

Aviation-related implications of a proposed development at Mercure Heathrow Hotel



Consultant's report

May 2026



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Project No – J152

Apart-hotel development, Mercure Heathrow, Shepiston Lane, Hayes
Aviation Impacts Assessment

Document history

Version	Description	Author	Reviewer	Date
v1	Consultant report	PF	NJ	11/05/2026

1. Introduction

1.1 Background to the study

This report has been prepared for Sal Hotels Ltd in relation to a planning application for an apart-hotel development at Mercure London Heathrow hotel in Shepiston Lane, Hayes UB3 8LY. It provides an Aviation Safeguarding Assessment in relation to the possible operational risks to aircraft flying in the vicinity, including those using London Heathrow Airport. The threshold of the R27R runway is approximately 1,891m to the south of the development, whilst the threshold of the proposed new R27 runway north of the existing two runways is approximately 2,330m to the south west of the development. Any possible risks of signal shadowing to radar and other navigational equipment as a result of the building is also evaluated.

The proposed development would be some 17m agl and local planning authority (London Borough of Hillingdon) requires an Aviation Impacts Assessment to accompany planning applications for all developments over 15m agl. Our assessment will determine whether the development might breach the obstacle limitation surfaces surrounding London Heathrow Airport or the clearances required for the Airport's IFPs (Instrument Flight Procedures) for approaches and departures. The possible signal shadowing impacts for radar and other navigational aids is also examined. Further possible risks to aircraft and the airport's ATC tower may arise from lighting or glint and glare from solar panels and there may be an increase in the risk of an aircraft bird strike in the event that the development attracts bird life eg in the landscaped areas or in a water feature. In addition, as cranes used during the construction of the building may potentially represent a temporary obstacle for aircraft, the report also outlines the height limits and the necessary procedures with the Civil Aviation Authority to authorise the use of cranes.

Any safeguarding risks to other airports, airfields or heliports¹ or to aviation or meteorological infrastructure (eg radar, navigational aids etc) are considered to be very low and can be disregarded.

In assessing these impacts, we have had informal pre-application contact with London Heathrow Airport and with NATS who are expected to be statutory consultees to the planning application. Their responses are shown in Appendices B and C.

¹ The nearest airports/airfields to the development are RAF Northolt (6.7 km) and Denham (11.9km). The heliport at Crowne Plaza Heathrow, which is close to J4 of the M4 motorway, is some 1,700m from the development, although helicopter operations will not be impacted.

1.2 Description of development

The proposed development involves the demolition of existing car park and erection of a five storey apart-hotel building (with retention of the lower car park level) hotel comprising 38 suites and associated ancillary facilities, with 26 parking spaces retained at lower ground level to support the wider Mercure Heathrow campus.

The site layout is shown in Figure 1.1 below and incorporates a total area of approx 1,375m and a building footprint of approx 825 sq m.

Figure 1.1 – Mercure Heathrow – Apart-hotel development – Site layout

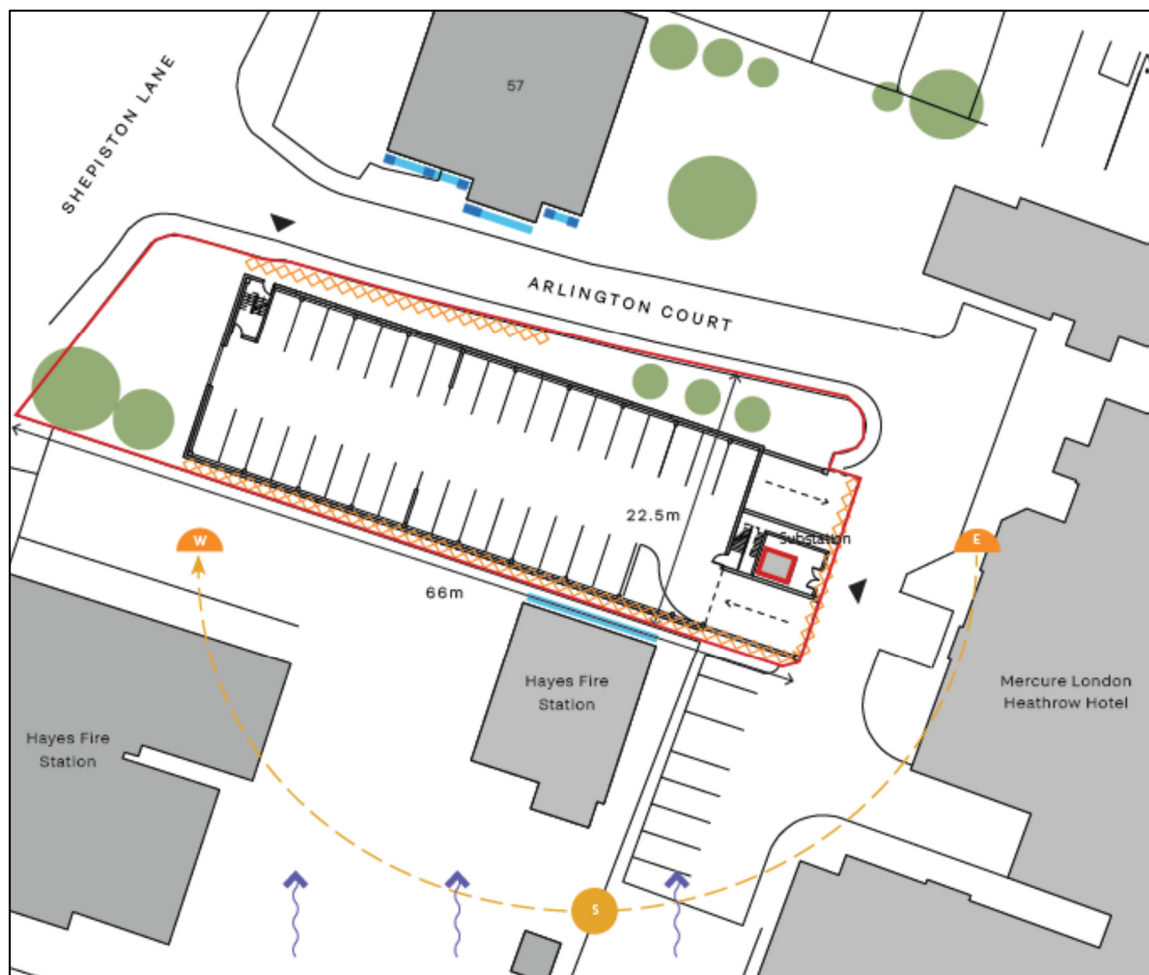


Figure 1.2 – Mercure Heathrow – Apart-hotel development
Building design illustration



