2026

Graffy Windfarm, Donegal

ACP-322673-25

Examination and Analysis of the Potential Effects on Merlin, Golden Eagle and White-tailed Eagle

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August 2026

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Contents

Introduction 1
Reasons for Refusal 1
Reason 2. Merlin 1
Reason 3. Golden Eagle and White-tailed Eagle 2
Examination of the Original Environmental Impact Assessment Report 2
Context 2
Baseline 3
Potential Effects 5
Mitigation 8
Residual Effects 9
Applicant Response Following the Section 131 Notice (07/07/2025) 10
Overview 10
Merlin 11
Golden Eagle 12
White-tailed Eagle 14
Other Responses Following the Section 131 Notice (07/07/2025) 16
Responses Following the Applicant Submission on 07/07/2025 17
DAU Response to 131 Notice and following submission by Applicant with updated survey results (24/09/2025) 17
Merlin 17
Golden Eagle 18
White-tailed Eagle 18
Red Grouse 19
Responses to the DAU Response Submitted on 24/09/2025 19
Applicant's Response to DAU Response Submitted on 24/09/2025 19
Merlin 19
Golden Eagle 23
White-tailed Eagle 25
DAU Response Following Second Submission by Applicant (27/11/2025) 27
Other Responses Following Second Submission by Applicant 27
Analysis, Evaluation and Assessment. 27
Merlin (Refusal Reason 2) 28
Golden Eagle (Refusal Reason 3) 33
White-tailed Eagle (Refusal Reason 3) 45

GRAFFY WINDFARM (ACP-322673-25)

EXAMINATION AND ANALYSIS OF THE POTENTIAL EFFECTS ON MERLIN, GOLDEN EAGLE AND WHITE-TAILED EAGLE

Introduction

1. The proposed Graffy Windfarm (the "Proposed Development"), situated in County Donegal and comprising eight turbines, was refused permission on 1 December 2023 under Ref. ABP-312385-22. This decision was subsequently quashed, and the case has been remitted from the High Court.

2. Two of the reasons for refusal in the quashed decision related to ornithology, namely effects on merlin (Refusal Reason 2) and the effects on golden eagle and white-tailed eagle (Refusal Reason 3).

3. Following the quashing of the refusal decision, the case has been reactivated. The new case number is 322673-25. Two additional submissions have since been received from the Applicant to support their position, one of which contained the results of updated survey work. A number of submissions have also been received from the Development Applications Unit (DAU) of the Department of Housing, Local Government and Heritage (DHLGH) and other parties supporting the position that the refusal decision should be upheld.

4. In order to carry out a full analysis of all the materials pertaining to this case, the initial Environmental Impact Assessment (EIA) Report chapter and its associated appendices where relevant to merlin, white-tailed eagle and golden eagle have been re-examined. Regard has also been given to the relevant submissions (Applicant and third parties).

5. This report has been prepared by Alex Ash, Senior Project Ornithologist at Natural Research (Projects) Ltd. Alex has been involved in the impact assessment of renewable energy projects on birds for over 15 years, working for several environmental consultancies in the UK and Ireland and as an independent consultant. Prior to this he worked for a number of organisations such as NatureScot, the Royal Society for the Protection of Birds and The National Trust.

Reasons for Refusal

Reason 2. Merlin

6. An Coimisiún Pleanála (hereafter referred to as "the Commission") based its refusal on the presence of a pair of merlin in proximity to the Proposed Development. The site in which the

Proposed Development lies was considered an important foraging area for merlin, a species afforded protection under Annex 1 of the EU Birds Directive (2009/147/EEC). The Commission was not satisfied that the Proposed Development would not have a significant adverse impact on merlin.

7. Given the proximity of the Lough Nillan Bog Special Protection Area (SPA), of which merlin is a Special Conservation Interest (SCI), the Commission was also not satisfied that the Proposed Development would not adversely affect the integrity of this European Site.

Reason 3. Golden Eagle and White-tailed Eagle

8. The Commission's refusal was based on its assessment that there would be a significant collision risk to golden and white-tailed eagles, together with a loss of foraging habitat. Potential risks to these species were considered not to have been adequately addressed by way of scientific evidence and conclusions.

Examination of the Original Environmental Impact Assessment Report

Context

9. Chapter 10 of the EIA Report examines the potential effects of the Proposed Development on birds. The assessment has been informed by key European legislation, namely the EIA Directive 2011/92/EU as amended by Directive 2014/52/EU, the EU Habitats Directive 92/43/EEC and the EU Birds Directive 2009/147/EC. Other relevant national legislation documents are also referenced as having been considered.

10. Other plans and policies that have been considered include national and local Biodiversity Action Plans and guidance from NatureScot and the Chartered Institute of Ecology and Environmental Management (CIEEM). A Statement of Authority is included.

11. The chapter is supported by the following appendices:

- Appendix 1: Ornithological Study Area
- Appendix 2: Survey Effort
- Appendix 3: Results: Flight Line Maps
- Appendix 4: Results: Site Walkover Maps
- Appendix 5: Results: Wider Area Maps
- Appendix 6: Collision Risk Modelling Report
- Appendix 7: Confidential Appendix: Merlin Flight-lines and Nesting Information

12. The EIA Report chapter details the methods used to establish the bird populations within the site of the Proposed Development and its surroundings; including a desk study, baseline survey

results and the process used to determine the sensitivity of the bird populations present. The ways in which birds might be affected (directly or indirectly) by the construction, operation and decommissioning of the Proposed Development are assessed, prior to and after the application of any proposed mitigation measures.

13. As part of the desk study the following sources were used to gather existing ornithological information within the study area:

    - National Parks and Wildlife Service (NPWS) Designations Viewer
    - National Biodiversity Centre database
    - Bird Sensitivity mapping tool to wind energy (BirdWatch Ireland)
    - National Bird Atlas Records
    - Peer-reviewed literature on distributions of species including merlin, golden eagle and white-tailed eagle.

14. The survey methodologies, detailed in Section 10(ii) 3.2, relevant to merlin, golden eagle and white-tailed eagle included Vantage Point (VP) watches, breeding bird surveys, breeding raptor surveys and breeding eagle surveys, developed with reference to the NatureScot guidance 'Recommended Bird Survey Methods to Inform Impact Assessment of Onshore Windfarms'[1]. Further detail on methodology and results are found in Appendix 1: Ornithological Study Area and Appendix 2: Survey Effort.

15. A statement of potential limitations is included in Section 10 (ii) 3.3.7, including those arising from the Covid-19 Pandemic in Spring 2020, during which no surveys were undertaken between 27 March 2020 and 19 April 2020. Survey hours missed during this period were subsequently caught up and no significant gap in coverage resulted as a direct result of the Covid-19 pandemic, given this period had already been covered in 2019. There was adequate time in April to undertake any surveys scheduled for that month.

Baseline

16. Baseline conditions are presented in Section 10 (ii) 4 of the EIA Report. A Natura Impact Statement (NIS) has been provided; in accordance with Environmental Protection Agency (EPA) advice, this section of the EIA Report provides summary findings only in relation to effects on European Sites.

[1] Scottish Natural Heritage (SNH). (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. Version 2. SNH Guidance Note Series, Battleby, UK.

17. Two SPAs that include merlin as an SCI were identified as being within the Zone of Influence (ZOI) of the Proposed Development:

    - Derryveagh and Glendowan Mountains SPA
    - Lough Nillan Bog SPA

18. The NatureScot guidance, 'Assessing Connectivity with Special Protection Areas'[2] was used to inform the NIS.

19. Section 10(ii) 4.2 summarises findings from all surveys and describes the target species present, including their presence, abundance and any incidences of breeding or roosting. These species descriptions also include information on the conservation status of each species in a national context along with some information on significance of effects associated with the Proposed Development. More details on survey results are presented in Appendices 3 to 7.

20. One merlin breeding territory was located within the study area, with nests found in 2019 and 2020. Flight activity was recorded over the site of the Proposed Development from VP watches.

21. Golden eagle was recorded exhibiting territorial behaviour within the study area, with flight activity recorded over the site of the Proposed Development from VP watches.

22. White-tailed eagle was recorded exhibiting territorial behaviour within the study area, with flight activity recorded over the site of the Proposed Development from VP watches.

23. Collision risk modelling results are presented in Appendix 6: Collision Risk Modelling Report, with predicted collision mortality figures set out in Tables 12 and Table 13 for the two candidate turbine types. Predicted annual collision figures, after applying avoidance rates, are given for merlin, golden eagle, white-tailed eagle and other species. The NatureScot collision risk model was used, informed by with NatureScot avoidance rates.

24. Key Ornithological Receptors (KOR) are identified in Section 10(ii) 5.1 using Percival (2003)[3], with rationale given for including or omitting each of the target species as a KOR. The following protected sites and species were scoped into the assessment as KORs:

[2] Scottish Natural Heritage (SNH). (2016). Assessing connectivity with Special Protection Areas (SPAs). Version 3. SNH Guidance Note Series, Battleby, UK.

[3] Percival, S.M. (2003). Birds and wind farms in Ireland: a review of potential issues and impact assessment. Ecology Consulting, Durham.

Very High Sensitivity

- Merlin (breeding), (Annex 1: EU Birds Directive)
- Lough Nillan Bog SPA (Merlin)
- Derryveagh and Glendowan Mountains SPA (Merlin)

High Sensitivity

- White-tailed eagle (Annex 1: EU Birds Directive)
- Golden eagle (Annex 1: EU Birds Directive)

Potential Effects

Table 1. Summary of Potential Effects (Merlin, Golden Eagle and White-tailed Eagle).

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing Phase	The Proposed Development site encompasses upland farmland and commercial coniferous forest plantation that are currently managed through a combination of extensive grazing regimes and agroforestry practices. If the Proposed Development does not proceed the area is considered likely to remain in use for agriculture/forestry purposes.
Construction Phase	*Merlin* One merlin nest was located within the study area in 2019 with the same pair nesting in a different location in the same area in 2020. In the final design layout turbines were positioned to ensure both nest sites were located further than 500 meters (m) from the nearest turbine. Additional follow up surveys in 2021 found that neither was being used. *Direct Habitat Loss & Disturbance* Although both nest sites were greater than 500 m from proposed turbine locations, they were within 200 m of a proposed access track and therefore within the recommended disturbance-free buffer distances of 300-500 m provided by NatureScot (2022)[4]. This pair was considered likely to be habituated to a level of disturbance, having previously nested within 45 m of an existing road and 180 m of an occupied dwelling. There is potential for inappropriately monitored or phased construction works to result in disturbance to breeding merlin that may lead to reduced productivity and possible displacement during the construction phase of the project. *Significance of Effect* Due to potential ecological links to populations within two SPAs, breeding merlin at the Proposed Development site was classed as having Very High sensitivity following Percival (2003)[3]. The potential magnitude of effects on the merlin population within local SPAs was assessed as being moderate. However, given the short-term nature of wind farm construction (typically 12 to 18 months) this was reduced to Low. Applying the Percival (2003)[3] significance matrix, Very High sensitivity combined with Low magnitude of effects returns an impact of **Medium Significance** for direct/indirect disturbance on breeding merlin in the absence of control measures. There is also the potential for disturbance leading to foraging displacement during the construction period. However, it was considered that the small size of the works corridor relative to the foraging habitat available in the wider area, any potential displacement effect would be negligible. Therefore, as the disturbance would be temporary, any potential secondary impacts on foraging merlin are considered as N**ot Significant**. *White-tailed eagle* No breeding sites were located within the 6-kilometre (km) study area although "high levels" of activity consistent with territory occupancy were noted, e.g., display flights. *Direct Habitat Loss & Disturbance* There is considered to be the potential for nesting to occur within this area in the future, although suitable habitat within 1 km of the Proposed Development site was described as "limited".

