

Bird Hazard Management Plan



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Hyde Park 5, HAYES BIRD HAZARD MANAGEMENT PLAN

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1.0 Introduction

A Bird Management Plan is required where any development is within 13km of an aerodrome. The site in question is located under 5km from Heathrow airport and as such a Bird Hazard Management Plan is necessary.

The submitted plan includes details of:

- Management of any flat/shallow pitched/green roofs on buildings within the site, which may be attractive to nesting, roosting and "loafing" birds. The management plan shall comply with Advice Note 8 "Potential Bird Hazards from Building Design". The Bird Hazard Management Plan shall be implemented as approved, on completion of the development. No subsequent alterations to the plan are to take place unless first submitted to and approved in writing by the Local Planning Authority.

The purpose of such a plan is to manage the development in order to minimise its attractiveness to birds which could endanger the safe movement of aircraft and the operation of Heathrow Airport in accordance with Policy A6 of the Hillingdon Unitary Development Plan Saved Policies September 2007.

Management of gull species in particular but also thrush species, feral pigeon, starling and corvids on the new development is necessary due to the proximity of Heathrow airport and the possibility of bird strike hazards associated with these groups of birds. Reduction of the number of pest species is also beneficial as it will reduce the amount of bird droppings in the area which pose a potential health risk to the public.

The following management strategy summarises the possible areas that could provide roosting sites for these species and then recommends a management programme that would make the new development less attractive for such species groups. The management plan is based upon the Civil Aviation Authority, Airport operations association & General aviation awareness council

– Safeguarding of aerodromes Advice Note 3 and DEFRA advice.

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2.0 Statutory Protection

Feral pigeons (*Columba livia (domest.)*), Herring Gulls (*Larus argentatus*), Lesser Black-backed Gulls (*Larus fuscus*) and Crows (*Corvus corone*) are protected under Part 2 of Schedule 2 of the

Wildlife and Countryside Act, 1981, specifying that the mentioned species may only be killed or taken by authorised persons.

General licences are available from DEFRA to allow killing or taking of these 'pest' species, but used only as a last resort. DEFRA recommend environmental methods such as reduction of suitable habitats for the pests and anti-roosting and proofing measures for the management of these species in unwanted areas.

Starlings (*Sturnus vulgaris*), song thrushes (*Turdus philomelos*) and mistle thrushes (*Turdus viscivorus*) are protected under the Wildlife and Countryside Act, 1981 (as amended). The Wildlife and Countryside Act 1981 (as amended) protects all wild birds and their nests and eggs. Under this act it is an offence to:

- kill, injure or take any wild bird
- take, damage or destroy the nest of any wild bird while it is in use or being built
- take or destroy the egg of any wild bird

Additionally, two further thrush species, fieldfare (*Turdus pilaris*) and redwing (*Turdus iliacus*), are listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and are also protected against disturbance whilst building a nest on or near a nest containing eggs or young. A potential risk from these species has been identified. Therefore, species that should be prevented from roosting on the site are those that constitute a hazard to air traffic. Feral pigeons, gulls and corvids constitute a hazard due to their size which may cause damage to due to the high velocity of impact of an individual bird striking an aircraft. Starlings and thrush species are considered hazardous despite their small size; an individual poses little hazard but their tendency to form large flocks increases the risk of damage to aircraft through bird strikes. High density flocks in collision with aircraft can easily cause damage to the fuselage and transparencies or interfere with the function of engines. It is important that any bird management strategy discourages the formation of these large flocks.

Through the comprehensive and sustainable bird management plan the level of risk would be maintained at very low in respect of the site.

3.0 Site Description

3.1 General Description

The development is within the ground of Hyde Park Hayes Business Park located off Millington Road. The bird management plan is the new office developments named HPH5 and HPH4. Each office block has a flat roof with a parapet around the roof edge.

The whole development including car park is surrounded by a narrow landscape buffer made up of planted trees and shrubs. Office block HPH4 has trees along the north south and west boundary and HPH5 has trees planted along the south and west boundaries. There is also shrub and amenity grass areas, as detailed in HED Planting Drawing Nos. 983 107 and 108.

