevent berries being produced is another alternative way of discouraging bird presence.
- **Open water areas:** If any landscaping or amenity planting scheme includes a body of water in excess of 1000m² or a sustainable urban drainage scheme which will feature open water, then specialist advice should be sought. Larger water bodies should be as deep as possible (over 4 metres) with vertical margins. The banks of larger water bodies should be steep and without vegetation. Signs near waterbodies requiring "no feeding the birds" should be installed and water should not be stocked with fish which may attract birds to feed. Ongoing management of the site post-development to deter bird species is essential. Small ornamental water bodies are great for increasing biodiversity and will not increase the number of local bird species.
- **Food outlets:** Food outlets and public areas with litter bins are attractive to feral pigeons, starlings, corvids and gulls unless these are covered and regularly emptied. All bins should also be locked and vermin proof. All outdoor eateries should have a regular cleaning regime to avoid food being left out for birds to eat.
- **Landfill sites:** Landfill sites and transfer stations for domestic waste are a major provider of food. Large flocks of loafing birds may be found on adjacent land and nearby areas of water will also be utilised for bathing and drinking in between feeding. Netting is often the only effective way to exclude hazardous birds. External guidance can be sought from Joint Advice Note 6 'Potential Bird Hazards from Sustainable Urban Drainage Systems' from the AOA, General Aviation Awareness and the CAA.
- **Green and brown roofs:** Green and brown roofs are gaining popularity in larger developments as part of Planning Authorities' green agendas, and have the potential to increase the risk level. The number of birds likely to be nesting on a roof less than 100m² are not significant, however this may not be the case if the roof is located close to the airport or under the approach. Nevertheless, the airport is committed to support these type of roof proposals if they are accompanied with an appropriate bird hazard or estate management plan.
- **Photovoltaic panels:** photovoltaic and solar panels are becoming a primary energy source for an increasing number of developments. These renewable energy sources offer great nesting opportunities for birds. Regular inspection of these panels along with netting could be sufficient to keep birds away. Creating a slope by tilting the panels could also make nesting impossible. Alternatively, placing netting over the panels could also discourage birds roosting on the panels.

Alternative ways to enhance biodiversity

There are many ways to increase biodiversity while not increasing bird populations and risk to aircraft. Some examples are as follows:

- Installation of bat boxes and small bird boxes inhabited with non-flocking species
- Creation of habitat for small reptiles and amphibians
- Creation of habitats for small mammals
- Installing small ornamental water bodies
- The introduction of beehives
- Compost bins so long as they are sealed
- The use of native species of plants
- Avoiding the use of pesticides or herbicides
- Installing walkways to prevent the people trampling on habitats

London City Airport encourages discussions with developers prior to the submission of planning applications to ensure that biodiversity is maximised whilst managing the risk to aerodrome safety. To initiate these discussions, or if you have any questions relating to safeguarding, please email to London City Airport's safeguarding team: safeguarding@londoncityairport.com

Covered bin for green areas



Bat boxes



Beehives



Tilted solar panels are preventing birds nesting