Table 1. Summary of Potential Effects (Merlin, Golden Eagle and White-tailed Eagle).	
Project Phase	**Potential Direct, Indirect and Cumulative Effects**
	Significance of Effect Although Percival (2003)[3] was produced before white-tailed eagle was reintroduced to Ireland this species was classed as having High sensitivity due to its ecological sensitivity to windfarms and small pioneering Irish population. Given that NatureScot's guidance[4] on disturbance distances for white-tailed eagle range between 250 m and 500 m and limited breeding habitat is available within this range, the potential impact of construction disturbance on any future white-tailed eagle breeding sites would be of negligible magnitude and therefore N**ot Significant**. Flight activity within the 500m turbine buffer was considered relatively low, consisting mostly of commuting birds. Given the discreet nature of the Proposed Development within the wider landscape, the availability of alternative foraging areas, the intermittent level of recorded usage and temporary short-term nature of the proposed construction works, potential secondary impacts on foraging white-tailed eagles are considered at negligible magnitude and therefore N**ot Significant**. Golden eagle No breeding sites were located within the 6 km study area and no breeding activity was recorded. *Direct Habitat Loss & Disturbance* Potential nesting habitat within 1-2 km of the Proposed Development site was described as "limited". Construction activities have the potential to cause displacement to foraging and roosting birds at distances of 750 m to 1.5 km. As no suitable nesting habitat was identified within this buffer, no secondary construction impacts on golden eagle are predicted. *Significance of Effect* Flight activity within the 500 m turbine buffer was relatively low, although flight activity increased within the second year of survey. Given the discreet nature of the Proposed Development within the wider landscape, the availability of alternative foraging areas, the intermittent level of recorded usage and temporary short-term nature of the proposed construction works potential secondary impacts on foraging golden eagles are considered at negligible magnitude and therefore **Not Significant**.
Operational Phase	*Merlin* *Disturbance and Displacement* In the final design layout turbines were positioned to ensure both nest sites were located further than 500 meters (m) from the nearest turbine and away from the areas of greatest flight activity. Maintenance activities during operation are not considered likely to add significantly to background levels of disturbance. Potential displacement due to operational turbines was considered. *Significance of Effect* A precautionary approach was taken, given the relatively unknown disturbance/displacement effect that operational turbines might have on the breeding merlin site. With design phase mitigation the magnitude of effect is considered Low. Therefore, as the sensitivity of the merlin population at this location is Very High the potential indirect operational impacts are of **Medium Significance** in the absence of control measures, and there is considered to be a requirement for carefully considered mitigation measures**.** *Collision Risk* The Collision Risk Model (CRM) predicted a collision rate of 0.02 merlin per annum, equating to 0.73 individuals over the 30-year life of the development, with most flights being recorded below the rotor swept area. *Significance of Effect* The magnitude of this effect is considered to be negligible; although merlin is classed as Very High sensitivity, the potential impact due to collision risk from turbines is considered to be **Not Significant**. *White-tailed eagle* *Disturbance and Displacement* White-tailed eagle flight activity through the 500 m buffer was recorded intermittently, demonstrating that birds are not reliant on the Proposed Development site as a foraging, roosting or socialising area. Foraging

[4] NatureScot. (2022). Disturbance Distances in Selected Scottish Bird Species. Available at https://www.nature.scot/doc/disturbance-distances-selected-scottish-bird-species-naturescot-guidance

Table 1. Summary of Potential Effects (Merlin, Golden Eagle and White-tailed Eagle).	
Project Phase	**Potential Direct, Indirect and Cumulative Effects**
	activity was mainly associated with carrion which was reported as "abundant and widely available". The studies cited show that white-tailed eagles show weak behavioural avoidance of windfarms, meaning that birds are not displaced by turbines leading to elevated levels of collision risk. *Significance of Effect* The effect of displacement due to the operation of the wind farm is considered negligible and therefore **Not Significant**. *Collision Risk* The CRM predicted a collision rate of 0.26 white-tailed eagles per annum, which equates to 7.32 individuals over the 30-year life of the development, or 1 bird every 3.9 years, using the NatureScot recommended avoidance rate of 95%. The total flight time recorded was 3,694 seconds, of which 3,134 seconds were at collision height. Over two consecutive days in April, a single bird present on site feeding on a dead sheep accounted for 2,480 of these seconds. An alternative estimate was also provided, using a revised population figure that reflects survival rates of young birds, a smaller candidate turbine and an avoidance rate of 98% based on a Norwegian study. *Significance of Effect* The Irish population is given as twelve pairs and is expanding, though there is uncertainty over population size and survival rates. The level of mortality predicted has the potential to adversely affect the population, and if realised would result in an increase in annual mortality of over 1% but less than 5% of the population. Given the species' high population sensitivity and the low magnitude of this effect, the potential direct impact due to collision on foraging was classed as being of **Low Significance**. This was considered appropriate at this time, as no nests were located within 6 km and nesting habitat was considered limited within 2 km of the Proposed Development. *Golden Eagle* *Disturbance to Nest Sites* Nesting sites within 1-2 km of the Proposed Development are considered to be limited, with more opportunities for suitable crags within 2.3 km. *Significance of Effect* As no "nesting activity" was recorded within 6 km, **no secondary disturbance** impacts to golden eagle breeding sites are anticipated as a result of the operational windfarm. *Foraging Displacement* Displacement due to windfarm infrastructure may present a more significant impact in upland areas, where the windfarm footprint results in habitat loss to foraging birds. Using Scottish foraging ranges of 846 to 6,687 hectares (ha), golden eagle territories in Ireland were assumed to be at the upper end of this range, reflecting generally poor food availability and a perceived paucity of food on the Proposed Development site. As the Proposed Development site is 389 ha it was assumed to represent the lower end of a 6- 46% share of a territory based on Scottish comparators. *Significance of Effect* The effect of potential displacement due operational turbines is considered to be negligible based on relatively low usage of the Proposed Development site by foraging golden eagles and occurrence of sub-optimal habitat. It is, therefore, considered that the effect on the regional population is **Not Significant**. *Collision Risk* Golden eagle flight activity was recorded over the Proposed Development site on 19 occasions for a total of 4,729 seconds. Of which, 3,657 seconds were at collision risk height. The CRM predicted a collision rate of 0.06 golden eagles per annum which equates to 1.7 individuals over the 30-year life of the development or 1 bird every 17.3 years. The Irish population of golden eagles is estimated at 20-25 birds, account of survival rates of adults and sub-adults. With five known territorial pairs, a worst-case scenario of 18 adult and 6 sub-adult birds was used. The predicted collision rate represents an additional 7% on annual background mortality which is a Moderate effect on a High sensitivity species and would generate a potential direct impact of **High Significance**.

Table 1. Summary of Potential Effects (Merlin, Golden Eagle and White-tailed Eagle).	
Project Phase	**Potential Direct, Indirect and Cumulative Effects**
	References are provided that show behavioural avoidance of windfarms by golden eagle, including studies from Scotland, e.g., Fielding *et al.* (2019)[5] which used satellite tag data to demonstrate macro-avoidance of windfarms by golden eagle in Scotland. These studies have informed a decision to reduce the potential direct impact to **Low/Medium Significance**.
Decommissioning Phase	Effects are anticipated to be broadly similar in nature to construction phase, though of generally reduced magnitude and duration. It is recommended they are timed to avoid the breeding season. As decommissioning is likely to occur at least 35 years after the original baseline surveys a pre-decommissioning survey will be required.
Proposed Grid Connection Route	The GCR is not assessed separately to the main windfarm. Activities will be restricted to the existing road network
Turbine Delivery Route	The TDR is not discussed within the EIA Report chapter.
Designated Sites	A Natura Impact Statement (NIS) was provided which considered the potential effects of the Proposed Development on the integrity of the Lough Nillan SPA and the Derryveagh and Glendowan Mountains SPA, where merlin is listed as a Special Conservation Interest (SCI). The relevant legislation and guidance were adhered to, and a Construction Environmental Management Plan (CEMP) was provided setting out mitigation measures that would protect merlin breeding attempts in the vicinity of the windfarm, these were also included in the EIA Report and are described below.
Cumulative	A 20 km study radius was used to identify other developments where overlapping effects may arise. A table describes all operational, permitted and proposed wind farms within 20 km of the Proposed Development, most of these were located over 15 km from the Proposed Development site. The Proposed Development site is not on any migration pathway where effects could be assessed cumulatively with other developments and given the low density of wind farms within 15 km, no risk of cumulative effects beyond those already covered in the assessment were identified. There is considered to be the potential for cumulative impacts to change over time, particularly regarding white-tailed eagle and golden eagle. Appropriate monitoring and mitigation measures will react to any changes in site usage.

Mitigation

Embedded Mitigation

25. Embedded mitigation measures described include the development layout which has been designed to minimise the potential impact on merlin, white-tailed eagle and golden eagle. The design of the Proposed Development has avoided situating turbines on the upper slopes of the Aghla mountain north of the Proposed Development where golden eagle activity was greatest. All turbines were situated at least 500 meters (m) from known merlin nests.

26. Pre-commencement checks will be carried out to locate any merlin nests, with weekly surveys undertaken during construction. No construction will be undertaken within 500 m of any known merlin nest locations during the breeding season, and a 500 m exclusion zone will be implemented around any new nests found. An Ecological Clerk of Works (ECoW) will be employed for the duration of the construction period.

Enhancement Measures

27. Fifteen nest baskets for merlin will be located in suitable trees in five general areas up to 5 kilometres (km) outside the windfarm area.

28. Compensatory/offset foraging habitat is not considered necessary, as the Proposed Development site is largely sub-optimal for foraging golden eagle and only of interest to white-tailed eagle due to the availability of carrion. It is recommended that the windfarm company provide funding to a red grouse project in County Donegal and that the provision of carrion away from the windfarm could be investigated as a further enhancement measure.

Operational Mitigation

29. Collision risk to white-tailed eagle and golden eagle is considered the greatest concern. Carrion, including livestock and wild animals such as deer, foxes, hares, rabbits and birds will be removed from the Proposed Development site to prevent scavenging opportunities.

30. The current grazing regime would be continued to ensure the habitat remains similar over the lifetime of the Proposed Development.

31. Contingency measures are identified for adoption should eagles move closer to the area in future years, including painting a turbine blade to make it more visible to eagles, and AI-based bird detection and shut down systems that will detect any eagles approaching the windfarm and shut down the relevant turbines.

Monitoring

32. Monitoring would be carried out in years 1 to 5, 10 and 15 following construction, as well as during decommissioning.

33. These would involve VP watches to record flight activity from four locations in the breeding and non-breeding seasons, together with searches for breeding merlin and eagles 2 km and 6 km from the Proposed Development respectively.

<u>Residual Effects</u>

34. Residual effects of construction, operational and decommissioning are assessed taking into consideration both embedded and additional mitigation measures.

Merlin

35. In the absence of mitigation, the Proposed Development has the potential to result in an impact of Medium Significance to merlin. Following the application of the mitigation measures

described including avoidance through embedded mitigation and restrictions in the timings of works the residual impact is considered **Not Significant**.

Golden eagle

36. In the absence of mitigation, the Proposed Development has the potential to result in an impact of Low Significance to foraging golden eagles. Mitigation measures, namely the removal of carrion from the Proposed Development site, will reduce foraging activity over the site resulting in a residual impact that is considered **Not Significant**.

White-tailed eagle

37. Some uncertainty remains regarding future use of the area by white-tailed eagle and additional post-construction mitigation may be required, informed by ongoing monitoring. This could involve painting a turbine blade black or employing an automatic curtailment system. A residual impact of **Very Low Significance** remains for foraging white-tailed eagle.

Applicant Response Following the Section 131 Notice (07/07/2025)

Overview

38. On 7 July 2025 the Applicant submitted a response to the Commission following the refusal of the Graffy Windfarm application. Two reasons for refusal related to birds.

39. Refusal Reason 2 relates to potential for significant effects on merlin as a result of the Proposed Development. The Commission was not satisfied that the information provided demonstrated that the Proposed Development would not have a significant adverse effect on local population of merlin, including local SPA populations.

40. Refusal Reason 3 relates to likely significant effects on golden eagle and white-tailed eagle, as a result of the Proposed Development. The Commission considered that the potential risks to these species have not been adequately addressed in the form of scientific evidence and conclusions within the EIA Report.

41. The Applicant states in its response that it considers there to be "*Fundamental errors in the Board's interpretation of the ornithological information provided in the EIAR and NIS*" reflecting what it characterises as a "*limited understanding of avian ecology in relation to merlin, golden eagle and white-tailed eagle*". The response also includes the results of updated merlin, golden eagle and white-tailed eagle surveys carried out in 2024 and 2025.

Merlin

Statement Contesting Refusal Reason 2

42. The Applicant's main points contesting Refusal Reason 2 are as follows:

- The Applicant disagrees with the implication that the initial identification of potential displacement effects on merlin, which could result in competition for resources on neighbouring pairs associated with the SPA, conflicts with overall finding in NIS that the pair are not a part of the SPA. It notes that wording has shifted from "*potential for*" used in the EIA Report to "*identifies specific risk*", and from "*could*" to "*likely*". It also argues that the Inspector's Report fails to consider the potential effects in context or to give due weight to proposed mitigation.

- The Applicant considered that mitigation measures have not been fully considered, particularly those during construction, stating that "*discounting mitigation measures outright and not adequately assessing their efficacy is a significant omission in this part of the Inspector's Report*" reflecting a "*disregard for the mitigation measures proposed and a lack of understanding of merlin ecology*".

- The Applicant disputes three points in the Inspector's Report that it considers immaterial to the assessment including the Inspector's concerns over the merlin pair nesting in the area again; the assertion that windfarm construction noise/disturbance exceeds that from an existing house or dwelling, there is an area of heather close to Turbine 1 and that the submitted flight maps show foraging over the Proposed Development site.

- Of four points raised in Section 9.16.4 of the Inspector's Report, one of these was considered irrelevant as it considers other raptor species that are not SCIs of either SPA. The remaining points concern the foraging range of merlin, distances between the Proposed Development and the SPAs and the potential for displacement of birds within the SPA. The Applicant argues that distances between the Proposed Development and the SPA are acceptable and that the accepted disturbance-free buffer distance is 500 m. The Applicant provides further evidence that merlin will habituate to operational windfarms.

- The Inspector's stated reason for refusal was the potential adverse effect on the integrity of the Lough Nillan Bog SPA arising from displacement of this merlin pair into the SPA thereby displacing a pair from the SPA. The Applicant maintains that

mitigation measures and habituation to the windfarm would ensure that this would not occur.

- The Applicant states that errors in the application of due process and proportionality have led to an inaccurate assessment of significance of effects on merlin and that the assessment demonstrates a "*limited understanding of the relationship between merlin ecology in response to potential disturbance from construction activity, operational wind farms and the efficacy of recourse to mitigation measures*".

43. The Applicant maintains that with proposed mitigation in place, the conclusions of the EIA Report chapter remain valid and the likely significant effects due to indirect disturbance to breeding merlin during construction and operation are reduced from Medium Significance to a residual effect of No Significance. The Applicant further states that the conclusions of the NIS also remain valid and that the Proposed Development will not adversely affect the integrity of the Lough Nillan Bog SPA and Derryveagh and Glendowan Mountains SPA and specifically the merlin population supported by these SPAs.

44. The Applicant also concludes that the Very High sensitivity level applied to merlin was overly precautionary and should be downgraded to High or Medium due to the lack of connectivity between the pair nesting adjacent to the Proposed Development and the SPAs.

Update Surveys 2024 & 2025

45. In 2024, spot checks were made at the two known nest sites in March and April. In 2025, these nests were checked as well as any other suitable areas within the 500 m buffer. No merlin were recorded during any surveys indicating the pair have relocated elsewhere.