3.2 Potential Roosting Sites

Any ledge on the development has the potential to be used as a site for roosting by all five groups (feral pigeons, thrush species, starlings, corvids and gulls). This includes both natural and urban ledges. Trees, shrubs and building ledges fall into these categories. Level building surfaces such as the office flat roofs and entrance canopies could also be used by gulls for resting and 'loafing'. It is therefore important that ledges, the ridges of the pitched roofs and the level surfaces are made as unattractive to hazardous species as possible. Any management scheme would aim to discourage this sort of resident community.

4.0 Management Strategies

The aim of the management plan would be to reduce the numbers of birds present on site; reduce the size of birds present, reduce the site attractiveness in terms of foraging, roosting and nesting and ensure that the site does not form an integral part of a flight line towards and from the airport.

There are various control systems that are available for use in deterrence, that decrease the likelihood of roosting and loafing on buildings and planted areas. These measures are summarised below and include artificial as well as environmental techniques that reduce the attractiveness of the development to pest species.

Measures for Control of Pest Bird Species Control Measure Description / Example Area of Use Efficacy

Environmental measures

Planting adjustment: Planting of less attractive tree species e.g. non fruitbearing combined with a low density planting and pruning regime to ensure a low roosting and foraging resource. All planted landscape buffers and linear planting in scheme.

Management of amenity grass across all relevant parts of site.

Control of waste: Limit amount of edible food waste that attracts birds across site.

Physical Measures

Roost inhibitors: Bird spikes
Netting
Pin wiring
Spikes and wiring are a physical deterrent on building ledges, netting is used on flat surfaces. Both prevent birds from landing / roosting

Visual scare devices: Scarecrow
Reflective tape e.g. 'Irritape'
Predator mimics
Close to potential roosting areas

Audible measures

Audible / sonic deterrents: Electronic device or rocket that emits a noise that is uncomfortable for the bird and scares them away, or one imitating the distress call of the target prey which means real birds keep away, e.g. Digi-scare.
In proximity of possible roosting sites DEFRA recommend distress call mimics, rockets are effective but may create a public disturbance in urban areas

Inaudible / ultrasonic Deterrents: Electronic device that emits ultra-sonic pulses that scare away birds. Indoors, e.g. loading bays, large hangars. Indoors, good, may have to be used in tandem in larger spaces.
Outdoors, limited effectiveness.

In many situations the manufacturers of artificial deterrents recommend that combinations of the above measures are used as the hazardous species may become habituated to the constant use of one particular measure. This obviously depends on the measure, for example physical deterrents are constantly effective as long as the deterrent is maintained in good condition, though visual predator mimics or scarecrows may have decreased success over time and are obviously less aesthetically pleasing than others. In this situation, environmental and physical measures may be effective alone but, due to the variability of the reaction of bird species to deterrents, it is essential that the success of any imposed measures is continually reassessed on an annual basis.

5.0 Management Scheme

5.1 The aims of the management scheme are to eliminate the use of the development features by hazardous birds.

5.2 This will be achieved by:

- Establishing the most suitable environmental and physical measures for the site
- Incorporating these into development plans
- Reducing the landscape scheme to ensure no attractive habitats for birds
- Annual assessment of effectiveness
- Adjustment of control methods to increase effectiveness if required

5.3 Recommended Control Methods

5.3.1 *Environmental Measures of bird Control*

The use of environmental methods is favoured as reducing the viable habitat for hazardous species is probably the most effective technique. Reducing the food available for the birds reduces the likelihood of them settling in the area and becoming a pest.

1. Trees, Planting and Grass Management

No extensive habitat areas will be created on site. No water features are proposed for the site. The planting scheme submitted by HED Landscape Architects confirms that neither of the tree species are berry bearing. The shrub species are considered not to be berry bearing (although some books note that the *Lonicera* has berries they are small and inconspicuous and do not attract birds. This species has been planted previously in the vicinity of Heathrow for many years). The proposed shrub species have already been previously used on the site with no issues arising. It is noted that the above is not expected to encourage hazardous species.

In various locations the planting scheme has been implemented at a lower planting density to meet BAA requirements. Wider spacing of planted trees would discourage large aggregations of hazardous species, particularly starlings and corvids that usually flock in tree aggregations as they provide more cover.

