

BIRD HAZARD MANAGEMENT PLAN

MANCHESTER GREEN



Site Address:

Hale Court and Enterprise House
333 and 337 Styal Road, Manchester,
M22 5LW

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1. Introduction

This Bird Hazard Management Plan (BHMP) is prepared in response to Manchester Airport's concerns regarding the potential birdstrike risk associated with the rooftop solar PV installation at Hale Court and Enterprise House, 337 Styal Road, Manchester, M22 5LW. Given the site's close proximity to Manchester Airport's Air Traffic Control Tower (ATC) and flight paths, it is essential to demonstrate that the installation will not increase bird activity in a way that could affect aviation safety.

This plan assesses the realistic risk of bird attraction, provides mitigation measures where necessary, and aligns with CAA CAP 772: Wildlife Hazard Management at Aerodromes.

2. Site-Specific Risk Assessment

2.1. Location and Surroundings

The site is located in an industrial/commercial area near Manchester Airport. Surrounding features include:

- Existing buildings and developed land, with no impact on open green spaces directly adjacent.
- No water bodies or natural foraging sites in direct proximity, reducing its attractiveness to waterfowl and gull species.
- Commercial building adjacent to subject property with existing rooftop solar PV system.
- No alteration to surrounding habitat as a result of this project, meaning there is no ecological change that could encourage new bird populations.

2.2. Roof Characteristics and Solar Panel Installation

The proposed rooftop PV system will be installed on a steep pitched roof with the following characteristics:

- Panels will be mounted less than 200mm above the roof surface, significantly limiting potential nesting or roosting space.
- Minimal horizontal surfaces, reducing the likelihood of perching.
- No additional ledges, cavities, or open structures that could create shelter or nesting zones.

This fundamentally differs from flat-roof and ground-mounted solar PV systems, which can provide extensive open space for birds. Studies indicate that steep-sloped solar arrays with tight mounting configurations do not provide suitable conditions for nesting birds ([Renewable Energy Wildlife Institute, 2022](#)).

2.3. Bird Species of Concern

Given the airport's location, the primary concern would typically be large flocking birds or species that nest in man-made structures. However, the likelihood of the rooftop solar panels attracting these species is extremely low, because:

- Gulls (*Larus spp.*): Attracted to large, open, flat surfaces, particularly near water bodies, which do not exist at this site.

- Feral Pigeons (*Columba livia domestica*): More likely to nest in abandoned buildings, roof cavities, or sheltered spaces - none of which are created by the design.
- Starlings (*Sturnus vulgaris*): Typically roost in dense tree canopies or urban structures with overhangs – none of which are created by the design.
- Corvids (Crows, Magpies, Jackdaws): Opportunistic nesters, but not known to be attracted to closely mounted solar panels on pitched roofs.

Studies by the UK Centre for Ecology & Hydrology show that bird activity on solar PV installations is mainly an issue for large-scale ground-mounted arrays, particularly in agricultural settings where open land attracts birds. There is limited evidence that rooftop solar panels, particularly on steep pitches, lead to increased bird presence ([Natural England Research Report 2023](#)).

3. Bird Mitigation Measures

3.1. Design Features Preventing Bird Attraction

To further support the extremely low likelihood of bird attraction, additional measures have been incorporated into the installation design:

Tight Panel-to-Roof Mounting ($\leq 200\text{mm}$)

- The minimal gap eliminates nesting opportunities.
- Studies on urban solar arrays ([Renewable Energy Wildlife Institute, 2022](#)) indicate that tightly mounted solar PV panels significantly reduce the likelihood of bird nesting as they provide insufficient shelter and access.
- No enclosed spaces between the panels and roof reduce shelter for birds.

Steep Roof Pitch

- The steep angle discourages perching, as birds prefer flat or shallow-sloped surfaces.
- Unlike flat-roof installations, this setup offers no viable surface area for birds to land comfortably.

Minimal Water Accumulation

- Panels are installed with a self-cleaning angle, preventing water pooling, which could otherwise attract birds.
- Panel drainage will be maintained with the installation of solar water drainage clips to eliminate any residual water sources.

4. Bird Hazard Monitoring & Management

4.1. Routine Inspections

- Regular inspections to assess for signs of bird activity (nesting materials, droppings, perching).

- After heavy rainfall or seasonal bird migrations, checks will confirm that water pooling is not occurring.
- Reviews with Manchester Airport Aerodrome Safeguarding (wildlife management team), if required.

4.2. Incident Reporting

- If increased bird activity is observed, measures will be reviewed, and additional deterrents will be introduced if needed.
- All bird-related incidents will be logged and reported if necessary.

5. Compliance & Motivation

This Bird Hazard Management Plan fully aligns with CAA CAP 772 and demonstrates that:

- The steep-pitched roof and minimal mounting height do not provide conditions for bird nesting.
- The lack of surrounding habitat changes means bird populations will not be altered.
- The absence of water bodies, food sources, or flat nesting spaces negates the attraction of this site to birds.
- The design inherently discourages perching, roosting, and nesting, eliminating the risk factors associated with increased bird activity.

Given these factors, there is no reasonable expectation that this installation will create additional bird hazard risks for Manchester Airport.

6. Conclusion

This assessment confirms that the likelihood of increased bird activity at 337 Styal Road due to the proposed solar PV system is negligible. The proposed tight mounting system, steep-pitched roof, and lack of environmental changes ensure compliance with aviation safety standards.