1.3 Location

The site location in relation to London Heathrow Airport is shown in Figure 1.3. The proposed development is situated approximately 1,891m to the north of the R27R threshold of the 09L/27R runway and 2,330m to the north west of the R27 end of the proposed new northern runway to be built between the existing 09L/27R runway and the M4 motorway. Whilst the new runway is yet to be formally approved, the implications of the operational safeguarding requirements need to be considered in this assessment.

**Figure 1.3 – Proposed Mercure Heathrow development
Location in relation to London Heathrow Airport**



Key coordinates

The key coordinates for the proposed development, including the ground height (amsl), the maximum roof height and the expected crane height during construction, together with the coordinates for London Heathrow Airport are shown in Table 1.1 below.

Table 1.1 Key coordinates

	Lat / Long	Ground level ¹	Maximum building height	Maximum crane height ¹
Proposed development	512939.71N 0002549.91W	26.1m amsl	26.1m+18.6m =44.7m amsl	261m+18.6m+15m =59.7m amsl
LHR – R27R threshold	512839.63N 0002559.82W	24m amsl	n/a	n/a
LHR – R27 (Northern) threshold	512915.20N 0002742.91W	30m amsl	n/a	n/a

1 Assumes vertical height of 15m above roof level

¹ Per Google Earth

2. Aviation safeguarding policy

Formal consideration within the planning process must be given to any detrimental impacts to aviation which might arise as a result of a proposed new development. All major commercial airports in the UK including London Heathrow Airport are officially safeguarded under the *Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas) (Scotland) Direction 2003*. This requires these airports to lodge a safeguarding map with local planning authorities and to consult with them in relation to certain possible operational impacts that might arise from tall buildings and other developments within certain distances of the airport. The proposed development would be within the Airport's safeguarding area which can extend to a radius of up to 30 km from the aerodrome reference point¹.

Aerodrome safeguarding covers several aspects. Its purpose is to protect:

- a) the airspace around an aerodrome to ensure no buildings or structures may cause danger to aircraft either in the air or on the ground. This is achieved
- b) through both the 'Obstacle Limitation Surfaces' (OLS) and the 'Instrument Flight Procedures (IFP) Surfaces'. This applies both once the development is completed and during construction (eg using cranes).
- c) the integrity of radar systems and other ground-based navigational aids through the distortion or reflection of the radio signals.
- d) aeronautical lighting, such as approach and runway lighting, by ensuring that they are not obscured by any proposed development and that any proposed lighting, either temporary or permanent, could not be confused for aeronautical ground lighting.
- e) the aerodrome from any increased wildlife strike risk, particularly bird strikes, which pose a serious threat to flight safety.
- f) aerodrome operations from interference by any construction processes through the production of dust/smoke, temporary lighting or construction equipment impacting on radar and other navigational aids.
- g) aircraft from the risk of collision with obstacles through appropriate lighting.
- h) aircraft from the risk of building induced turbulence.

¹ Approximate geometric centre of all runway surfaces

- i) aircraft and ATC tower controllers from the risk from glint and glare, e.g. solar panels or glazing.

The protection of the Obstacle Limitation Surfaces (OLS) is a specific requirement of all CAA certified and other licensed aerodromes. The dimensions of the OCS for UK certified aerodromes are set out in UK Reg (UK) No 139/2014 (the UK Aerodromes Regulation) and those for other licensed aerodromes in CAP 168 Licensing of Aerodromes. These regulations are established in accordance with ICAO Annex 14 (Aerodromes) to the Convention on International Civil Aviation.

The protection of the Obstacle Limitation and Instrument Flight Procedures Surfaces also applies in relation to any cranes used on a temporary basis during construction of a development. In certain cases, a dispensation for a minor or temporary breach of the OCS or IFP may be acceptable to the airport operator, provided this is approved by the Civil Aviation Authority and published, if required eg in the AIP (Aeronautical Information Publication) produced by NATS or other suitable publications (eg Pooley's Flight Guide). In addition, prior notification must be given to the CAA for the use of all cranes over 10m agl during the construction phase.

3. Key operational considerations

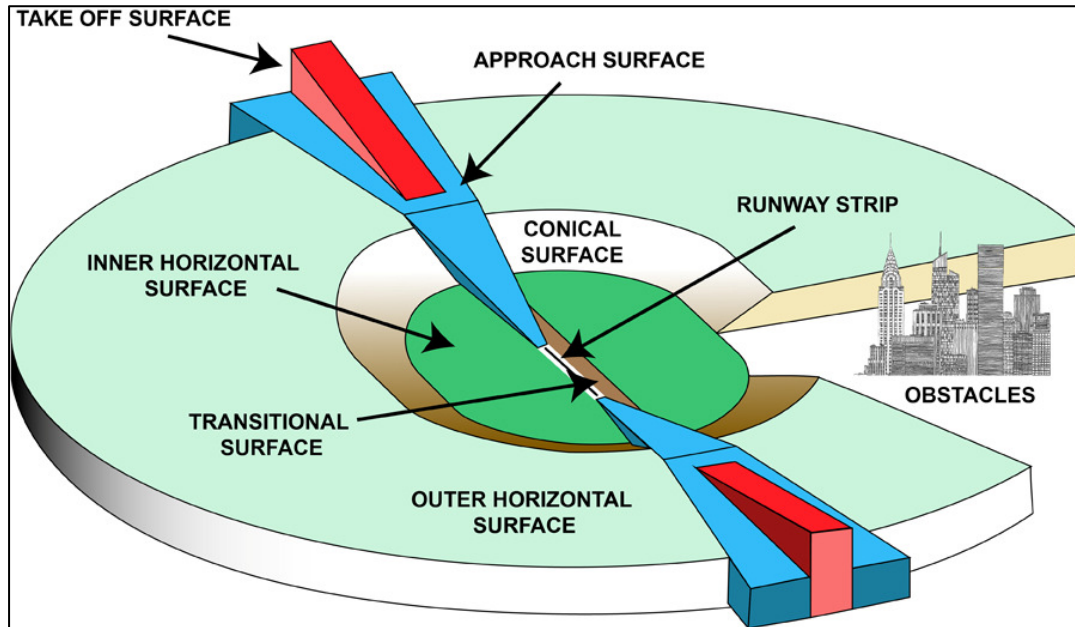
3.1. Obstacle Limitation Surfaces (OLS)