Golden Eagle

Statement Contesting Refusal Reason 3 (Golden Eagle)

46. The Applicant contends that the Inspector's approach in combining conclusions for both species is inappropriate given the differences between white-tailed eagle and golden eagle in their ecology, distribution in Donegal and occurrence in vicinity of the Proposed Development.

47. The Applicant was aware of a golden eagle territory more than 6 km northwest of the Proposed Development. Whereas the DAU in its response, which informed the Commission's decision, measured the distance to the grid connection; however, the Applicant considers the distance to the turbines as more appropriate.

48. The Inspector's Report stated that the Proposed Development is an important foraging area for golden eagles, specifically for the territory to the northwest of Graffy; the Applicant

disputes this, citing relatively poor habitat quality with "*plantation throughout*" and notes that the Proposed Development lies outside of the 6km buffer zone of any "*currently known nesting locations in Donegal*".

49. The Applicant states that the Inspectors Report exhibits a lack of proportionality in its treatment of flight activity within the 500 m turbine buffer and that 19 observations were made over 16 days, but no observations were made on the remaining 83 days. On this basis, the Applicant considers that the DAU and Inspector's position is unfounded and unbalanced.

50. The Applicant notes that golden eagle collision risk is not fully discussed in the Inspector's Report, and questions whether this is in view of current research produced by Fielding *et al*. (2019[5], 2021[7] & 2022[8]) demonstrating that golden eagles exhibit avoidance of turbines.

Update Surveys 2024

51. The aim of the surveys was to identify areas of golden and white-tailed eagle activity over the winter and early spring to determine any potential nesting locations in relation to the Proposed Development. Vantage Point watches were carried out at a number of locations within the 6km study area, totalling 57 hours of surveys effort. Watches were carried out by a single observer, except on 26 February, when five two-person survey teams were deployed simultaneously to establish whether the same birds were displaying at multiple locations within the 6 km study area, or whether these were separate pairs or territorial birds.

52. The Applicant provides notes on the breeding ecology of golden eagle, noting that in Ireland golden eagles is likely to have large home ranges and utilise habitats and nest sites at lower altitudes than they would do in Scotland, along with a description of typical territorial flight activity.

53. Much display activity was recorded to the south of the Proposed Development, in the area around Silver Hill and Lough Ea, with birds recorded commuting between the Lough Ea/Silver Hill area and Aghla Mountain to the north, with further commuting flights recorded just to the west of the Proposed Development.

54. The Applicant states that surveys conducted in 2024 indicate that one golden eagle territory was located within the 6 km study area that had not been identified during surveys between 2018 and 2020. While a nest location was not determined in 2024, suitable crags backing Lough Ea and Lough Maddy lie within 2.3 km of the Proposed Development, and display activity was recorded there. Re-examination of the data from 2018 to 2020 suggests this territory was present in 2019, and that activity was wrongly assigned to another pair nesting

outside the 6 km study area. This is a different golden eagle pair to the pair that nested in 2020 c. 6 km to the northwest of the Proposed Development.

55. Some golden eagle activity was also recorded in the territory to the north of the 6 km study area, with a male recorded early in the season; however, "*this area did not appear to be occupied in 2024*".

56. The Applicant asserts that that updated survey results show that breeding activity was broadly similar to that recorded during the baseline period, and that data collected over this period is still valid for informing the EIA Report. On the basis of "*broadly similar numbers of eagles inhabiting the area and exhibiting a comparable distribution*" the Applicant maintains that the statement of significance in the EIA Report remains valid.

57. The work of Fielding *et al.* (2019[5], 2020[6], 2021[7] & 2022[8]) on macro-avoidance of windfarms by golden eagles in Scotland is cited, particularly referring to the avoidance of wind farm sites away from steep gradients.

58. In conclusion, the Applicant reiterates the EIA Report's position that, given the low usage of the Proposed Development for foraging and sub-optimal habitats on site, any potential displacement due to operational turbines will have a negligible effect on the regional population and therefore is not significant. The likely significant effects due to predicted collision risk for golden eagle is stated to be reduced from Low Significance to a residual effect of Not Significant following proposed mitigation measures.

White-tailed Eagle

Statement Contesting Refusal Reason 3 (White-tailed Eagle)

59. Since the original surveys were carried out a pair of white-tailed eagles has started nesting 10 km south of the Proposed Development and another pair has settled 6 km to the north. Although there are currently no breeding pairs within 6 km of the Proposed Development the Applicant considered that there may be nesting opportunities for this species in the future within 2 km, although habitat here is considered limited.

[5] Fielding, A., Haworth, P.F., Anderson, D., Benn, S., Dennis, R., Weston, E., Grant, J., Etheridge, B. & Whitfield, D.P. (2019). Responses of satellite tagged golden eagles to wind farms in Scotland: macro-avoidance rather than risk of collision. Abstract for CWW Conference on Wind Energy and wildlife Impacts, University of Stirling: 27th to 30th August 2019.

[6] Fielding, A.H., Haworth, P., Anderson, D., Benn, S., Dennis, R., Weston, E. & Whitfield, D.P. (2020). A simple topographical model to predict Golden Eagle Aquila chrysaetos space use during dispersal. Ibis 162: (400– 415).

[7] Fielding, A.H., Anderson, D., Benn, S., Dennis, R., Geary, M., Weston, E., Whitfield, D.P. (2021). Non territorial GPS-tagged golden eagles Aquila chrysaetos at two Scottish wind farms: Avoidance influenced by preferred habitat distribution, wind speed and blade motion status. PLoS ONE 16(8).

[8] Fielding, A.H., Anderson, D., Benn, S. Dennis, R. Geary, M. Weston, E. & Whitfield, D.P. (2022) Responses of dispersing GPS-tagged Golden Eagles (Aquila chrysaetos) to multiple wind farms across Scotland. Ibis, 164, (102-117).

60. As with golden eagle, the Applicant contends that the Inspector's approach of combining conclusions for both species is inappropriate, given the differences between white-tailed eagle and golden eagle in their ecology, distribution in Donegal and occurrence in vicinity of the Proposed Development.

61. The Inspector's Report questions the population estimates used to model potential increases in predicted annual mortality due to collisions. The Applicant contends that the "*crude estimate*" population figures provided (38 pairs and 85 sub-adults) were intended to illustrate the population size required for collision effects to fall below 1% of the population, and state that in "*no way are the higher theoretical population estimates used to derive conclusions of significance effects in relation to the proposed development*". In total, 173 birds had been released up to 2023, and the Irish Raptor Study Group had given the Irish population as 12 pairs plus an additional 12 non-breeding birds in 2018.

62. The Inspectors Report corrects the collision risk to 0.26 collisions per annum; applying a 98% avoidance rate (rather than the NatureScot recommended 95%) reduces this to 0.09. Taken in context of recent additions to the Irish white-tailed eagle population (between 2020 and 2023 an additional 71 birds have been released) the original assessment on population effect is considered to remain valid and is assessed as low population effects (1-5%) and a direct effect of Low Significance.

63. The Inspector's Report questioned why operational displacement effects were discounted for white-tailed eagles. The Applicant states that white-tailed eagles show weak behavioural avoidance of windfarms and are "*not displaced by turbines*" which is why a lower avoidance rate is used. The Applicant reiterates the EIA Report findings that there is no suitable nesting habitat within 1 km of the Proposed Development and that the maximum disturbance distance provided by Goodship & Furness (2022)[9] is 1,000 m.

64. The DAU submission suggested observed display activity was indicative of probable breeding in the area; the Applicant disputes this, noting Hardey *et al*. (2013)[10] that display and play fighting are not necessarily indicative of a breeding territory and considers DAU's assessment of probable breeding as "*highly pre-emptive and does not reflect the reality as recorded by baseline surveys*".

[9] Goodship, N.M. & Furness, R.W. (2022). Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species. A report from MacArthur Green to NatureScot.

[10] Hardey, J., Crick, H.Q.P., Wernham, C.V., Riley, H., Etheridge, B. & Thompson, D.B.A. (2013). Raptors. A Field Guide for Surveys and Monitoring, 3rd edn. The Stationery Office, Edinburgh.

65. The Applicant contends that the Inspector's Report understates how infrequently white-tailed eagles were recorded within the 500m buffer and that the majority of flight time occurred over two days when a single bird was feeding on a dead sheep. Mitigation measures would ensure dead animals are removed from the windfarm area, reducing the risk of collision.

Update Surveys 2024

66. The aim of the surveys was to identify areas of golden and white-tailed eagle activity over the winter and early spring to determine any potential nesting locations in relation to the Proposed Development. VP watches were carried out from a number of locations within the 6km study area. In total, 57 hours of surveys were carried out. Watches were carried out by a single observer, except on 26th February, when five two-person survey teams were deployed simultaneously to establish whether the same birds were displaying at multiple locations within the 6 km study area or these were separate pairs or territorial birds.

67. Predicting occupation of potentially suitable nesting locations is considered challenging, as white-tailed eagles use wide range of crag and tree sites. Hardey *et al*. (2013)[10] note that on the Isle of Mull distances between nest sites can vary from 3.2 to 14 km from each other.

68. Although at least two individuals (an adult and a sub-adult) were recorded periodically using the wider area, these were generally observed more than 2 km from the Proposed Development, and no display activity indicative of a nest site was recorded within the 6 km study area.

Other Responses Following the Section 131 Notice (07/07/2025)

69. Other responses were received from interested parties including the Irish Red Grouse Association, Donegal County Council, Adrian Gallagher and the Graffy Environmental Group.

70. The Irish Red Grouse Association consider that red grouse and the nearby Cro na mBraonain red grouse sanctuary are overlooked within the assessment. The Graffy Environmental Group stated that red grouse should have been included within the NIS as the red grouse sanctuary is a short distance away.

71. The Cloghercor Windfarm was refused permission as a pair of golden eagle nested in close proximity to the proposal in 2020 when a chick was raised. There were also unsuccessful attempts in 2021 and 2022 in different locations. There is an assertion that this nest was within 6 km of the Proposed Development which was not disclosed by the Applicant.

72. The other responses did not contain anything of note regarding merlin, white-tailed eagle or golden eagle.

Responses Following the Applicant Submission on 07/07/2025

73. Following the Applicant's submission in July 2025 responses were received in August 2025 from the following interested parties: M. Cooke, P. Sharkey, A. M. O Donnel, A. Gallagher, The Graffy Environmental Group, The Irish Red Grouse Association and the Donegal County Council.

74. The Graffy Environmental Group's response (18/08/2025) contained reference to two white-tailed eagle fatalities at Meenacloghspar Windfarm in Co. Donegal in October 2024 and May 2025.

75. The Irish Red Grouse Association Response (18/08/2025) states that the sightings and flightlines in the Applicant's response prove there is a golden eagle territory within 2 km of the Proposed Development. It also states there are three golden eagle "territories" between Aghla and the Gweebarra River, although this likely refers to the three alternate nest locations used in proximity to Cloghercor Windfarm in 2020, 2021 and 2022, rather than three distinct territories. The Association also claim that the 2020 golden eagle nest location was 5 km from the "*centre of the Turbine plot*" and asserts that there are two golden eagle territories in the area, one to the northwest (the Cloghercor pair) and one centred around Lough Ea, with the Aghla mountain ridge is the division between the two territories.

76. The other responses did not contain anything of note regarding merlin, white-tailed eagle or golden eagle.

DAU Response to 131 Notice and following submission by Applicant with updated survey results (24/09/2025)

77. The DAU state that many of its original concerns have not been addressed in the updated submissions and recent white-tailed eagle strikes are of extra concern. The Department maintains that it has significant outstanding concerns.

<u>Merlin</u>

78. The DAU state that the home range size of breeding merlin in Western Europe is not known, and that it is therefore not possible to state conclusively that the breeding pair in the area of the Proposed Development is not connected to either of the SPAs. It also states that the turbines would likely prevent the re-occupation of the previously occupied merlin territory through collision or displacement.

79. Citing national survey data, the DAU note that merlin breeding range decline by 49% over the 40 years to 2019, and that a national survey of merlin in SPAs found 33% of birds were located outside of SPA boundaries.

80. American studies are also cited that show prairie merlin have a foraging range of 13 to 28 km^2, offered as evidence that foraging ranges can vary with habitat richness and availability.

Golden Eagle

81. The DAU suggests that the designation of SPAs for golden and white-tailed eagles may be appropriate in future when populations have been established and the most suitable sites have been identified.

82. The CRM predicted one golden eagle killed every 17.3 years which is considered significant by the DAU for "*such a small population of long lived, low productivity, life-mating, high profile Annex 1 Birds*".

83. The results from the surveys for the Clogherchor Windfarm application showed golden eagle flight activity in the Aghla area on six separate occasions with Golden Eagle Topography (GET) modelling from the Clogherchor EIA Report showing the wider area being very suitable for golden eagles.

84. Analysis of the 2024 Graffy eagle surveys recorded "c*onsiderable*" golden eagle activity on six of the seven survey days, including multiple birds and display activity.

85. The DAU raise concern that the location is not suitable for a proposed windfarm, one reason being the use of the area by both eagle species and cites a paper on bird mortality at US wind farms, including golden eagle, in support.

White-tailed Eagle

86. There have been three white-tailed eagle collisions in Donegal in the previous year; two within 6 km of the Proposed Development at Meenacloghspar Windfarm and one in Killybegs. The DAU argues this casts doubt on the validity of the CRM as turbine tip height at Meenacloghspar is only 74 m, against 149 m at Graffy, meaning larger Graffy turbines are likely to pose a greater collision risk. Meenacloghspar Windfarm extension was built in 2005, before white-tailed eagles were reintroduced in 2007.

87. The DAU advises that the Commission must take account of the cumulative effect of these fatalities along with the Proposed Development. It notes that all three birds were satellite tagged and note that collision fatalities of other birds that are not tagged, particularly smaller birds such as merlin, may go unnoticed.