Large flocks of starlings can form in long grass and scrub; therefore, the management of amenity grass in the landscape buffer areas will be carried out with it being kept short to reduce the risk of the formation of these large flocks.

The birch trees in the central space/106 area will grow to potentially 10m high, depending upon the amount of water they get over their lifespan. The plane trees along the road/site boundary have the potential to reach 20+m. However the mature plane trees to south-east of the car park have been pruned/pollarded at a height of

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approximately 7m (and presumably this periodic pruning will continue). Both tree species are already planted on site.

2. Waste control

Feral pigeons, corvids and gulls are opportunistic foragers and will forage to some extent wherever there is edible food waste. It is for this reason that use of selfclosing waste bins and regular waste collection is recommended. Keeping the amount of food waste on site to a minimum would reduce the number of pest species by limiting the amount of food available.

5.3.2 *Physical Methods of Bird Control*

It is recommended that the development uses physical deterrent methods in addition to environmental deterrents. Each deterrent will be checked for its effectiveness prior to the next method being implemented. Further methods will only be implemented if further deterrent is required.

1. Roof Inspections

The primary physical deterrent to birds would be regular inspections of the roof areas by nominated personnel from the Facilities Management Team of Hyde Park Hayes. During the period of March–June, weekly inspections of all roof areas would be undertaken by nominated personnel. If bird activity is found to be high, a greater frequency of inspections would be required. All roof areas can be accessed from inside the buildings via the stair within the core of each building.

Outside of this period, monthly inspections of all roof spaces would be undertaken by nominated personnel. If birds are found to be using the roofs in sufficient numbers, more frequent inspections would be required. During inspections, all roof spaces would be searched for roosting, loafing and nesting birds. Any roosting or loafing birds will be dispersed by nominated personnel using a hand held distress call. Upon the discovery of nesting birds, a qualified ecologist would be consulted immediately.

Any nests found during the inspections would be removed by a qualified ecologist. Wild birds, their nest and eggs, are protected under the Wildlife and Countryside Act 1981 (as amended), therefore, an appropriate DEFRA licence would be required in order to remove any nests and eggs.

2. Visual Methods

A similar product to Irri-tape would be used to deter birds from the development site. Irritape is essentially a non-invasive deterrent that can be tied to tree branches that will scare away birds. The Irri-tape works by reflecting light in such a way that makes birds feel uncomfortable and scare them away.

3. Audible / Sonic Deterrents

DEFRA recommend the use of a system that emits the distress call of the target species that scares the target individuals away. An example of this is Digi-Scare, a system already used by airports in the UK. Success of this method may be limited if there are multiple species using the site. Distress calls may be species specific and a decision would have to be made as to which species call should be used. However, this method can be used to deter birds from natural structures, e.g. trees, where other physical measures, such as bird spikes, are unsuitable.

Digi-Scare is an example of a product available on the market although its success is not guaranteed; when choosing a new measure, considerable research should be conducted at the time to find a suitable product with the best effect for the best value.

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Ultrasonic deterrents should be used if a problem develops in internal areas such as loading bays. Some pest species are known to nest inside these large, open areas in the roof structures (such as on the support stanchions in the roof). Ultrasonics would be the best deterrent method for an internal area; ultrasonic systems would emit ultrasonic pulses to scare away pest species but do not work well outdoors. For very large areas, more than one ultrasonic emitter may be required. Initially one emitter should be used and if this is found to be insufficient at the annual reassessment, more systems should be installed.

4. Bird Spikes

The most effective measure to reduce perching or nesting of birds (e.g. gulls) on ledges and roof edges are bird spikes. The spikes would discourage roosting by the target species but allow smaller birds to alight. Bird spikes would be located at the edges of all rooftops, gutters and on any ledges on the warehouse roofs, including the tallest part of the roofs, the central ridges. If applicable, bird spikes would also be fitted to the horizontal parts of the guttering system where located on the outer extremity of the roof.

Bird spikes are standard products and should be sited, fitted and maintained in accordance with manufacturers' recommendations. Care should be taken when spikes are affixed to guttering to prevent interference with the gutters normal functioning.