The key surfaces to be assessed (ie whether these would be penetrated by the proposed development) are:

- Take-Off and Climb Surface
- Approach Surface
- Transitional Surface
- Inner Horizontal Surface
- Conical Surface
- Outer Horizontal Surface

These surfaces are shown diagrammatically in Figure 3.1.

Figure 3.1 Airport Obstacle Limitation Surfaces



The development would lie underneath the Inner Horizontal Surface (IHS) at London Heathrow Airport. The IHS is contained in a horizontal plane located 45 m above the elevation of the lowest runway threshold existing or proposed for the aerodrome (R09R=75.3ft/22.95m). Where the main runway is 1,800m or more in length (ie at London Heathrow Airport), circles of radius 4,000 m are described centred on the strip ends of the runway. These circles are joined by common tangents parallel to the runway centreline to form a racetrack pattern. The boundary of this pattern is the boundary of the inner Horizontal Surface. On this basis, the development would be underneath the IHS by some 23.25m and, assuming the use of a crane with a vertical height of 15m above roof level, by some 8.25m during construction. HAL has confirmed that the development would not breach any of the Airport's Obstacle Clearance Surfaces (see Appendix A).

3.2 Instrument Flight Procedures (IFP) constraints

Buildings near airports should not infringe the safeguarded airspace surrounding an airport's Instrument Flight (PAN-OPS) Procedures as shown in the UK AIP (Aeronautical Information Publication). Aircraft will be at the closest point to the proposed development either at or shortly after take-off and as such that the proposed development and any associated crane used during construction would not penetrate the vertical airspace buffer requirements for any of the IFPs at London

Heathrow Airport or those at any other nearby airport. This has been confirmed by HAL (see Appendix A).

3.3 Protection of ILS signal

There is sufficient lateral and vertical distance between the ILS glide slope on the approaches on R27R and the proposed new northern R27 at London Heathrow and the proposed development to prevent any signal distortion to aircraft. This has also been confirmed by HAL.

3.4 Protection of radar and other navigational aids

Heathrow has its own secondary surveillance radar (SSR) and primary surveillance radar (PSR) at the Airport and various round-based navigational aids (navaids). Buildings can distort radar and navaid signals although normally software modifications are possible to prevent this. In this instance, there are no surrounding buildings which might shield the line of sight to the proposed development. We have contacted NATS who have indicated that a detailed assessment would need to be made as to whether a software adjustment is necessary (see Appendix B). The developer is expected to fund this and, from our past experience, have typically charged between £3,000-£8,000 for this.

Other PSRs are based at Bovingdon (26 km from the development), Farnborough Airport (34 km) and at Gatwick Airport (43 m). There is also a military PAR (Precision Approach) radar at Northolt Airport (6 km) and a metrological (MET) radar at Chenies (21 km). In view of these distances, any risk of signal distortion will be very low and can be disregarded.

3.5 Bird strike risk

Planning consent for all developments needs to consider whether the development or the surrounding landscaping might attract birds and thereby increase the risk of an aircraft bird strike. These risks and their appropriate mitigation measures are set out in the regulatory requirements for certificated and other licensed CAA *Aerodromes* and in guidance by the CAA in CAP 772 *'Aerodrome wildlife hazard management and reduction'*. Further safeguarding advice in relation to the risks to aviation from wildlife is set out in the CAA CAST (Combined Aerodrome Safeguarding Team) Advice Note shown in Appendix A to this report.

The development will require the removal of some existing trees at the site and the planting of some replacement trees and shrubs for landscaping. Whilst trees can

attract birds, the scale of this landscaping together with the distance of the development from the flight paths is such that this would not present a significant additional risk of an aircraft bird strike. The Design and Access Statement indicates that the apartment building would have a blue green flat roof (see Figure 3.2). Whilst this is unlikely to attract significant numbers of birds, it would be necessary for this to be inspected and monitored through the lifespan of the building and, if required, suitable mitigation measures should be introduced.

In their initial safeguarding assessment, HAL has indicated that the bird strike risk would be acceptable although they would impose a planning condition requiring regular inspection and monitoring of the blue-green roof.

**Figure 3.2 – Mercure Heathrow – Apart-hotel development
Blue-green rooftop and landscaping**



3.6 Other possible safeguarding impacts

There are two further possible aviation-related impacts that might arise from the proposed building. In certain instances, solar panels can cause glint and/or glare to controllers in airport ATC towers or to pilots, although is now relatively commonplace around airports and in most circumstances can be mitigated either by the use of non-reflective coatings or by special orientation. Whilst there would be a solar panel array of some 67 solar panels on the rooftop (29.46kWp -1.0m x 2.0m panels) located at roof level, the scale and location of the panels in relation to the ATC tower and the

aircraft flight paths would not produce any significant glint or glare to pilots or to controllers.

External lighting at developments close to flight paths can also in certain circumstances be a hazard to aircraft. The Design and Access Statement states that

‘....All external lighting will utilise high-efficiency LED fittings with warm white colour temperatures (typically 3000K) to reduce glare and light spill, in accordance with the guidance in the Institution of Lighting Professionals (ILP) GN01 and London Plan Policy D9. Light trespass will be strictly controlled through precise aiming, shielding and cowling to ensure that illuminance levels on sensitive boundaries do not exceed 2 lux vertical at Elm View House facades, well below the 5 lux threshold recommended for residential interfaces’.