88. The DAU also discuss two new white-tailed eagle nests within 10 km of the Proposed Development; flight maps are produced of two satellite tagged birds using the South Donegal area.

Red Grouse

89. The DAU questions why the nearby red grouse sanctuary hasn't been included for assessment.

Responses to the DAU Response Submitted on 24/09/2025

90. The Graffy Environmental Group and Irish Red Grouse Association submitted new responses in October 2025 that reiterate their concerns and confirmed that they were in agreement with the DAU's position.

Applicant's Response to DAU Response Submitted on 24/09/2025

91. The Applicant responded to the DAU response on 04/11/2025.

Merlin

92. The Applicant states that it "*strongly challenge the DAU's observations in relation to the potential effects on merlin breeding adjacent to the proposed development*"

93. The consented Glenard Windfarm is used as a comparison with Graffy. Glenard has merlin nesting within 600 m of a turbine and within 230 to 390 m of construction works and lies over 30 km from the nearest merlin SPA. In that instance the DAU agreed that by using appropriate mitigation (preconstruction nest checks, application of buffer zones and phasing of construction zones) that no residual effects were predicted and operational effects were considered not significant.

94. The Applicant points to published guidance by NatureScot (2022)[4] that considers 5 km to be the core foraging range for merlin, and to Irish forestry guidance that similarly considers 5km to be the distance from a merlin SPA beyond which a project can be screened out of assessment.

95. The Applicant considers that discounting the mitigation measures provided for merlin is a significant omission.

96. A technical review of windfarm displacement effects on merlin is provided; references were cited throughout and can be found in the response. The main points are:

- Merlin does not generally breed for more than one year in old corvid nests in Sitka spruce, but may re-use nests in birch, rowan or Scots pine for several years. Trees within the 500 m turbine buffer for Graffy Windfarm are almost all exclusively Sitka spruce.
- Most territories have a number of alternate nest locations up to 3.5 km apart. Nesting habitat largely determined by the availability of old corvid nests, given limited ground cover.
- At Ray Windfarm in Northumberland, 23 merlin chicks have fledged from a territory within the windfarm between 2017 and 2023.
- At Dorenell Windfarm in Scotland, the study site had five pairs in 2008 and three in 2013 with one pair breeding within the windfarm boundary.
- At Clashindarroch Windfarm in Scotland, two chicks fledged in 2015 with an attempt in 2017.
- Five examples from Ireland are provided where merlin have nested near operational turbines:
    - Meenadreen, Donegal: Bred within 500-700 m of a turbine
    - Cark, Donegal: Bred within 500-700 m of a turbine
    - Owenreagh, Tyrone: Bred within 700 m of a turbine
    - Crockandun, Tyrone: Bred within 250 m of a turbine
    - Barnesmore, Donegal: Bred within 1.7k m of a turbine
- A study in the Baltic Sea showed that migrant merlin showed a low avoidance response to turbines making them less likely to be displaced.

97. The Applicant concludes that based on the evidence provided breeding merlin can become habituated to turbines once operational and will incorporate the wind farm within their core foraging range. Therefore, displacement effects will not significantly affect the regional merlin population and will not adversely affect the integrity of merlin SPAs in the region.

98. A Technical Review of merlin collision risk modelling and population level effects was provided. References were cited throughout and can be found in the response. The main points of this were:

- Merlin is considered less susceptible to collision due to the majority of flight activity occurring below collision height (in this instance below 18 m) when merlins are hunting prey at ground level. There could be an argument that the 98% avoidance rate could be higher for this species but this may be balanced out by lower detection rates during surveys for this species.

- Based on Percival (2003)[3] a likely significant effect arises once turbine induced mortality begins to affect more than 1% of the population being assessed, whether local, regional, national, European or SPA level. Therefore, if turbine induced mortality exceeds background mortality by 1-5%, a population effect of Low Significance is anticipated. The challenge in Ireland is that the exact population sizes at each of these scales remain unknown.

- The population estimates for the two local SPAs derived from breeding density values applied to suitable habitat; actual surveys recorded very few pairs.

- Population estimates are provided for merlin across a range of geographical scales in Ireland and indicative values for the number of fatalities required to increase background levels of mortality above 1%.

- Population figures were modelled using published breeding densities ranging of 2 to 6 pairs per 100km^2, applied to availability of suitable habitat of between 17,000,000 m^2 and 25,000,000 m^2, derived from the occupancy of squares in the 2007-2011 Bird Atlas giving a regional population estimate of 34-102 pairs by one method and 125-150 pairs by the other.

- The Applicant considers that the magnitude of effect was more appropriately assessed at the regional scale, i.e. Co. Donegal, given the DAU's focus on birds outside of SPAs (ex-situ pairs).

- Using a conservative estimate of 34 pairs and applying an adult annual survival rate of 0.62, background mortality equates to the loss of 26 birds from the population annually. To generate a 1% increase in background mortality due to collision then 0.26 collisions per annum (7.8 over the lifespan of the windfarm) would need to occur. The worst-case output for Graffy is 0.73 collisions over the life of the windfarm which is considerably less.

- In Ireland breeding success and productivity of merlin is relatively high with birds reaching breeding age at 1-2 years and producing, on average, 3.5 fledged young per breeding attempt.

- Given the very low levels of predicted collision mortality and the population's tolerance to low levels of additional mortality, the review concludes that the "*viability of the regional merlin population is not vulnerable to the proposed development*".

- The 49% range contraction cited by the DAU predates any significant growth in the wind industry in Ireland and is unlikely to have been a significant driver of this decline.

- As follow up surveys have not located the merlin nest in the two previous locations or within the 500m buffer it is argued that any future flight activity is likely to be less than that recorded when the nests were occupied.

- The Applicant reaffirms its position in the EIA Report and NIS that the level of predicted collision risk is not significant and will not have an adverse effect on the conservation objectives of nearby SPAs.

99. A Technical Review of turbine mediated mortality in merlin was provided. References were cited throughout and can be found in the response. The main points of this were:

    - The review examines whether CRMs for merlin reflect real-world collision risk.

    - There is very little information available on merlin collision fatalities. There are a small number of recorded collisions from windfarms in the USA, Ireland, Europe and the UK. Notably at the Braes of Doune Windfarm in Scotland collision monitoring for red kite resulted in three juvenile merlin carcasses being discovered over a four-year period.

    - As merlin is a small species, carcasses are likely to be hard to detect when searches are carried out.

    - A study in the USA found that merlin are potentially susceptible to collision with overhead powerlines but this was at coastal sites involving wintering or migrant birds rather than breeding populations.

    - The review concludes there is strong "*qualitative evidence*" that merlin are at relatively low risk of collision mortality, citing records of pairs breeding adjacent to turbines, low numbers of reported fatalities and comparatively high fecundity for a raptor species.

100. A Technical Review of merlin home range sizes and the application of relevant guidance was provided. References were cited throughout and can be found in the response. The main points of this were:

- NatureScot (2022)[4] guidance on SPA connectivity recommends a 5 km core foraging range for merlin; forestry guidance also uses 5km as the distance beyond which merlin can be screened out during Appropriate Assessment screening.
- The Derryveagh and Glendowan Mountains SPA lies over 5km from the Proposed Development and from the merlin nest locations recorded in 2019 and 2020. Lough Nillan Bog SPA lies 3.7 km away from the closest turbine and 1.7 km from the grid connection, with the two merlin nest locations just over 5 km from the SPA.
- These distances are considered sufficient to avoid disturbance effects on either SPA during construction, with mitigation in place to protect any birds nesting near the Proposed Development.
- No disturbance or barrier effects during the operational phase of the windfarm are predicted and the predicted collision risk for merlin is assessed as being well below background mortality. Therefore, no significant population level effects, and no adverse effects on the conservation objectives of the SPA, are anticipated.
- The Applicant argues that as it has been clearly demonstrated that the magnitude of any residual operational or barrier effects are not significant and therefore there will be no adverse effects on the conservation objectives of the SPAs.
- Very few studies have established home range sizes of merlin but references are cited to corroborate the 5 km core breeding season home range provided by NatureScot.

<u>Golden Eagle</u>

101. The Applicant questions the relevance of the observation by the DAU that in future this area could be considered as an SPA for golden eagle and white-tailed eagle, as far as the Applicant is aware, there are no proposed plans for this.

102. The DAU considers that the Proposed Development site contains high-quality habitat for both eagle species and that there is unacceptable risk of collision, the Applicant questions whether the habitat is of good quality but also states that mitigation measures such as painting a turbine blade black, using a bird detection and shut down system and removal of carrion would reduce the collision risk.

103. The Applicant also gives examples of other enhancement and monitoring measures used elsewhere for eagles, particularly golden eagle, such as habitat management plans to enhance foraging habitats, feeding stations and public awareness campaigns although these were not specified as mitigation or enhancement within the EIA Report chapter itself.

104. The Applicant disagrees with the DAU's assessment of the habitat quality of the Proposed Development site. The Applicant maintains its EIA Report position that there is limited cover for prey species and the "*occurrence of conifer plantation throughout*" and that there was low observed usage of the Proposed Development site by foraging golden eagle.

105. Barrier effects were also discounted as the Proposed Development site is not considered to be on any significant route between breeding, roosting and foraging areas, with cumulative barrier effects being discounted for the same reasons.

106. On cumulative assessment more broadly, the Applicant states that the age of the other windfarms within 20 km of the Proposed Development limits any meaningful cumulative assessment. Many of these windfarms were built before the reintroduction or establishment of the two eagle species in Ireland. In some instances, the quality of the assessments of collision risk were, in the Applicant's view, of poor quality.

107. The Applicant considers that the iterative design process of the windfarm in avoiding the upper slopes of the Aghla mountain north of the Proposed Development prior to finalising the design for the planning application will have reduced collision risk as this area was considered to have greater densities of hares and red grouse and topographically would be more attractive to soaring eagles.

108. Fielding *et al*. (2019[5], 2020[6], 2021[7] & 2022[8]) in their analysis of satellite-tagged golden eagles in Scotland found that birds largely avoided the interior of operational windfarms and had minimum displacement distances of under 200 m from outer turbines. As the Irish golden eagle population is derived from Scottish stock it is assumed they will show the same macro-avoidance behaviour.

109. The EIA Report for the refused Cloghercor Windfarm, to the northwest of the Proposed Development, includes a GET modelling report showing moderate suitability of the Proposed Development site for golden eagle based on topography. The Applicant considers that golden eagle usage of the wider area recorded in the Cloghercor survey data is not relevant to actual usage of the Graffy site and that golden eagle activity was greater over Cloghercor as it overlapped with a known breeding territory.

110. The Applicant notes that flight activity can appear disproportionately concentrated over a survey site in EIA Report maps simply because vantage point survey effort there is far greater than in the surrounding area.

111. The Applicant states that they are aware that there is a golden eagle territory to the south of Graffy.

112. The Applicant argues that the results of Gedir *et al.* (2025)[11], cited by DAU, is not relevant to the Irish context. It should be discounted because it examined sites in the USA that used different turbines designs, featured poor turbine placement along ridgelines and overlapped with golden eagle migration routes; whereas golden eagles in Ireland and Scotland do not migrate.

113. Ferrer *et al.* (2012)[12], also cited by the DAU, is also considered not to be relevant in an Irish context given that this was based on a study in southern Spain where large numbers of migrant raptors pass through, and different methodologies were employed than those recommended by NatureScot guidance[1].

White-tailed Eagle

114. The Applicant assesses the effect of displacement due to the Proposed Development as being negligible, as white-tailed eagles show weak behavioural avoidance to windfarms, though this does make them susceptible to collision.

115. The DAU consider that, as the turbines are larger, the Graffy turbines pose more risk to white-tailed eagle than those at Anarget Windfarm (also referred to as Meenacloghspar Windfarm in some submissions) where two collision fatalities were recorded. Applicant disputes this, arguing that smaller turbines rotate faster and therefore pose greater risk: citing analysis showing collision probability for the worst-case (fastest rotational) scenario at 20–24% for smaller turbines, against 8–9% for larger turbines.

116. The Applicant considers that Anarget Windfarm is not comparable with the Proposed Development for the following additional reasons:

    - Anarget Windfarm grew incrementally, at a time when EIA was not required for smaller projects.

[11] Gedir, V.J., Gould, M.J., Millsap, B.A., Howell, P.E., Zimmerman, G.S., Bjerre, E.R. & White, H.M. (2025). Estimated golden eagle mortality from wind turbines in the western United States, Biological Conservation, Volume 302.

[12] Ferrer, M., de Lucas, M., Janss, G.F.E., Casado, E., Muñoz, A.R., Bechard, M.J. and Calabuig, C.P. (2012), Weak relationship between risk assessment studies and recorded mortality in wind farms. Journal of Applied Ecology, 49: 38-46.

- The windfarm predates the reintroduction of white-tailed eagle to Ireland and therefore this species was not considered in the design.
- The Anarget turbines are placed on ridges where there is likely to be greater risk to soaring eagles, this has been avoided at Graffy.
- It is unclear whether birds at Anarget were attracted by carrion, which would in any case be removed from the Graffy site under proposed mitigation.

117. The Applicant also questions whether other factors, such as lead poisoning leading to a lack of coordination, a nearby communal roost or weather conditions, may have contributed to the Anarget fatalities.

118. The Applicant states that many white-tailed eagle fatalities are due to poorly situated turbines where no mitigation measures, such as monitoring or bird detection systems, exist and contend that although fatalities garner a lot of attention, they should be assessed in context of overall population level significance, given that collision is only one of the many factors contributing to white-tailed eagle mortality.

