

Ecology Statement: Safety of Birds

National Football Museum Urbis, Cathedral Gardens,
Corporation Street, Manchester, M4 3BG

10 September 2025



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1. Introduction

- 1.1 This Ecology Report has been prepared by Infinite Renewables Ltd to accompany the planning application for a Single Temporary Wind Turbine in Association with the Christmas Ice Rink at National Football Museum Urbis, Cathedral Gardens, Corporation Street, Manchester, M4 3BG.
- 1.2 The purpose of this statement is to identify the potential risks the development has on bird safety, how the design of the proposed development reduces these risks and any recommendations to further reduce associated risks.

Proposed Development

- 1.3 The proposed development is the installation of a single temporary wind turbine in association with the Christmas ice rink at National Football Museum Urbis, Cathedral Gardens, Corporation Street, Manchester, M4 3BG.
- 1.4 The application is for temporary permission for a period starting on 01/10/2025 and ending on 31/01/2026 (4 months in total).
- 1.5 The candidate turbine is a Bestwatt turbine (BW15) that provides up to 15kW generation capacity. It has a maximum tip height of 21m.

Site Details



Figure 1: Proposed Turbine Location (Google Earth)

- 1.6 The development site is within the outdoor space of the ice rink, which was previously occupied by a large Christmas tree.
- 1.7 The ice rink will be located on a grassed area of open public space within Cathedral Gardens, which is bounded by Corporation Street to the east and Fennel Street to the south. Surrounding the gardens are heritage buildings (including The Triangle, Manchester Cathedral and Chetham's School of Music) and the contemporary Urbis building which houses the Football Museum. Cathedral Gardens is located within Manchester City Centre, a heavily built-up and urban environment.
- 1.8 The site is not within any statutory protected sites (including SSSIs, SACs, SPAs, Ramsar Sites, NNRs and LNRs) or in an Area of Outstanding Natural Beauty.

2. Bird Safety and Wind Turbines

Bird Safety and Wind Turbines

- 2.1 In this section, the key bird safety risks associated with wind turbine developments are discussed. Bird safety in relation to the site is discussed in Section 3.

Collisions

- 2.2 The Planning Policy Guidance on Renewable Energy recognises the risks of birds colliding with wind turbines which often leads to fatalities. However, the guidance claims that the risk is “a relatively low risk”. Collision risk is increased during migration periods where migratory birds generally fly at altitudes greater than 100m.

Habitat Damage and Loss

- 2.3 All developments have a footprint which can cause habitat loss and damage. For wind turbines, this often includes the turbine base, crane pads and any additional areas in the construction period.

Displacement

- 2.4 Another concern raised in relation to bird safety is displacement. This is a particular issue during the construction period of wind turbine sites which can cause a loss of conditions. In contrast, the operational period of wind turbines often reduces displacement and birds are able to habituate.

Bird Safety Case Studies

- 2.5 The following paragraphs briefly examine case studies that range from technical research to our own projects. The studies below highlight the low risk of bird collision and offer additional ways to reduce the risk.

Infinite Renewables Past Projects

- 2.6 Infinite Renewables have implemented schemes similar to the proposed development across the UK and Europe where temporary turbines were installed in a mix of urban and rural environments such as a housing estate in Dalston, London and Rier Cottage, Devon. A number of these projects were in built-up urban areas with trees within 50m of the development. Bird fatalities were monitored across the seven projects, and no fatalities occurred.

Vattenfall Case Study

- 2.7 Research from 2023 using radar and camera technology found that seabirds

purposely avoid offshore wind turbine rotor blades. The technology used allowed the researchers to track bird movement and examine behaviour towards the wind turbines. The research was conducted over a 2 year period in the Aberdeen Bay in the North Sea. During the duration of the study, monitoring concluded that there was not a single collision recorded between the birds and rotor blade. As seabirds approached the turbines, movement tracking showed that they would reduce their flying speed.

- 2.8 Vattenfall began another study in 2025 in the Dutch wind farm Hollandse Kust Zuit, specifically monitoring migrating birds by using similar technology to their previous study plus AI. During the first migration period, in which millions of birds migrate, it was revealed that during the peak period only a couple of collisions were recorded.