This level of lighting, together with the distances of the approach and take-off paths for either the existing 09L/27R or the proposed new 09/27 northern runway, would not be a hazard to aircraft eg by confusion with runway lighting. HAL has confirmed that lighting at the development would not represent a significant risk to operations at the airport.

3.7 Crane usage during construction

Although any crane used would be below the obstacle clearance surfaces for London Heathrow Airport or any other nearby airports or airfields, the Civil Aviation Authority (CAA) requires crane operators to notify them of cranes that are 100m or higher above ground level (agl), or that are 10m or higher agl and are within 6km of an aerodrome.

The relevant guidance and procedures for this are set out in Civil Aviation Paper (CAP) 1096 -‘*Guidance to crane users on the crane notification process and obstacle lighting and marking*’. Under this guidance, the CAA has to be notified of the use of all cranes above a height of 10m agl at least eight weeks (40 working days) in advance, using the online ACOMS portal¹. The CAA will in turn process and share these notifications with relevant parties (eg nearby airports) which require this information. HAL has also indicated that it wishes to be sent a crane plan, which should be emailed to Airside_Works_Approvals@heathrow.com, to enable a permit to be provided.

¹ <https://portal.caa.co.uk/>

4. Conclusions

Our key conclusions from this assessment can be summarized as follows:

- The proposed development is situated approximately 1,891m to the north of the R27R threshold of London Heathrow Airport's 09L/27R runway and 2,330m to the north west of the R27 end of the proposed new northern runway to be built between the existing 09L/27R runway and the M4 motorway. As such, the development is within the airport's defined safeguarding area.
- The development would not breach the London Heathrow Airports obstacle clearance surfaces and underneath the airport's protected inner horizontal surface by some 23.25m. A typical crane used during construction, with a 15m clearance over the roof height, would be underneath the inner horizontal surface by 8.25m.
- The development (and any associated cranes) would also not breach the protected obstacle limitation surfaces for the RNAV (PAN-OPS) Instrument Flight Procedures as set out in the Airports AIP (Aeronautical Information Publication) as indicated by National Air Traffic Services (NATS).
- There is sufficient lateral and vertical distance between the development and the take-off and approach paths at the Airport to avoid other impacts to aircraft and to ATC controllers eg glint and glare from solar panels, development lighting etc.
- Design and Access Statement indicates that a number of trees and shrubs would be planted as landscaping for the development. Whilst these might theoretically increase the risk of an aircraft bird strike, the scale of the landscaping and the distance from the flight paths is such that any incremental increase in this risk would be negligible. The apartment building would have a blue green flat roof. Given that these can attract birds, the roof should be regularly monitored throughout its lifetime to ensure that suitable mitigation measures to reduce bird nesting and roosting are employed, if required.
- Heathrow Airport (HAL) and National Air Traffic Services (NATS) will both be statutory consultees for the planning application. HAL has provisionally indicated that the operational risks to aviation from the development are acceptable (see Appendix B). National Air Traffic Services has indicated that further assessment is required to assess possible signal distortion to its radar and other navigational aids (Appendix B). If this is the case, the developer

may be required to finance some software modifications, which typically cost between £3,000-£8,000.

- During construction, the CAA should be provided with a crane plan at least eight weeks before their use. This should be notified through the CAA's online portal, ACOMS.

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Appendix A

CAA CAST (Combined Aerodrome Safeguarding Team)
Advice Note

AERODROME SAFEGUARDING ADVICE NOTE

Date:	April 2024
Ref.:	Advice Note 3
Subject:	Wildlife Hazards Around Aerodromes
Action required:	For Information

1. Introduction

Aerodrome safeguarding ensures the safety of aircraft and their occupants when in the vicinity of an aerodrome by controlling potentially hazardous development and activity around it. For an overview of the safeguarding process see Advice Note 1 'Aerodrome Safeguarding – An Overview', available at [CAST publications | Civil Aviation Authority \(caa.co.uk\)](https://www.caa.co.uk/publications/cast-publications).

This advice note provides an understanding of how wildlife hazards can have serious impacts on flight safety and what sorts of developments influence these hazards. Wildlife includes birds and animals; however, most wildlife strikes and wildlife strike safeguarding issues in the UK involve and relate to birds. Therefore, 'wildlife' strikes will be referred to birdstrikes in this guidance, to be more representative of the issues discussed.

2. Background

Aircraft are vulnerable to wildlife strike risk. Species such as deer, badgers and foxes can cause issues, however birds are the most problematic in the UK. Therefore, this advice note concentrates on birdstrike risk as it has resulted in aircraft losses and fatalities. Also, it is estimated that damage to aircraft and flight delays resulting from wildlife strikes around the world cost more than one billion Euros a year. The vast majority of birdstrikes occur on or close to aerodromes. Aerodrome operators are therefore required to take necessary steps to ensure that the hazard is assessed, and the risk is reduced to the lowest practicable level.

The International Civil Aviation Organisation (ICAO), (Annex 14 to the Convention of International Civil Aviation) states:

'The wildlife strike hazard on, or in the vicinity of an aerodrome shall be assessed through:

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- a) *The establishment of a national procedure for recording and reporting wildlife strikes to aircraft*
- b) *The collection of information from aircraft operators, aerodrome personal and other sources on the presence of wildlife on or around the aerodrome constituting a potential hazard to aircraft operations; and*
- c) *an ongoing evaluation of the wildlife hazard by competent personnel*

Aerodromes work hard to apply control and manage the risks posed by birds on the airfield through the implementation of effective habitat management and active deterrence measures. Birds moving between sites located off the aerodrome can increase the birdstrike risk, however the proactive prevention can often enable effective biodiversity and planning challenges to be met without compromising the very real risk to aircraft and flight safety.



The result of a bird strike - US Airways Flight in 2009. European Space Agency Image ©

Birds moving between sites located off the aerodrome can increase the birdstrike risk, however, proactive prevention can often enable effective biodiversity and planning challenges to be met without compromising the very real risk to aircraft and flight safety. Birdstrikes have the potential to result in damage or delays to aircraft operations. Different species of birds can reside within habitats around aerodromes at different times of year. Their presence has the potential for uncontrolled risk to arise should these birds move through the aircraft flight approach paths to an aerodrome or across the aerodrome itself.