119. The figures provided by DAU of two satellite tagged white-tailed eagles are included and the location of Anarget and the Proposed Development transposed on them by the Applicant. The Applicant points out that there is little flight activity recorded over the Graffy areas compared with Anarget and that if this information was available, it would usefully complement future windfarm EIA Reports.

120. The Applicant notes that since the EIA Report was written, two pairs of white-tailed eagle have begun nesting 6 km and 10 km from the Proposed Development. As they are both over 6 km from the Proposed Development the Applicant considers that the "*assessment of likely significant effects presented in the EIAR for Graffy remains appropriate and applicable*".

121. The Applicant maintains that "*usage of the site (500 m turbine buffer) is proportionately lower than the surrounding area for both species of eagle and for WTE this is notably the case for resident birds, as opposed to the more mobile sub-adult (pre-breeding) component of the population*."

122. References are cited showing that sub-adult white-tailed eagles will range more widely; following recent reintroductions of new birds there are currently a disproportionate number of young non-territorial birds. Given that 60% of reintroduced birds in Ireland will die before reaching adulthood this will level off when pairs are established, with less flights being recorded away from known nest sites.

DAU Response Following Second Submission by Applicant (27/11/2025)

123. The DAU reaffirms its position, particularly regarding collision risk to white-tailed eagle. It considers that one predicted eagle mortality every 3.9 years when the windfarm is operational is a sizeable impact and argues that three collision deaths in 2024 and 2025 in Donegal shows that white-tailed eagles do not avoid turbines.

124. References are cited that show white-tailed eagles have been recorded foraging 38 km and 29 km from the nest in Germany and Poland respectively, these distances are well beyond the 13 km connectivity distance given by NatureScot (2022) guidance[4], arguing that local white-tailed eagles could be susceptible to collision at sites assumed to fall outside connectivity range.

125. The DAU also states that carrion would only be removed from the windfarm during the construction period and not when the windfarm is operational.

Other Responses Following Second Submission by Applicant

126. Responses received that had comments relevant to merlin, golden eagle and white-tailed eagle included those from the Graffy Environmental Group on 27/11/2025 and from Adrian Gallagher received on 19/01/2026. The Graffy Environmental Group's position was unchanged from its previous responses and remained in agreement with the DAU on all points.

127. Adrian Gallagher disputed the claims by the Applicant that large turbines move more slowly and therefore the risk of collision is lower. Mr Gallagher argues that it is not just the rotation speed that needs to be taken into consideration but also the speed of the blade along its whole length. The further out from centre the faster the blade moves and therefore at Graffy when at full speed almost half of the blade is moving as fast as the smaller turbines at the windfarm site where two white-tailed eagles were killed, whilst also sweeping a much larger "kill area".

Analysis, Evaluation and Assessment.

128. We have examined, analysed and evaluated Chapter 10 of the EIA Report (Ornithology) including all associated appendices and figures, the Inspector's Report and the reasons for refusal and all relevant submissions by interested parties following refusal. We have provided our professional opinion as to the adequacy of the information contained in the EIA Report chapter and subsequent submissions from the Applicant and the reliability of the reasons for refusal.

Merlin (Refusal Reason 2)

Survey Methodology and Timings

129. Initial surveys for breeding merlin were conducted during two breeding seasons (2019 and 2020) following the relevant guidance provided by NatureScot[1] and using methodology found in Hardey *et al*. (2013)[10], the accepted manual for surveys of raptors in the UK and Ireland. Surveys to locate breeding birds were undertaken during the correct period in both years (late March to early August) and covered the correct study area (a 2 km buffer around the Proposed Development).

130. Walkover surveys were carried out within a 500 m study area to identify territories of waders and other ground-nesting birds, which along with VP watches to record flight activity would have identified any breeding attempts by merlin within the 500 m study area. The methods found in Hardey et al. (2013)[10] were then used to survey the study area between 500 m and 2 km from the Proposed Development.

131. VP watches were undertaken from four locations which gave adequate cover of the proposed turbine locations and a 500 m buffer around them, following NatureScot guidance[1]. The Applicant took care to ensure that when VP watches were carried out simultaneously the viewsheds did not overlap.

132. On five occasions VP watches ran longer than the recommended three hours, with durations of up to four and a half hours, but all other surveys over the 2-year period were three hours or under.

133. There were no surveys undertaken between 27 March and 19 April 2020 as a result of travel restrictions during the initial stages of the Covid-19 pandemic. Additional VP hours and other survey effort were undertaken after 19 April to account for this gap in coverage and the equivalent period was surveyed in 2019.

134. These minor limitations are unlikely to have materially affected the survey results from the original surveys between 2018 and 2020.

135. In 2019 and 2020, a pair of merlin were found nesting at two locations in the same general area, at their closest being 570 m and 680 m from a turbine location.

136. Follow-up surveys carried out in 2021, 2024 and 2025 only searched the previous nest locations and did not locate this breeding pair at either of its previous sites. In 2025, the 500 m study area was also searched; however, given that seven years have now elapsed since the

initial 2019 surveys it would have been desirable to extend this more recent search effort to cover the full 2 km study area as well.

137. The flight activity surveys underpinning this assessment were conducted in 2019 and 2020, while breeding merlin were confirmed nesting in close proximity to the Proposed Development. In each of the subsequent survey years (2021, 2024 and 2025) no breeding was confirmed at either previous nest site, and the 500 m study area was also checked in 2025 without result. While it would have been more robust to complete more contemporary survey coverage out to the full 2 km study area as recommended in NatureScot guidance[1] the survey of the 500 m study area in 2025 does provide contemporary data that this species has not been recorded nesting within 500 m of a proposed turbine location. This 500 m distance is the accepted upper limit disturbance buffer for this species[4]. We consider that the flight activity data collected during 2019 and 2020 represent a reasonable worst-case scenario for this species, given that an active nest was present nearby throughout both baseline survey years.

138. We are therefore of the view that the level of survey effort undertaken, and the data presented, are likely to remain representative of the current baseline conditions, given that elevated levels of flight activity would be unlikely and embedded mitigation measures would be in place to protect any nesting attempts.

Construction Effects, Mitigation and Assessment

139. Embedded mitigation measures have been employed. This includes locating Turbine 1 (T1), T2 and T3 in the final design layout in positions that ensure that all turbine locations are greater than the maximum disturbance distance of 500 m recommended by NatureScot (2022)[4] guidance from known nest locations. The closest turbine to one of these nest locations was 570 m away. Pre-construction checks will be carried out where construction coincides with the breeding season, with no construction to occur within 500 m of known nest locations during this time, and a 500 m buffer would be applied to any new nests that are located. These are accepted embedded mitigation measures, consistent with NatureScot (2022)[4] guidance, and appropriate in this instance.

140. NatureScot (2022)[4] guidance on disturbance distances to protect species such as merlin during construction is based on reviews by Ruddock & Whitfield (2007)[13] and more recently by Goodship & Furness (2022)[9] and the upper end of this disturbance distance (500 m) has been

[13] Ruddock, M. & Whitfield, D. (2007). A review of disturbance distances in selected bird species. A report from Natural Research (Projects) Ltd to Scottish Natural Heritage.

applied. In the absence of equivalent Irish guidance, there is no reason to assume that Irish merlin are any more susceptible to disturbance than those in Scotland.

141. The closest point of any construction activity (including access tracks) to the Lough Nillan SPA is 1.7 km, therefore there is no potential for any disturbance to SPA birds at their nest sites during the construction period, given that the accepted maximum disturbance distance is 500 m for merlin.

142. The Turbine Delivery Route is likely to follow existing roads and therefore is unlikely to create additional disturbance to merlins either breeding within the SPA or in close proximity to the Proposed Development where embedded mitigation measures would be in place.

143. Lough Nillan SPA does fall within the 5 km core foraging range given for merlin, so disturbance to foraging merlin during the construction period is possible. During the breeding season merlins feed on small birds, hunting them over areas of open ground with meadow pipits being particularly important in a British and Irish context[14]. There is an abundance of open ground, including rough grassland and open moorland that is likely to contain high densities of meadow pipits, in the wider area, not only within the Lough Nillan SPA itself but also the land surrounding the Proposed Development. Therefore, given the temporary nature of construction and the small proportion of the Proposed Development site which might form part of this species' core foraging range (the majority of foraging activity is likely to be closer to the nest location), when compared to the SPA area (4,179 ha) and other nearby areas of suitable habitat, there is no realistic prospect that the long-term maintenance of the qualifying species would be compromised. The Derryveagh and Glendowan Mountains SPA lies outside of this 5 km core foraging range and therefore does not need to be considered further. There are no other SPAs that include merlin as an SCI within 20 km of the Proposed Development.

144. We are of the opinion that, following the described mitigation measures, any residual construction effects on the local merlin population and that of the Lough Nillan SPA and Derryveagh and Glendowan Mountains SPA would be Not Significant.

Operational Effects, Mitigation and Assessment

145. The CRM predicted 0.73 merlin collisions over the 30-year life of the windfarm. The magnitude of the effect is considered to be negligible and although this species was classed as having Very High sensitivity the potential direct operational impact from collisions is considered Not Significant.

146. As the Applicant notes, assessing the local population of merlin is inherently difficult, given that exact population sizes, nationally, regionally (in Co. Donegal) and within the SPA, are unknown.

147. In this instance the Applicant's use of a conservative regional population estimate, for Co. Donegal, of 34 pairs is a reasonable approach given the lack of better data. Using a background annual mortality equating to 26 birds lost per year, a 1% population level effect from collision would require 0.26 collisions per annum or 7.8 collisions over the life of the windfarm. The worst-case output for Graffy is calculated as being 0.73 collisions over the life of the windfarm, which is considerably less, even if a smaller regional population is considered.

148. This conclusion has more headroom than it might appear. The Applicant's own figures imply that a 1% population-level effect threshold is reached at 0.26 collisions per annum for a regional population (in Co. Donegal) of 34 pairs. Graffy's predicted worst-case output of 0.73 collisions over the windfarm's 30-year life equates to about 0.024 collisions per annum. Working back from that, the regional population would need to be as low as 3.2 pairs or fewer before Graffy's predicted collision rate alone would reach the 1% significance threshold. Given that even a pessimistic reading of the available evidence puts the Donegal regional population well above that figure, the "Not Significant" conclusion for merlin collision risk appears robust to a fairly wide margin of error in the underlying population estimate.

149. The DAU state in their response that the windfarm would "*likely prevent the re-occupation of the previously occupied merlin territory, whether through bird strike or avoidance*" is not, in our view, supported by the very low predicted mortality provided by the CRM, given that merlin flight activity during the breeding season is accepted as mostly occurring close to the ground whilst hunting small birds[14] which would be below the collision height of modern turbines, in this instance under 18 m.

150. The EIA Report chapter assessed operational disturbance effects as of Medium Significance due to a low magnitude of effect combined with the Very High population sensitivity due to proximity of the SPAs.

151. The Inspector's stated reason for refusal was the potential adverse effect on the integrity of the Lough Nillan Bog SPA arising from displacement of this pair into the SPA, thereby displacing an existing pair from the SPA. We are not aware of any studies that would support this and it is our view that this is a very unlikely outcome; although the current SPA population is unknown it seems improbable that a) this pair of merlin would be displaced that far and b) that a pair of

[14] Rennie, F. (2025). The Merlin: The Ecology of a Magic Raptor. Pelagic Publishing.

merlin within the SPA would wholly relinquish its territory as a result. Merlins can also exist in close proximity to each other with nest locations of separate pairs being recorded as close as 350 m from each other (Wright, 1997)[15]. It is considerably more likely that any birds displaced by the Proposed Development would seek an alternate nest location within their own existing territory, consistent with the species' documented use of multiple alternate nest sites, rather than travelling the distance required to encroach on a neighbouring pair's established territory within the SPA.

152. The DAU's position that "*the home range of merlin is not known*" is addressed by the Applicant's use of NatureScot (SNH, 2016)[2] guidance, that is used in windfarm assessments and gives a core foraging distance of 5 km which, in effect, is a proxy home range from the nest. Given the distance between the Lough Nillan SPA and the merlin nests at Graffy is 5.16 km (2019) and 5.13 km (2020) it is unlikely that this pair is connected to the SPA, particularly given that Rebecca *et al*. (1992)[16] recorded alternate nesting locations no more than 3.5 km apart.

153. The Applicant puts forward that merlin were recorded nesting within 600 m of a turbine and within 230 to 390 m of construction works at the consented Glenard windfarm. As Glenard windfarm was consented with similar mitigation measures in place this is potentially a useful comparator with Graffy. The Applicant in their post-refusal responses has also provided a number of examples from UK and Ireland of merlin becoming habituated to operational turbines.

154. We are of the opinion that, on the evidence presented in the Applicant's literature review and our knowledge of this species, breeding merlin can habituate to operational turbines, and no significant operational displacement effects are predicted. Birds are also likely to incorporate the windfarm within their core foraging range while continuing to use other suitable foraging habitats nearby. Operational effects on the local merlin population and that of the Lough Nillan SPA and Derryveagh and Glendowan Mountains SPA would, therefore, be Not Significant.

Conclusion

155. The 2019/2020 flight activity data were collected while a breeding pair was confirmed as being 570 km and 680 km from a turbine location in 2019 and 2020 respectively. No breeding has subsequently been confirmed at either former nest site, or elsewhere within the 500 m study area, across three further survey years (2021, 2024, 2025). On that basis, we consider the

[15] Wright, P.M. (1997). Distribution, site occupancy and breeding success of the merlin *Falco columbarius* on Barden Moor and Fell, North Yorkshire. Bird Study 44 (2), pp. 182-193.

[16] Rebecca, G.W., Cosnette, B.L., Hardey, J.J.C & Payne, A.G. (1992). Status, distribution and breeding biology of the merlin in northeast Scotland, 1980-1989. Scottish Birds, 16, 165-173.

baseline flight activity data to represent a reasonable worst-case scenario for this species, and together with the mitigation measures described, the residual construction effects on the local merlin population and on the relevant SPAs would be Not Significant.