Natural England: Vision Based Wind Turbine Collision Mitigation

- 2.9 A 2022 study conducted by Natural England focused on how vision-based wind turbine mitigation measures could help reduce the risk of collision. The review concluded that increasing the visual contrast of the turbine helped approaching seabirds detect the turbine and alter their flight speeds to avoid collision.

3. Site Specific Analysis

- 3.1 This section analyses the site of the proposed development in relation to the risks presented in Section 2.
- 3.2 As mentioned previously, the location of the proposed development is not within any statutory protected areas, nor is it within an AONB.
- 3.3 The proposed duration of the temporary turbine is outside of nesting and breeding season which, in the UK, is typically between March to September. Therefore, the temporary proposed turbine is unlikely to cause disruption to breeding birds nor lower their productivity.
- 3.4 The proposed turbine is also within the ice rink development which previously used the space for a large Christmas tree. The introduction of the proposed turbine does not increase the footprint of the ice rink development, and will not cause additional habitat loss or damage. In addition, no trees will need to be removed for the proposed development.
- 3.5 The use of a ballasted base means no ground works need to be carried out. This reduces the construction period of the proposed development, which is the period of time where bird populations are more likely to be displaced. In addition, the wind turbine would be erected within the same construction period as the ice rink and would not pose any additional risks of displacement. The decommissioning of the turbine will take place during the decommissioning of the ice rink.
- 3.6 The proposed turbine will have a height of 21m which is 79m below the general flying altitude of migratory birds. Utilising a turbine largely below the general flying altitude reduces collisions of migratory birds with the turbine.
- 3.7 As concluded by the 2022 Natural England study, increased turbine visibility can help reduce collision risks. The temporary turbine will utilise festive colours and will be adorned with Christmas decorations. The blades are painted pink and therefore are more visible than standard white and easier for birds to detect and avoid. This bright and colourful design will offer a visual contrast for approaching birds. Additionally, the surrounding buildings and ice rink development will also act as a visual cue for birds to reduce flying speeds.
- 3.8 The erection of the proposed turbine will be completed within one working day with minimal noise to reduce disruption to nearby bird populations.

4. Recommendations

- 4.1 In addition to the design measures taken to reduce bird safety risks, this section offers recommendations to reduce any risks associated with bird safety during the construction, operation and decommissioning phases of the proposed temporary turbine.

Recommendation 1: *ensure the erection and decommissioning of the turbine is completed within the construction and decommissioning periods of the ice rink development.*

- 4.2 This recommendation relates to the risks of displacement and habitat loss of the bird population. Erecting the proposed turbine within the construction period of the ice rink prevents any additional disruptions to the bird population, and keeps the development footprint within that of the ice rink development.

Recommendation 2: *utilise bright colours on the turbine that are distinctive against the surrounding environment that offers a visual contrast for oncoming birds.*

- 4.3 As supported by the Natural England 2022 report, visual contrast can help reduce collision risks of approaching birds. Utilising the proposed colours will create a visual contrast.

Recommendation 3: *take care to reduce impacts to the environment during the erection and decommissioning of the proposed temporary turbine.*

- 4.4 During the erection and decommissioning of the proposed temporary turbine, care should be taken to complete the installation in a timely manner to reduce disruption to nearby birds. Trees should not be removed.

5. Conclusions

- 5.1 In conclusion, although there are risks to bird safety, these risks are very low and strategies can be implemented to further reduce the associated risks.

Collisions

- 5.2 Collision risks are heavily reduced as the proposed turbine has a height below 100m and uses bright colours that contrast with the surrounding environment. The turbine height reduces collisions with migratory birds and the vivid colours offer a visual cue for approaching birds to reduce flying speeds.

Habitat Damage and Loss

- 5.3 The proposed turbine uses a ballasted base which sits on top of the ground and does not require any groundworks. Additionally, no trees need to be removed in order for the development to be erected. The design of the turbine therefore prevents any habitat loss or damage.

Displacement

- 5.4 By ensuring the erection and decommissioning of the turbine occurs during the construction and decommissioning period of the ice rink, risks of displacement are reduced as bird populations are less likely to be disrupted. Additionally, it is recommended that care is taken during the erection and decommissioning of the proposed turbine to prevent any further disruptions.