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The precise mix of habitats and attractants around each individual aerodrome will affect safety considerations.

3. Safeguarding Strategies

As a general approach, any developments that have the potential to attract flocks of birds or large birds to the vicinity of an aerodrome should be assessed for their potential risk. The internationally accepted safeguarding area with reference to bird hazards is defined by ICAO as a 13km radius around the aerodrome reference point (ARP). Most birds utilise the airspace close to the ground with the majority of birdstrikes recorded below an altitude of 2000 feet. An aircraft on a standard approach to an airport enters this zone at a distance approximately 13km from a runway. Within this zone, aerodrome operators should conduct an inventory of sites that attract wildlife within a defined radius around the aerodrome, paying particular attention to sites close to the airside and the approach and departure corridors. However, the radius may be extended or reduced, based on a wildlife evaluation of the aerodrome vicinity.

The 13km zone should be seen as a planning guide and should a planning application that is likely to attract large numbers of hazardous (flocking or large) birds be presented outside this vicinity *it is possible* that the movements of birds could impact significantly on flight safety. Scavenging gulls, for example, are known to fly over 45 kilometres each way to exploit food waste and could generate flight lines *within the zone* that may increase the birdstrike risk at an aerodrome. Where doubt arises, planning applications outside the 13km radius should always be forwarded to the aerodrome for comment.

It is not possible to state whether the location of a planning application within (or close to the 13km zone) is an indicator of the level of risk it may provide. Applications would need to either increase the population of hazardous birds¹ within the vicinity of the aerodrome or generate flight lines that enter critical airspace. Local conditions and existing attractants and bird populations will always influence the risk posed by a new application. In order to understand the local conditions and their effect on the aerodrome, operators may determine to monitor off-aerodrome bird or wildlife activities in different ways to achieve the desired objectives and benefits. Off-aerodrome monitoring practices may be dependent and determined by the size and complexity of the aerodrome itself, the type of operating aircraft, the human resource available, the bird/wildlife hazard presented in the vicinity and results of any risk assessment (as noted in the aerodrome's wildlife hazard management plan).

In order to identify whether an application has the potential to increase the birdstrike risk at an aerodrome, features of the site that could attract hazardous birds should be assessed alongside the geographic location of the application in relation to other key attractants in

¹ Large and / or flocking species capable of causing damage of aircraft

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the vicinity of the aerodrome. This process often requires specialist aviation knowledge and competence in the subject matter, an understanding of the risks posed by different species, the likely movement factors and any seasonal issues along with construction, development and final plan considerations. If an LPA has any doubt regarding the potential for wildlife issues, they should consult the aerodrome. Both manmade and natural landscaping features off-aerodrome can attract wildlife onto and aerodrome. These can include:

- Landfill sites
- Sewage works
- Building developments
- Drainage schemes
- Reservoirs
- Gravel pits
- Coastal areas
- Rivers and estuaries
- Woodland and agricultural land

The above points provide examples of the attractants that can be created as a result of developments that have the potential to increase the birdstrike risk.

4. Species Risks and Proximity

Flocking or large birds present the highest likelihood of resulting in flight safety concerns. Developments that attract waterfowl or gulls, for example, must be referred to the aerodrome operator. Dependant on proximity or location in relation to other sites, the development may still be permissible or may require an appropriate mitigation in the form of a 'Hazard Management Plan' to enable the development to gain planning permission.

Where a proposed development has the potential to attract birds, the developer will be expected to have undertaken a comprehensive bird hazard assessment, carried out by experts in the subject matter, to identify the risk(s) of species being attracted.

It is important to understand what constitutes a birdstrike risk and what constitutes a birdstrike hazard. The birdstrike hazard relates to the background population² of hazardous birds and their ability to have a negative impact on air safety. The risk is the likelihood of hazardous birds resulting in such impacts. This can be assessed by identifying the ability of

² The level and type of bird activity that would occur in the absence of any bird control measures.

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the application to increase the carrying capacity³ of hazardous birds in the aerodrome vicinity or to result in flight lines between attractants such as breeding, feeding and roosting sites that could impact aircraft movements.

Listed below are common hazardous birds found in the UK. This list is not exhaustive but provides an indication of the kinds of birds that require consideration when assessing planning applications, noting that other species may also have the potential to increase the hazard. In general, large birds (waterfowl, large birds of prey etc.) and flocking species (Starlings, Lapwings, Pigeons, Gulls etc.) present the greatest hazard.

- All wildfowl (Ducks, Geese and Swans)
- All large waterfowl
- Herons
- Egrets
- Cormorants
- Gamebirds (Pheasants & Partridges)
- Birds of prey
- Large waders (Lapwing, Curlew and Golden Plover)
- All gull species
- All Pigeon species
- All Corvid species (crow family)
- Starlings

Safeguarding should take a proactive, precautionary approach and as such, the potential attraction of a site to hazardous birds should be used to inform safeguarding decisions. The potential for a birdstrike risk to then develop depends on several factors, for example the species of birds present, the types of aircraft operating, the presence of other habitats in and around the vicinity of the aerodrome and the frequency of aircraft movements. The time of year will also need to be taken into consideration in respect to which species will be more prevalent across certain sites.

Where a significant hazard is identified, the developer will be expected to modify their proposals to mitigate the risk or, should the increase remain unacceptable, may find their application remains subject to a sustained objection from the aerodrome operator. To lift any objections, it is possible that further to habitat modifications, a results-based Wildlife

³ The maximum population size of the species that the environment can sustain indefinitely, given the food, habitat, water, and other necessities available in the environment.

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Hazard Management Plan (WHMP) could be agreed with the aerodrome operator. The long-term efficacy of all mitigations proposed would need to be fully auditable by the aerodrome or their nominated representatives.

To avoid delays in the planning process it is suggested that developers consult with relevant aerodromes at a preliminary stage and follow the design advice provided in aviation flight safety guidance material. Further information is available in CAA Publication 'CAP 772: Wildlife Hazard Management at Aerodromes' available at www.caa.co.uk.