156. On the evidence presented in the literature review and our knowledge of this species, breeding merlin can become habituated to operational turbines and are likely to incorporate the windfarm within their core foraging range. Merlins will also use other suitable habitat nearby, they forage by hunting small birds in a wide range of open habitats, which there is an abundance of in the area surrounding the Proposed Development.

157. We are satisfied that the predicted operational collision risk provides a reasonable margin of safety even under pessimistic assumptions: taking the Applicant's own methodology, a 1% population-level effect threshold would only be reached at a regional population of roughly 3.2 pairs or fewer (compared with the Applicant's population estimate of 34 pairs), an implausibly small figure for Co. Donegal on any reading of the available evidence.

158. On the specific concern that displacement could push this pair into Lough Nillan Bog SPA and displace an established SPA pair, we consider it considerably more likely that any birds displaced by the Proposed Development would seek an alternate nest site within their own existing territory, consistent with the species' documented use of multiple alternate nest locations, rather than travel the distance required to encroach on a neighbouring pair's territory within the SPA. Any operational effects on the local merlin population and on the relevant SPAs would be Not Significant.

159. Taken together, a representative baseline data, a collision risk conclusion that holds up under a wide margin of population uncertainty, a plausible account of how any displaced birds would respond and an extensive literature review provided by the Applicant we consider the case for Not Significant effects on merlin to be robust. Provided the described mitigation measures are adhered to, we do not consider that the Proposed Development will have a significant adverse impact on the local merlin population or on the integrity of Lough Nillan Bog SPA. We are therefore of the opinion that **Refusal Reason 2 should not be upheld**.

Golden Eagle (Refusal Reason 3)

160. As the Applicant has stated, white-tailed eagle and golden eagle are ecologically distinct species with differing behavioural responses to wind turbines and are treated separately in this evaluation despite falling under the same refusal reason.

161. Certain references cited by the DAU were not directly relevant in an Irish context, particularly the studies in southern Spain (Ferrer *et al*., 2012)[13] and the USA (Gedir *et al*., 2025)[11], both of

which concern poorly sited turbines of different designs that have killed large numbers of migrating raptors. Raptor migration in Co. Donegal is likely to be almost non-existent by comparison.

162. We also question the relevance of the DAU's suggestion that SPAs for golden eagle and white-tailed eagle may be established in future. Until any such designation is formally progressed and candidate areas identified, this should have no bearing on the present decision. This would essentially halt any wind energy developments in any areas where these two species currently occur.

Survey Methodology and Effort

163. NatureScot guidance[Error! Bookmark not defined.] on recommended bird surveys to inform impact assessment of onshore windfarms specifies that two years of survey must be undertaken, unless the developer can demonstrate that a shorter period is sufficient. Both eagle species were identified as important target species known to occur within the 6 km study area required by NatureScot guidance[1]. Therefore, it is unclear why dedicated surveys for these species within the required 6 km study area were not carried out in 2019, the first survey season. The EIA Report states in Section 10. (ii). 29 that "*the wider area surveys undertaken during 2019 breeding season (Year 1) were primarily targeted at identifying potential nesting habitat within the 6 km search area to be targeted with more intense surveying in Year 2*". Only a half day of dedicated "eagle surveys" was undertaken in that entire 2019 season (in June) and it is unclear what this entailed.

164. The Applicant stated that the methodology found in Hardey *et al*. (2013)[10] had been followed; this is a standardised manual for identifying and monitoring raptor breeding attempts and covers all species likely to be found in Ireland. It is the manual that is recommended by NatureScot in their guidance[1].

165. **Table 2** is reproduced from Hardey *et al*. (2013)[10] and gives a simplified survey schedule for golden eagle to ensure that territorial birds are located and any nests found. It should be noted that surveys for windfarm developments do not necessarily need to monitor breeding success; locating active nest sites is the primary objective of any survey work.

Table 2. Golden eagle survey schedule (Hardey *et al*., 2013).

Visit Number	Survey Period	Reason for Survey
Visit 1	January to early March	To check for occupancy
Visit 2	April	To locate active nests
Visit 3	June	To check for young
Visit 4	Late July	To check for fledged young

166. In the second year of survey, eagle surveys were carried out for three days in February/March 2020 with territorial activity by golden eagles recorded. The EIAR report describes that "*a profusion of territorial flight displays… detected over numerous hills within the survey area by both golden eagles and white-tailed eagles*". No nest locations were identified, and it is unclear why no follow up surveys were carried out until early July, by which point, had a nesting attempt occurred, it could well have already failed, leaving no detectable activity near the nest site. Two further eagle surveys took place in the last week of August, by which point any fledged young from a successful attempt would have likely dispersed from the natal area, limiting their usefulness.

167. There was a gap in the survey period between 27 March and 19 April 2020 due to restrictions put in place during the Covid-19 pandemic. There was still, however, still adequate time between 20 and 30 April and in May and June to carry out additional eagle surveys.

168. Hardey *et al.* (2013)[10] states that "*the presence of a breeding pair can easily be overlooked*" and that "*the lack of any sightings during one visit should not be regarded as evidence of a vacant territory or non-breeding*". Golden eagle eyries are not always obvious and can be very inconspicuous, particularly to an observer unfamiliar with the exact location or watching from one angle. If a nesting attempt has failed there may be few visible signs (i.e., faecal splash, prey remains and shed downy feathers) in the vicinity of the nest.

169. Given that only a half day of dedicated eagle surveys were carried out in the breeding season of 2019 and the survey effort in 2020 was insufficient to identify any nest locations of golden eagle within the study area, we are of the opinion that the survey effort required to identify golden eagle nest locations within the study area was inadequate.

170. In its first post-refusal submission (dated 07/07/2025) the Applicant acknowledges that, at the time of initial survey work "*the Blue Stack territory was considered to be the same pair recorded over the Silver Hill area. However, with hindsight and with the benefit of further surveys, including those conducted in 2024, this may in fact have been a separate territory*". This refers to territorial birds recorded between 2018 and 2020 in the Lough Ea/Silver Hill area that were overlooked as being birds from a territory located outside the 6 km study area.

171. Follow up eagle surveys were carried out in 2024, the results of which are included in the Applicants first post-refusal submission, comprised 51 hours of surveys effort in February 2024, involving up to ten observers on one day and recorded a territorial pair displaying in the Lough Ea/Silver Hill area, see **Figure 5**.

172. The Applicant concludes that there is one golden eagle territory located within the 6 km study area but that "*the exact location of the nest was not determined*" and that suitable nesting habitat exists within 2.3 km of the Proposed Development, nesting habitat that was previously discounted as unsuitable in the EIA Report. The only further survey effort was a 3.25-hour and a 2.75-hour watch on the same day in March 2024 over two different potential nest areas, during which one territorial bird was recorded, with display activity recorded in the Silver Hill/Lough Ea area and aggressive behaviour towards a white-tailed eagle.

173. Given that golden eagle nests are not always visible, and based on the bird's aggressive behaviour, it seems likely that an incubating female was present nearby during these watches; females incubate for up to 90% of the time (Watson, 1997)[17], with the male typically provisioning food once or twice a day, it is possible that a three-hour watch could easily miss activity near an active nest.

174. The Applicant's own 2024 survey report states that its aim was "*to identify hotspots in eagle activity over the winter and early spring to determine any potential nesting locations in relation to the proposed wind farm site*". Despite eagle activity in February and March strongly indicating a golden eagle nest within 2.3 km of the Proposed Development, no further surveys were undertaken. It is unclear why follow up surveys were not undertaken, including watches or searches to identify roost sites that could in turn have indicated nest location.

Construction Effects, Mitigation and Assessment

175. Due to an absence of suitable nesting habitat any likely current or future nest location lies outside NatureScot's recommended 1 km maximum disturbance buffer for golden eagle, and construction effects are likely to be Not Significant. Embedded mitigation measures would ensure any nest locations were identified before the commencement of any construction activities. Potential effects on foraging birds are addressed under operational effects, below.

Operational Effects, Mitigation and Assessment

176. The EIA Report chapter did not consider golden eagle likely to nest within 6 km of the Proposed Development, stating there were no suitable nesting sites within 2 km and any locations between 2 km and 6 km were not suitably isolated for this species. It did, however, state that an expanding population of reintroduced birds may "*bring breeding activity closer to the proposed windfarm site at Graffy Hill*".

177. The Applicant's assessment of operational effects on golden eagle was carried out on the assumption that golden eagle was not nesting within 6 km of the Proposed Development. The

[17] Watson, D, (1997), The Golden Eagle, T & D Poyser, London.

2024 surveys indicate the assumption no longer holds: a territory is now considered present, with suitable nesting habitat occurring potentially as close as 2.3 km south of the Proposed Development.

178. In its first post-refusal response, the Applicant states that "*For both white-tailed eagle and golden eagle the updated breeding surveys found that breeding activity was similar to that recorded over the baseline period and data collected over this period is still valid for informing the ornithological impact statement*". As no flight activity surveys were carried out over the Proposed Development site in 2024 this claim of continued validity cannot be substantiated. There are also significant concerns about the representativeness of the original first-year flight activity data.

179. Between October 2018 and August 2019, only three golden eagle flights were recorded over the 500 m buffer area during vantage point watches; this increased to 16 flights between September 2019 and August 2020 (**Figures 1** to **4**).