5. Bird Netting

Bird netting would also be installed on the large flat spaces of the warehouse roofs to prevent birds from nesting, landing and loafing. The netting is installed above the level of the roof so that birds are unable to land on the roof surface. It should be contoured to the slope of the double pitched roofs to reduce visual impact (i.e. they do not span the ridges but follow the slope of the roof). Bird netting should be sited, fitted and maintained in accordance with the manufacturers' recommendations.

5.3.3 Deterrent Implementation

Roof inspections will be the primary deterrent from the outset. If this method proves to be insufficient for controlling bird usage, additional methods will be implemented sequentially. Roof inspections would be followed by visual methods, then audible methods, bird spikes and finally bird netting. Buildings will be surveyed every six months by a qualified ecologist to determine the level of use by pest species and effectiveness of the current deterrent methods. If the nominated personnel judge the methods in use to be insufficient at any time an inspection by a qualified ecologist should be undertaken immediately. If the deterrent methods in use at that time are found to be insufficient the next deterrent method in the sequence should be implemented.

5.4 Reassessment

After implementation of the initial measures, surveys of their efficacy should be conducted every six months. This would be conducted initially by a qualified ecologist with a view to training employees of the new development in continual assessment of pest species numbers. This would include methods of identifying the pest species (e.g. distinguishing feral pigeons from wood pigeons).

Additionally, assessment of pest species using the buildings would be monitored and if judged to be necessary by a qualified ecologist, further physical deterrents would be implemented.

5.5 Adjustment

After reassessment, if the physical prevention measures are not sufficient to stop considerable roosting of pest species, then additional actions should be taken. If the target species are

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roosting and nesting in the trees surrounding the buildings, then either audible and/or visual measures should be utilised to reduce this particularly during the breeding season.

5.5.1 *Environmental Measures*

1. Replanting/Planting Scheme Adjustment Replanting of trees and/or shrubs may be necessary if those originally planted do not survive. The decision to replant should be made by the management company for the development. Although replanting must conform to the original planning specifications, if bird numbers on site are identified as a problem, it may be necessary to plant only non-berry bearing species as replacements. Height of planted trees should also be managed to keep the planted trees below the BAA recommended safety height.

2. Waste Control

Self-closing waste bins and waste collection would be monitored on a weekly basis and waste should be placed in self closing waste bins, so that gulls cannot use the waste as a food source.

5.6 Alternative Methods

The following are considered as measures to be used as a last resort.

Visual Deterrents

Visual deterrents other than Irri-tape, for example scarecrows, would not be appropriate for the sites as they would be detrimental to the overall appearance of the development, plus these deterrents are generally less effective than others due to habituation of birds.

Netting of Trees

An alternate method to reduce roosting in trees, they could be netted to prevent birds from accessing branches used for roosts. This would probably be an effective measure however it would not be in keeping with the aesthetics of the development and is therefore mentioned as a last resort.

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6.0 Summary

The Bird Management Strategy is summarised below. In particular it specifies the timing for reassessment of the different aspects of the plan and possible steps to take.

Self-closing bins and regular waste collection will be used to minimise the amount of food waste on the site, reducing scavenging opportunities for opportunistic foraging species.

The long term proposals include the installation of audible and/or visual deterrents and the adjustment of the planting scheme if it is required.

Activity

ACTIVITY	ACTION
Amenity grass management Cutting regime	16 times a year
Manage tree height	Every 5 years
Replacement planting	To be actioned if monitoring indicates further deterrent is required.
Waste management*	Once a week
Building Monitoring of Pest Species Usage	Once a week from March to June Once a month from July to February
Installation - Visual Deterrent - Audible Deterrent - Bird Spikes - Bird Netting	To be actioned if monitoring indicates further deterrent is required.
Maintenance (according to manufacturers specifications)*	Mandatory requirement
Reassessment of all elements*	Every 5 years

References

Civil Aviation Authority, 2002. CAP 680: Aerodrome Bird Control.

Civil Aviation Authority, 2008 CAP 772: Bird Strike Risk Management for Aerodromes

www.defra.gov.uk