5. Development Types

As there are many types of development, the following examples are given to help identify the potential to attract hazardous species. The final decision on whether a site may or may not result in a risk to flight safety will be dependent on location, proximity and relation to other existing wildlife sites and corridors at each individual aerodrome.

Development Type	Specific	Species concerns
Waste Management	Landfill Composting Recycling Treatment	Feeding opportunities for potentially large numbers of scavenging birds e.g. Gulls, Corvids, Starlings, Pigeons, Raptors.
Water	Nature Reserves Reservoirs Ponds River diversions Sewage/Water Treatment	Diversity of feeding, loafing, breeding and roosting opportunities for Waterfowl, waders and gulls e.g. Swans, Feral and Wild Canada, Greylag and 'grey' geese, Gulls, Ducks, Herons and Egrets, Wading birds such as Lapwing, Oystercatcher etc.
Wetland	Nature Reserves Marshland Reedbeds Swales SuDS Schemes Drainage schemes Flood Alleviation Works Managed retreat	Feeding, roosting, breeding, and loafing for Waterfowl, passerines, <i>hirundines</i> e.g., Swans, Feral and Wild geese, Ducks, Herons and Egrets, Gulls, Wading birds etc and potential for large Starling or Swallow roosts to form (e.g., Reedbeds).
Sports facilities	e.g., Golf course open grassland, watercourses Fishing lakes Sailing clubs	Landscape developments risking feeding, loafing, and breeding opportunities for different species such as Canada Geese, Gulls, Pigeons,

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		Corvids, Starlings, Herons and Egrets etc.
Property development	Housing Factories Industrial Estates / Units Mineral extraction Green roofs	Diverse human factors and built environment providing food and shelter for urban species such as Pigeons, Gulls, Corvids, Starlings etc.
Rural	Woodland plantations Pig rearing facilities Poultry facilities	Potential feeding, nesting and cover for species such as Pigeons, Gulls, Corvids, Starlings, Game birds etc.
Energy	Solar farms	Potential perching and breeding opportunities for Gulls, Corvids and Feral Pigeons.
	Tidal barrage	Changes to waterfowl / wader behaviour / distribution.
	Energy plantations	Provision of potential roosting habitat for passerines (Starling).

Whilst solar farms (PV arrays) have the potential to provide some attractants (perches, shelter, and recesses for breeding), peer-reviewed research⁴ suggests that “*PV arrays would not increase hazards associated with bird-aircraft collisions*”.

Research in this field is still in its infancy, and a precautionary approach should be taken when assessing birdstrike risk associated with a planning application on a case-by-case basis. Natural England⁵ state:

‘Until further scientific evidence is accrued to support any positive or negative impacts of solar farms on birds, we recommend that developments should be considered on a site-by-site basis with consideration given to 1) the habitat available

⁴ *Bird use of solar photovoltaic installations at US airports: Implications for aviation safety*

Travis L. DeVault^a, Thomas W. Seamans^a, Jason A. Schmidt^a, Jerrold L. Belant^b, Bradley F. Blackwell^a, Nicole Mooers^a, Laura A. Tyson^a, Lolita Van Pelt^c

^a US Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services, National Wildlife Research Center, USA

^b Department of Wildlife, Fisheries and Aquaculture, Mississippi State University, USA

^c US Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services, USA

⁵ *Evidence review of the impact of solar farms on birds, bats and general ecology (NEER012)* 1st edition - 9th March 2017, Natural England

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prior to the development, 2) the habitat that will co-occur with the development and 3) the potential for attraction to polarotactic insect species (i.e., is the development close to a water body)'.

Insects attracted to PV arrays are likely to primarily attract passerine species not considered hazardous to aircraft. In addition, there is the possibility that PV arrays may provide fewer attractants than existing habitat (either open land or open flat roof habitat), so each application should be assessed individually as some may have the potential to reduce the presence of current hazardous bird populations.

If a proposed development involves the removal, storage, and redistribution of fertile topsoil, this can expose significant populations of invertebrates and small vertebrates. These can provide significant feeding attractants for Gulls, Corvids (the Crow family) and Starlings. Whilst such attractants are generally short-lived, they have the potential to increase risk that may be significant to the aerodrome. If there is doubt about a development, a second opinion in relation to birdstrike concerns should always be sought.

The range of individual considerations and the potential attractions that can arise from just one of these developments are given below. This provides a demonstration of the depth of concerns that may arise and the considerations that are necessary. Even if a building or development itself does not present apparent attractants, the construction phase might, for example due to standing water and the disturbance of soil. Many hazardous bird species are adept at exploiting these conditions, hence the construction phase should always be assessed with suitable mitigation put in place.

Development	Type	Attraction
Example: Industrial Estate Development	Development site - ground works	Corvids, Gulls & scavenging birds feeding on soil invertebrates
	Development site - standing water	Loafing or bathing gulls and dabbling ducks (Mallard). Potential for feeding (e.g., Grey Heron)
	Development site - human factors	Worker's cafeteria or mobile food outlet; waste food attracting Feral Pigeons, Starlings, Corvids or Gulls.
	Construction works	As above
	Construction works - buildings	Unfinished buildings providing nesting grounds for Feral Pigeons
	Completed works - rooftops	Open flat roofs – breeding / roosting habitat for roof nesting gulls

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	Completed works - landscaping	Tree planting or hedgerows presenting nesting opportunities for Woodpigeon / Rook and berry, fruit or nut provision providing food for Thrushes, Starlings, Pigeons etc.
	Completed works - SuDS	Drainage swales resulting in streams, ponding / open grassland etc. suitable for waterfowl.

The above table shows the depth of consideration needed to determine whether an apparently unattractive development may result in a birdstrike risk. Similarly, assessments of clearly attractive sites e.g., waste disposal facilities would need reviews based on other factors. Another example is given below.

Development	Concern	Risk
e.g., Landfill	Waste disposal	Thousands of scavenging gulls, corvids, Starlings etc.
	Location	Proximity to aerodrome
		In relation to gull roosts
		In relation to rookeries
		In relation to Starling roosts
		In relation to other feeding sites
	Flight lines	Proximity / probability of crossing aerodrome or approaches

Sites that result in increased risk during construction are likely to be located in relatively close proximity to the aerodrome, or beneath the aerodrome approaches hence a responsible development should address all aspects of the works to ensure that both the construction and final outcome are appropriately managed.