Figure 1. Flight-lines for golden eagle: Season 1 – non-breeding 2018-19

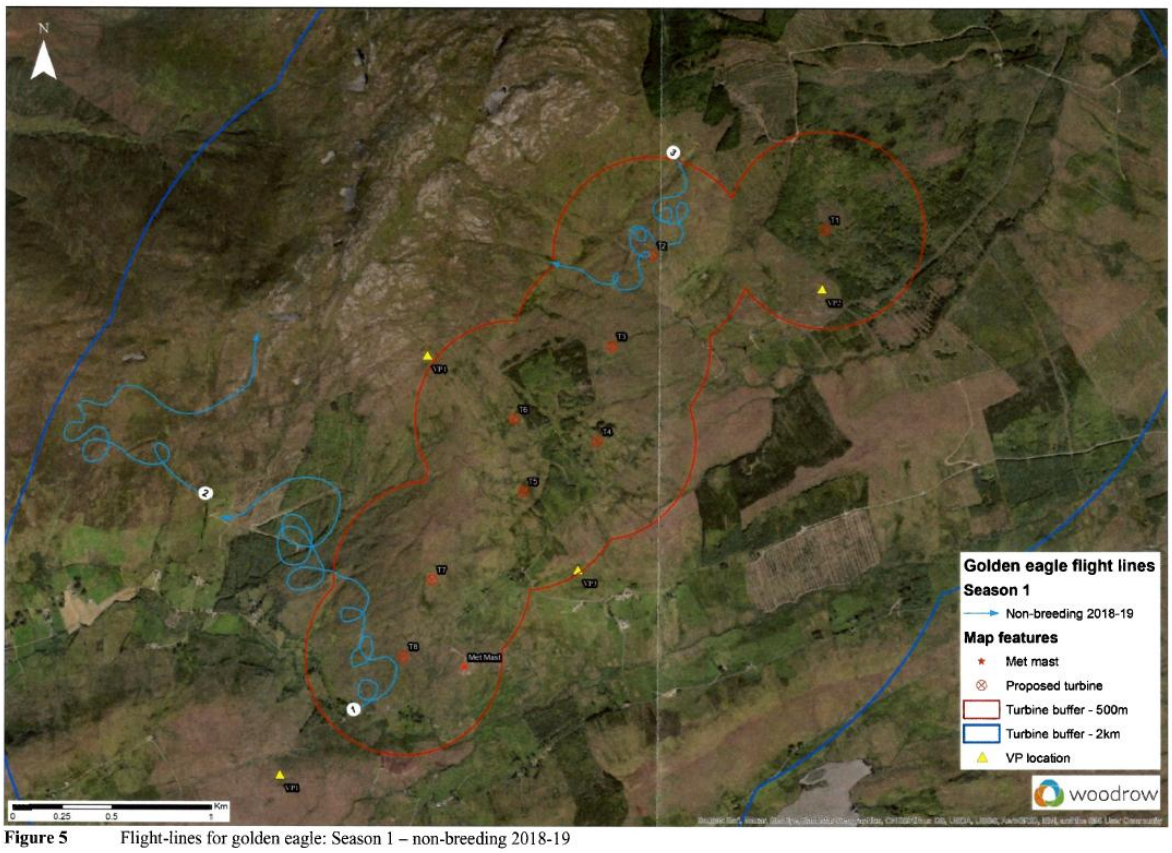


Figure 5 Flight-lines for golden eagle: Season 1 – non-breeding 2018-19

Figure 2. Flight-lines for golden eagle: Season 2 – breeding 2019

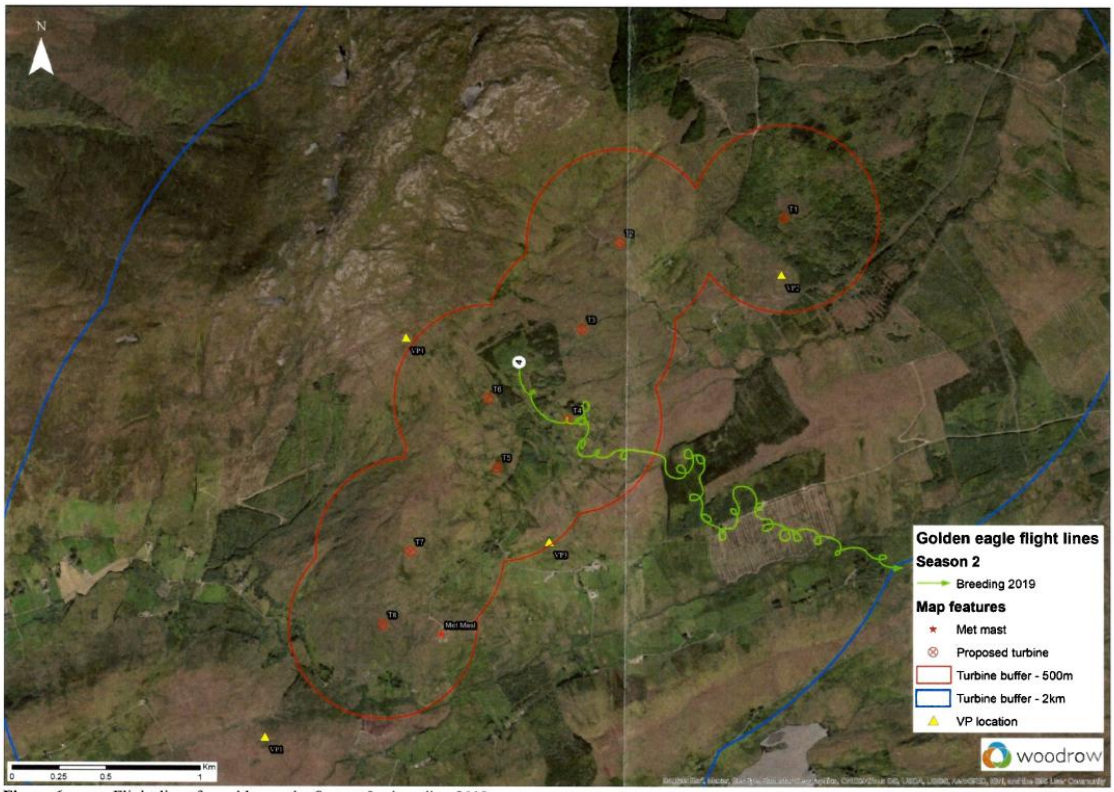


Figure 6 Flight-lines for golden eagle: Season 2 – breeding 2019

Figure 3. Flight-lines for golden eagle: Season 3 – non-breeding 2019-20

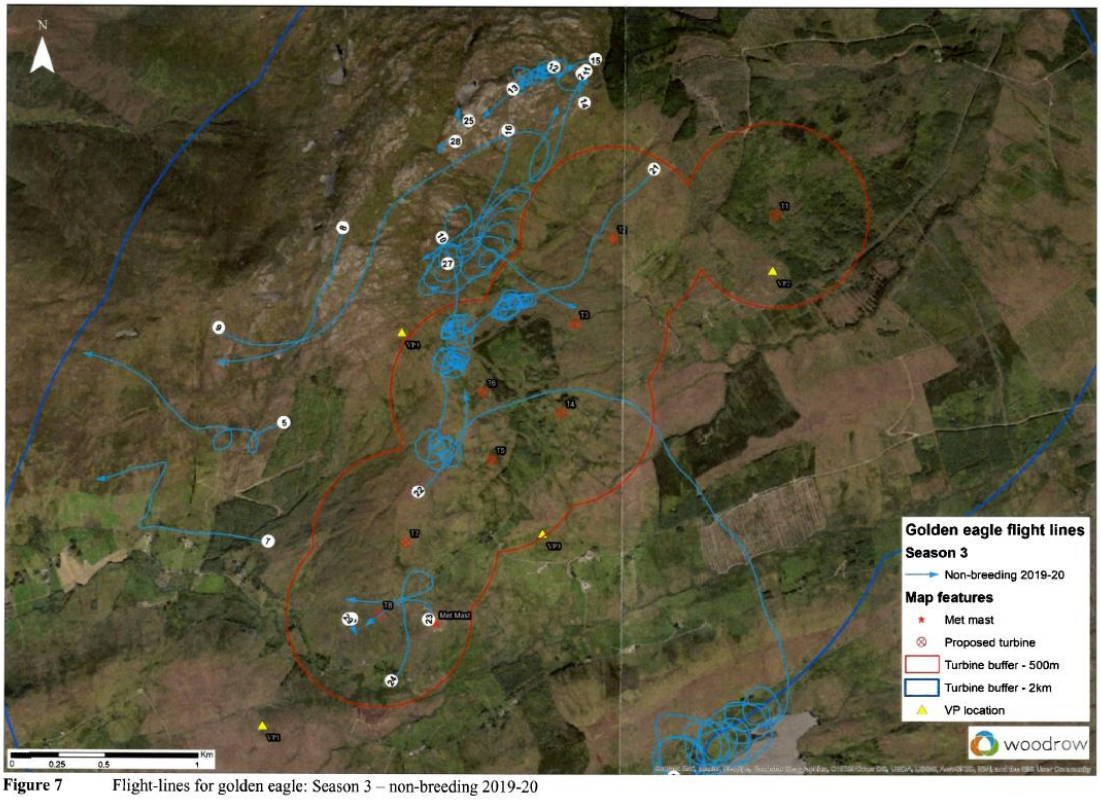


Figure 7 Flight-lines for golden eagle: Season 3 – non-breeding 2019-20

Figure 4. Flight-lines for golden eagle: Season 4 – breeding 2020

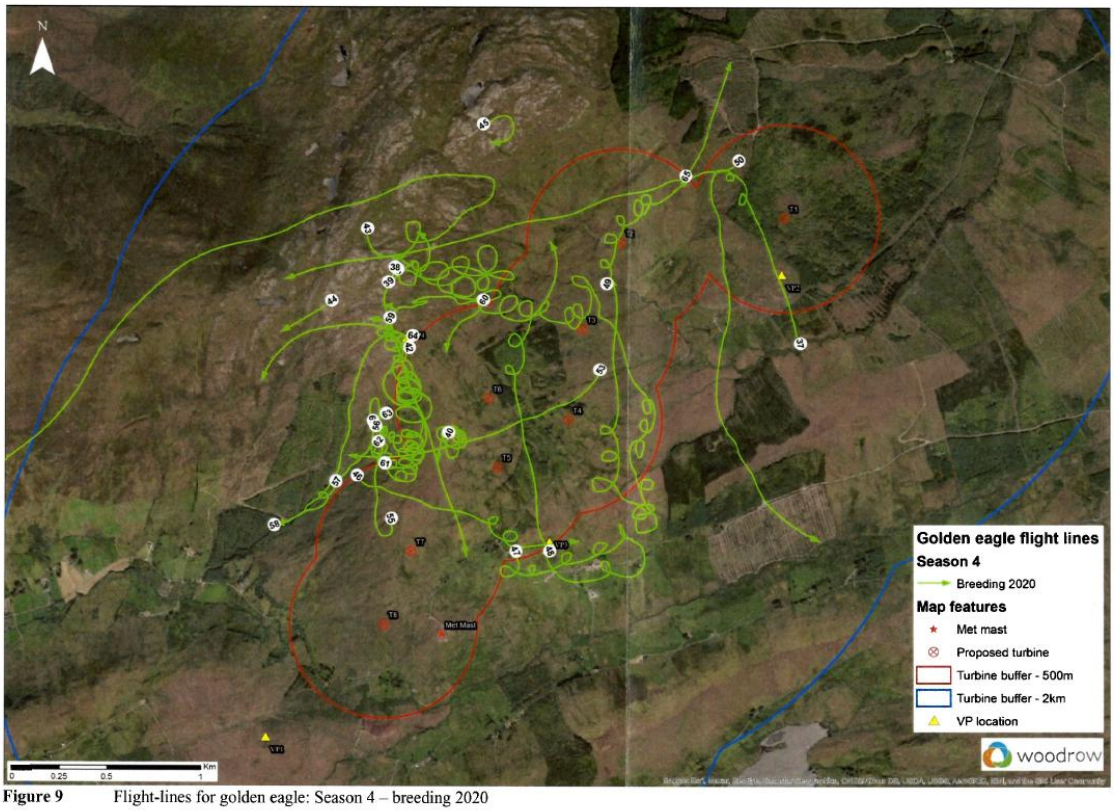


Figure 9 Flight-lines for golden eagle: Season 4 – breeding 2020

180. Table 5 of the Technical Appendix to the EIA Report chapter presents flights that were recorded outside the 500m buffer area and shows a comparable pattern of golden eagle flight activity at a wider scale. Between October 2018 and August 2019 four golden eagle flights were recorded, rising to 63 flights between September 2019 and August 2020.

181. This represents a substantial increase in recorded flight activity, indicative of a new territory being established in the study area in early 2020, a possibility the Applicant did not adequately investigate. On this basis, the first year of surveys (October 2018 to August 2019) cannot be considered representative of the current baseline conditions and has significantly underestimated flight activity over the Proposed Development.

182. Given the weight of evidence that golden eagle's primary response to windfarms is behavioural avoidance rather than collision (discussed further below), the practical significance of this underestimate lies chiefly in what it implies about functional habitat loss, i.e., the extent to which the Proposed Development site and its surroundings form part of an established territory's regularly used range, and are therefore effectively lost to the resident pair as foraging habitat once the windfarm is operational, rather than in any implied increase to collision mortality risk.

183. The 2024 surveys confirm an established territory in the Lough Ea area, and at least two years of current flight activity data should have been collected, and could readily have been, in 2024/2025, to properly characterise the extent of this functional habitat loss.

184. Although the 2024 eagle survey results did not locate a nest, numerous flights were recorded in the Silver Hill/Lough Ea area in February and March, including birds commuting between this area and Aghla mountain, just to the north of the Proposed Development, where display activity was also observed (**Figure 5**).

185. Separately, responses from the Graffy Environmental Group and the Irish Red Grouse Association (IRGA) (received in July and August 2025) highlighted that a golden eagle nest was discovered in 2020 around 5 to 6 km to the northwest of the Proposed Development. While its exact location has not be established, it is clear a second territory exists in this area distinct from the one south of the Proposed Development as both were occupied in 2020. The IRGA's suggestion that the Aghla mountain ridge forms the boundary between the two territories appears to be corroborated by the survey data.

186. The DAU raised concerns that the grid connection would potentially be closer to the pair located 5 to 6 km northwest of the Proposed Development than the distances given by the Applicant from the turbine locations. Construction of an underground grid connection would be further away from any likely nest location than the 1 km disturbance buffer recommended by NatureScot and there would not be any significant displacement effects during the operational phase of the Proposed Development.

Figure 5. Golden eagle observations recorded in 2024

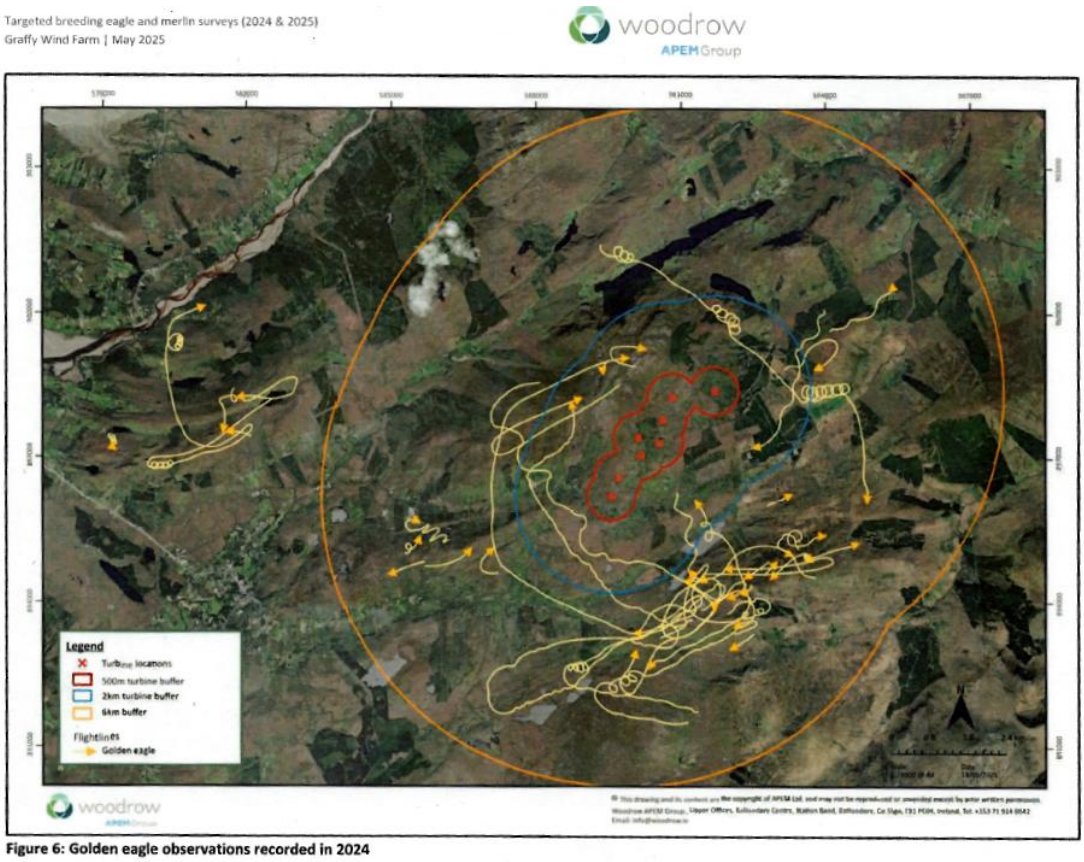


Figure 6: Golden eagle observations recorded in 2024

187. Golden eagles will often engage in display flights along the boundaries of their territory, and the Lough Ea pair's recorded commuting between Lough Ea and Aghla for display purposes is consistent with Aghla forming part of that pair's territory. **Figure 5** shows flights to the east and west of the Proposed Development, and two flights over Lough Ea that appear to originate from, or be heading toward, the Proposed Development itself. Although this reflects only a brief late-winter snapshot, and further commuting flights over the Proposed Development site at other times of year (e.g. during chick-provisioning) cannot be ruled out.