6. Management Controls

National and international guidance material, alongside experts in birdstrike management can help provide the necessary detail for reducing the potential risk from developments to levels acceptable to an aerodrome operator. If a specific development cannot be suitably controlled, early consultation with the aerodrome should at least enable the developer to consider alternative locations.

Where developments can be appropriately controlled, an example of potential actions is provided in the case where buildings may provide flat roofs for nesting gull colonies or

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ledges and gullies for Feral Pigeons, Jackdaws and Starlings to establish nest sites or perching areas. In addition, solar arrays can provide similar attractants. Opportunities to reduce the risk from rooftop design could include:

- Netting to proof roofs and exclude hazardous species as required.
- Roof overhangs kept to a minimum.
- Ledges beneath overhangs and external protrusions avoided where possible.
- Redesign roof to steeply pitched to deter gulls from nesting, roosting, and resting.
- Lighting structures proofed to prevent perching.
- Solar arrays to be designed close-fitting to reduce potential perching / nesting opportunities.
- Choice of roof material to reduce attractiveness (smooth surfaces with minimum protrusions or vents to reduce breeding opportunities).
- Roof spaces to be designed in such a way as to prevent access by birds.
- Self-closing doors to prevent access to birds or openings fitted with netting or plastic strip enclosure materials.
- Safe access enabled for on foot access to all areas of roof that cannot be proofed.
- Outside dining areas enclosed or avoided near an aerodrome.
- Green and brown roofs near an aerodrome not to be included in the design.

7. Monitoring & Inspections

Developments that have been carefully considered for wildlife hazards may have a combination of methods or standards attached to ensure any residual attractants that cannot be designed out do not increase risk to an aerodrome. As these planning requirements may be essential to the safe development and operation of a site, they may need to be independently reviewed to ensure they continue to be effective. Wildlife Hazard Management Plans should therefore be results based, to enable the applicant to be flexible in their approach. Should circumstances change and species of concern no longer be present, less effort may be required to meet the needs of a results-based plan. Equally, should an approach fail to achieve the desired results, additional effort may need to be established. In order to develop a results-based WHMP, all interested parties need to agree on achievable threshold figures that will result in no further increase in background populations or risk to the aerodrome, i.e. the number of each species that can be tolerated on site before deterrence should be carried out.

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An aerodrome will derive such a threshold figure from an estimation of the background population⁶ of that species in the local area in combination with potential risk to aircraft. An increase above the background population would be indicative of increased risk. A precautionary approach to the setting of the threshold figure will be adopted in the absence of robust ornithological data specific to the development. If WHMPs are necessary for breeding birds, the threshold figures shall be set at zero (as measured by breeding success). In order for the efficacy of BHMPs to be audited, records of actions taken and results must be kept and a programme of audit agreed.

During the breeding season for gulls, for example, inspections to assure compliance with a 'no breeding' WHMPs should be carried out at least weekly during the breeding season (typically April to June), in order to ensure that all hazardous birds found nesting are dispersed and any nests and/or eggs are removed. This process should be fully documented to provide an audit trail and will require separate licensing if required.

For roosting or loafing (resting) birds, regular inspections should be carried out and if the threshold level is exceeded then birds should be dispersed. The frequency of inspections should be dictated by the presence of hazardous birds and be sufficient as to ensure the efficacy of the plan. This process should be fully documented to provide an audit trail and compliance site visits from the aerodrome operator may be required, subject to the necessary Health and Safety considerations.

If a development is close to the critical airspace of an aerodrome, then it may be necessary to have a communication plan in place to contact Aerodrome Operations staff at the aerodrome concerned before any required bird dispersal takes place. In some cases, developers have engaged pest control companies to carry out inspections and bird deterrence on their behalf.

It is important that if bird numbers at a development increase and bird deterrence methods are not proving effective, a process to ensure the aerodrome operator is informed should be included in any WHMP.

Important measures that **may** be included in a WHMP are provided here for general guidance only:

⁶ The level and type of bird activity that would have occurred prior to the development.

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- Confirmation that access to all areas of the site is available and by what method, to ensure that inspections can be carried out (See CAA Publication 'CAP 772: Wildlife Hazard Management at Aerodromes' available at www.caa.co.uk).
- Confirmation that an appropriate inspection schedule is to be operated.
- Confirmation that any control is to be carried out under appropriate licences.
- Details of bird species and, where applicable, species behaviours that will be subject to management plans along with clearly designated thresholds to define when dispersal actions should be instigated and what they should achieve.
- Information on communication plans to contact Aerodrome Operations staff at the aerodrome concerned before bird dispersal takes place (in line with agreed thresholds).
- Details of any dispersal methods to be used.
- An auditable record of all BHMP information to be maintained detailing: dates, times and description of monitoring carried out, species and number of birds recorded, dispersal effort provided and the results of any dispersals.
- Provision for the aerodrome to inspect the records and undertake no-notice visits to the site (where necessary).
- Duration of the WHMP linked to the site and not the site owner or operator.

Early pre-planning application consultation with the aerodrome operator on the content of a WHMP is recommended. It is important that the aerodrome seeks to ensure that WHMPs are results-based, enabling the efficacy of the plan to be assessed in a fair and transparent way. Results-based WHMPs also enable the applicant to develop the WHMP in the most cost-effective way, as they are less prescriptive than plans detailing the equipment to be used. Please contact the aerodrome to discuss their requirements.

This advice note has been revised and updated by the Combined Aerodrome Safeguarding Team (CAST) from that produced by the Airport Operators Association (Safeguarding Working Group) with the support of the CAA. Its contents may be reproduced as long as the source is acknowledged.

Further CAST Safeguarding Information is available at <https://www.caa.co.uk/combined-aerodrome-safeguarding-team-cast/>.

Project No – J152

Apart-hotel development, Mercure Heathrow, Shepiston Lane, Hayes
Aviation Impacts Assessment

Appendix B

Provisional response by HAL (Heathrow Airport Ltd)



Peter Forbes <peteraforbes@googlemail.com>

Re: Mercure Heathrow - Proposed development

2 messages

DD - Airport Safeguarding/BAA <safeguarding@heathrow.com>

27 April 2026 at 14:11

To: Peter Forbes <pforbes@alanstratford.co.uk>

Classification: Public

Hello Peter,

Thank you for your email.

On review of the Design & Access Statement I can see that the proposed elevations at 18.6m Above Ground Level (AGL) 44.75m Above Ordnance Datum (AOD), based on a ground level of 26.1m, will ensure the building will remain below the safeguarding surface known as the Inner Horizontal Surface (IHS) which is a flat surface with a datum level of 67.95m AOD.

I can also confirm that as long as the building remains below the datum level of the IHS, then there would also be no impacts on the Instrument Flight Procedures. (IFPs).

You have stated that you are engaging with NATS to confirm no impact on the Instrument Landing Systems (ILS) & Radar. Heathrow would not support a development that impacted these facilities therefore if a report is commissioned with NATS, this should be provided as supporting documentation at the subsequent planning stages, confirming no impacts.

I can see that the proposed roof structures will consist of flat blue/green roofs which will need to be monitored for the life of the building. This will be enforced via a Planning condition at the planning stages or you could submit a proposed Bird Hazard Management Plan (BHMP) as supporting documentation at the subsequent planning stages. Please see attached advice note for further information.

The areas in which soft landscaping will be introduced are too small to be of concern to the airport. However, if you are providing a BHMP for the roofs then there is no harm in adding the monitoring of the whole site to ensure no nesting or loafing of large numbers of birds occur.

The site is only just outside the current and future lighting box. Therefore, please can you ensure that any external lighting associated to the site is designed to minimise light spill above the horizontal.

No turbines should be introduced to the site and if solar panels are to be installed at either ground or roof level then a Glint & Glare assessment should be completed to show no impacts to the all-runway approaches and the Air Traffic Control Tower.

If cranes are required for construction purposes, then all crane detail should be submitted to following address to allow a further review of the crane plan and subsequent Crane Permit. No cranes should operate on site until the operator has been provided with the crane permit.

Airside_Works_Approvals@heathrow.com

I hope this was helpful but, in the meantime, if you have any further questions then please let me know.

Kind Regards

Simon Vince
On behalf of Heathrow airport.

From: Peter Forbes <pforbes@alanstratford.co.uk>
Sent: 27 April 2026 13:21
To: DD - Airport Safeguarding/BAA <safeguarding@heathrow.com>
Subject: Mercure Heathrow - Proposed development

You don't often get email from pforbes@alanstratford.co.uk. [Learn why this is important](#)

Caution: external email. Unless you recognise the sender and know the content is safe, do not click links or open attachments.

Hi

On behalf of the developer, we have been commissioned to provide an Aviation Impacts Assessment for a proposed five storey apartment development at the Mercure Heathrow, Shepiston Lane, Hayes HB3 1LP to the north of Heathrow Airport.

Whilst our initial assessment is that it is unlikely to be breach your safeguarding requirements for either the existing runways or the proposed northern runway, I would be grateful if you could please provide an informal opinion on this. We recognise that the Airport will be a statutory consultee for the planning application in due course. Please note that we are also contacting NATS to give a view on other possible impacts eg radar/navaid signal distortion or glint and glare to the ATC tower.

For further information I attach the Design and Access Statement for the development.

Thank you for your assistance with this.

Brgds

Peter A Forbes

Director
Alan Stratford and Associates Limited
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[Teddington](#) | Middlesex TW11 8RD
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Alan Stratford
& Associates

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cast-advice-note-3-wildlife-hazards-around-aerodromes-april-2024.pdf

544K

Peter Forbes <pforbes@alanstratford.co.uk>

3 May 2026 at 17:57

Draft To: DD - Airport Safeguarding/BAA <safeguarding@heathrow.com>

[Quoted text hidden]

Project No – J152

Apart-hotel development, Mercure Heathrow, Shepiston Lane, Hayes
Aviation Impacts Assessment

Appendix C

Provisional response by NATS (National Air Traffic Services)



Peter Forbes <peteraforbes@googlemail.com>

Fwd: Proposed 5-storey development at the Mercure Heathrow hotel [SG20673]

1 message

Peter Forbes <pforbes@alanstratford.co.uk>
To: pforbes <pforbes@alanstratford.co.uk>

11 May 2026 at 14:12

----- Forwarded message -----

From: **ROSSI, Sacha** <Sacha.Rossi@nats.co.uk>

Date: Wed, 6 May 2026 at 13:13

Subject: RE: Proposed 5-storey development at the Mercure Heathrow hotel [SG20673]

To: Peter Forbes <pforbes@alanstratford.co.uk>Cc: NATS Safeguarding <NATSSafeguarding@nats.co.uk>, Max Plotnek <max@mjpplanning.com>

Hi Peter,

I've just had this email sent on from the IFP team. I can confirm that NATS does not undertake Glint and Glare assessments and that advice should be sought from LHR airport directly. While the airport should be able to provide some initial guidance, there still isn't an industry wide agreed process for assessing the G&G impact on ATC. However, where developments are offset from the runway direction, that may generally be acceptable, although other traffic and procedures (e.g. helicopter crossing points) would also need to be considered.

In terms of the NATS position, I note there are 2 existing warehouses on this bearing, on Millington Rd that cause radar reflections, as do a number of other buildings in Hayes and within the Nestle Development. I don't know whether this proposal has consent or is subject to a resubmission, we reviewed it as [382/APP/2018/4380](#) in 2019 but that doesn't seem to include an increase in height. In any case, we will review the exact height, design and finish of the building when we're consulted under planning. Should it be found to cause radar reflections, a conditional consent requiring mitigation is likely to be supported.

Regards

Sacha

NATS Safeguarding Office

NATS**Sacha Rossi**

ATC Systems Safeguarding Engineer

D: 01489 444205

E: sacha.rossi@nats.co.uk

11/05/2026, 14:12

Gmail - Fwd: Proposed 5-storey development at the Mercure Heathrow hotel [SG20673]

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL

www.nats.co.uk



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