188. A substantial and growing body of Scottish research (Fielding *et al*., 2019[5], 2020[6], 2021[7], 2022[8]) demonstrates that golden eagle's characteristic response to windfarms is macro-avoidance rather than collision. Golden eagles largely avoid the interior of operational windfarms and maintain buffer distances from turbines, rather than flying through rotor-swept areas in numbers sufficient to generate meaningful collision mortality. On this evidence, we consider collision risk to be, in practice, a secondary concern for this species: the primary pathway of effect is instead functional habitat loss and displacement, i.e., the exclusion of birds from otherwise suitable foraging and commuting habitat that avoidance behaviour itself creates. This shifts what matters most about the survey deficiencies identified above: the priority is not so much refining a collision risk model that is likely, on the weight of current evidence, to predict low mortality regardless, but properly characterising how much of this established pair's territory and foraging range would be functionally lost to avoidance once the windfarm

is operational. Current guidance nonetheless still requires two years of representative, site-specific survey data to inform the EIA Report for this purpose. GET modelling, however useful as context, is not a substitute for reliable, site-specific data on how this particular pair uses the land in and around the Proposed Development.

189. Prey availability is considered a limiting factor on growth of the Irish golden eagle population (McAuliffe *et al*., 2024)[18], which currently stands at around five pairs. Preferred prey in Ireland is red grouse and hares though they will take other prey including young badgers, foxes and deer; prey remains in a nest in Glenveagh National Park comprised approximately 56% hare, 12% grouse, 12% badger cubs, 6% fox cubs and 12% birds[18].

190. The Applicant characterises the Proposed Development site as "*relatively poor*" quality foraging habitat. Although Irish hare was not targeted during ecology surveys the Ecology chapter confirms their presence, along with red grouse particularly around the northern parts of the Proposed Development site, albeit at relatively low density (consistent with typically lower Irish red grouse densities compared with Scotland). Other prey species, including fox, badger, deer and various bird species, are also likely to be important to this pair locally. The Ecology chapter confirmed the presence of badger and deer on site and foxes are likely to be present. Carrion is described as being "abundant"; it is noted that carrion removal is included as a mitigation measure but removal of smaller items such as foxes, hares and birds is likely to be difficult in practice.

191. Without dedicated eagle prey availability surveys, it is not possible to say definitively how important the Proposed Development site is as foraging habitat. It clearly lies within the core foraging range of a golden eagle territory and contains species that golden eagles regularly prey upon. Given that red grouse densities are generally low in Ireland and the densities of hares are unknown it cannot be confidently concluded that this is not an important foraging area for this species, particularly as the home range size of this pair remains unknown.

192. The Applicant describes the Proposed Development site as having "*conifer plantation throughout*"; however, this appears to be an overstatement given that plantation only accounts for 21% (0.89km^2) of the Proposed Development site total area of 4.1 km^2. Aerial imagery clearly shows substantial open areas within the plantation to the north, described elsewhere in the EIA Report as "*notably patchy*" and identified as potential nesting habitat for

[18] McAuliffe, F., Wilson-Parr, R., O'Toole, L., Marnell, F., & Reid, N. (2024). Prey deficit for reintroduced Golden Eagles (*Aquila chrysaetos*) in Ireland. In N. E. Coughlan, D. P. Sleeman, & N. T. Monaghan (Eds.), *Origins of Ireland's biodiversity* (pp. 72-83). Irish Naturalists Journal Ltd.

hen harrier and merlin. These areas, along with the plantation itself, are likely to support foxes, deer, pine martens and various birds that in turn represent potential golden eagle prey.

193. No compensatory/offset habitat measures were proposed within the EIA Report, only an enhancement measure in the form of a donation to a red grouse charity. Given the proximity of what is now considered an established golden eagle territory, and the presence of relevant prey species, we consider that habitat management measures should have been included as mitigation.

194. A number of submissions, including from the DAU, raised concerns about effects on the local red grouse population. Any habitat management measures should take this species into account, although the Proposed Development is unlikely to significantly affect the nearby red grouse sanctuary and as the sanctuary is not a European Site (i.e. not an SPA), inclusion within the NIS was not required.

Conclusions

195. We consider the level of survey effort and methodology used to locate golden eagle nests to be inadequate, resulting in an incomplete understanding of the species' breeding status within the study area. The flight activity survey results are not representative of the current baseline conditions and have consequently understated the true extent of the Proposed Development site's use by this species; with the principal consequence being an underestimate of likely functional habitat loss and displacement, rather than of collision mortality risk, given the weight of evidence that avoidance rather than collision is this species' characteristic response to windfarms. An EIA Report that has not adequately characterised baseline conditions is deficient on that basis alone, independent of any single ecological judgement made from the data it does contain. We also consider that compensatory/offset habitat should have been included as a mitigation measure, given that functional habitat would be lost to a golden eagle pair potentially nesting less than 2.5 km away.

196. The assessment methodology is based on Percival (2003)[3]; while a full critique of that guidance is beyond the scope of this report, we would question its treatment of any SCI of an SPA as Very High sensitivity whereas Annex 1 species with small, fragile or re-establishing non-SPA populations are only categorised as High sensitivity. As the two eagle species are not linked to an SPA they are assessed as being of High sensitivity under the existing framework.

197. We would also highlight a more fundamental concern regarding reliance on this methodology. Percival (2003)[3] states explicitly that it is based closely on a methodology "*developed jointly between Scottish Natural Heritage and the British Wind Energy Association*", and the

document itself describes that underlying methodology, even as of December 2003, as "*a working version... still very much a methodology in development*", noting specifically that it was "*in the process of review with regard to its application on European Union protected Special Protection Areas*". NatureScot's current published guidance[19] confirms that this draft SNH/BWEA methodology was never finalised, stating "*We do not support the use of the SNH/BWEA* draft guidance *Assessing impacts of Wind Farms on Birds or any updates based on it*", as it was not satisfied the approach complied with the Habitats Regulations 1994. This does not mean the framework is without value, it remains widely used in the absence of an agreed alternative, and the underlying ecological judgments in this case do not depend solely on it, but it does mean the EIA Report's assessment rests on a methodology that its own author acknowledged, at the time, to be unfinished and specifically under review in respect of SPA-related questions, and that its originating body has since declined to formally endorse. Given that the very SPA/non-SPA sensitivity distinction we question above is precisely the area Percival (2003)[3] flags as being under review, this further undermines the degree of confidence that should be placed in significance conclusions, such as those relating to golden eagle sensitivity and population-level effects, that flow directly from applying that framework, and reinforces our view that the conclusions reached should be treated with appropriate caution rather than as a definitive determination of no significant effect.

198. We are also of the view that only breeding pairs, not an estimation of the whole population including non-breeding immature birds, should be used to derive the breeding population figure against which collision effects are assessed. Using total population inflates the denominator and understates the true magnitude of effect; on a breeding-pairs-only basis, the magnitude of collision effects would be greater than stated in the EIA Report. We also have reservations about the suitability of the Percival (2003)[3] methodology for assessing effects at local/regional scale, discussed further in the white-tailed eagle section below.

199. These considerations carry particularly weight given the fragility of the Irish golden eagle population, currently around five pairs, and the loss of even a single bird could have material consequences given the slow reproductive rate of this species.

200. For these reasons, we agree with the Commission's original reasoning for refusal that potential risks to golden eagle were not adequately addressed by scientific evidence and conclusions, and are of the opinion that **Refusal Reason 3 should be upheld in respect of golden eagle**.

[19] Available at https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/renewable-energy/onshore-wind-energy/wind-farm-impacts-birds

White-tailed Eagle (Refusal Reason 3)

Overview

201. As survey methodologies for golden eagle and white-tailed eagle are broadly similar much of what is discussed in the golden eagle section above regarding survey methodology also applies here, a shorter summary is provided below, but the golden eagle section should be read alongside it.

Survey Methodology and Effort

202. As discussed in greater detail above, there were deficiencies in the survey effort carried out to locate eagle nesting attempts generally. Virtually no surveys were carried out in 2019, and none in April, May and June of 2020. In 2024, surveys in February targeted displaying birds, but no further survey work was undertaken that year to locate white-tailed eagles specifically, as the subsequent March surveys were focussed on golden eagle.

203. Displaying birds were recorded within the study area (including display flights and talon-grappling) during the original surveys, and searches should have continued beyond March to locate any potential nest sites. With hindsight, it does not appear that white-tailed eagle were in fact nesting within the study area; had they been, however, this level of survey effort may well have been inadequate to locate them.

204. In 2024, effort focussed on locating displaying birds in February and no birds were observed exhibiting any territorial behaviour. Unlike golden eagle where territorial behaviour was recorded, the lack of follow up surveys may have been a more acceptable approach. We are nonetheless of the view that further searches would have been advisable as white-tailed eagles can be unobtrusive and relatively inactive on any given day, even during peak display periods.

Construction Effects, Mitigation and Assessment

205. Any likely nest locations in the future are located outside of the maximum disturbance buffer distance of 500 m recommended by NatureScot (2022)[4] guidance for white-tailed eagle and therefore any construction effects are likely to be not significant. Embedded mitigation measures would ensure any nest locations were identified before the commencement of any construction activities. There may be effects on foraging birds but this is dealt with in the operational effects section.

206. The DAU's response to the Applicant's second submission raised concerns that carrion would only be removed from the windfarm during the construction period and not when the

windfarm is operational. However, this appears to be a straightforward misreading of the mitigation package being offered by the Applicant.

Operational Effects, Mitigation and Assessment

207. The EIA Report chapter concluded that there were no breeding attempts within the 6 km study area and that the availability of suitable habitat was limited within 2 km. It was considered that it was likely that pairs would become established within 6 km of the Proposed Development "*in the coming years*".

208. Given that two new white-tailed eagle nests have since been established outside the 6 km study area, it seems likely that any display activity closer to the Proposed Development during the original surveys involved birds that eventually settled elsewhere, a pattern the Applicant notes was directly observed in one wing-tagged bird. Although the initial concern, raised in both the Inspector's Report and the DAU's submissions, that white-tailed eagle might be nesting within the study area were valid, this appears to have not been the case.

209. White-tailed eagle nest locations are generally better documented than golden eagle's, given the extent of satellite tagging, so the EIA Report's description of baseline conditions within the 6 km study area is likely reasonably accurate, although this may change as the species continues to colonises Co. Donegal.

210. Thus, the level of flight activity over the Proposed Development site is likely to be broadly similar to that recorded during the original surveys, even though nearly seven years have elapsed. The Applicant's assertion that "*data collected over this period is still valid for informing the ornithological impact statement*" is more robust for white-tailed eagle than it is for golden eagle we would still question why no flight activity surveys were carried out in 2024 or 2025 to confirm this rather than infer it.

211. The worst-case collision risk for white-tailed eagle is 7.3 collisions over 30 years or 1 bird every 3.9 years, using the 95% avoidance rate prescribed by NatureScot (2025)[20] guidance and the largest candidate turbine. This worst-case figure is the one that has been, and should continue to be, used in the assessment. The less precautionary 98% avoidance rate offered as an alternative is based on a single study in Norway and has not been adopted by NatureScot; given the species' known susceptibility to collision, we do not consider this higher avoidance rate an appropriate basis for the assessment.

[20] NatureScot. (2025) Use of Avoidance Rates in the NatureScot Wind Farm Collision Risk Model. Available at https://www.nature.scot/doc/wind-farm-impacts-birds-use-avoidance-rates-naturescot-wind-farm-collision-risk-model

212. The Applicant points out in their first response following refusal that of 3,134 seconds of white-tailed eagle flight activity recorded over the Proposed Development, 2,480 seconds involved a single bird feeding on a dead sheep over two days in April. As carrion removal from the Proposed Development was included as a mitigation measure in the EIA Report, this would reduce the occurrence of birds lingering on the Proposed Development site. We would, question, however, the potential for the removal of carcasses of hares, rabbit and birds as these would be more difficult to find.

213. Other operational mitigation measures were included as reactive measures if eagles moved closer the Proposed Development in future years resulting in more flight activity. These included the painting of one turbine blade black to make it more visible to eagles as this has had some success at a site in Norway. This may not necessarily be an easy measure to implement given that a Landscape and Visual Impact Assessment will have already been undertaken that did not include this feature. A bird detection and shut down system is also included as a potential reactive mitigation measure though the cost of this may be prohibitive.

214. Several submissions, including the DAU, note two white-tailed eagle collision fatalities at the same turbine at Anarget windfarm between October 2024 and May 2025. Anarget windfarm is situated less than 6 km from the Proposed Development.

215. Anarget windfarm is now over 20 years old and has a maximum tip height of 74 m compared with a tip height of 149 m at the Proposed Development. The DAU, in their response received on 24/09/2025, were concerned that as there is a larger collision risk area that more eagles were likely to be at risk of collision at the Proposed Development. The Applicant has put forward an argument in their second submission following refusal that as smaller turbines move faster than larger ones there is a higher risk of collision if they fly through at collision height. Adrian Gallagher in his response on 19/01/2026 then refutes this claim by the Applicant stating that it is not just the rotation speed that needs to be taken into consideration but also the speed of the blade along its whole length arguing that at full speed almost half the blade at the Proposed Development would actually be moving as fast as the smaller turbine at Anarget.

216. A like for like comparison with the turbines at Anarget windfarm is somewhat reductive as there are many other factors, as the Applicant has pointed out, that could have led to these collisions. The Anarget Windfarm was built in 2005 before white-tailed eagle was reintroduced to Ireland and a robust EIA was not required. It was, therefore, not designed with white-tailed eagles in mind with turbines situated on ridges and steep slopes.

217. The two figures produced by the DAU of two satellite tagged white-tailed eagles show that both tagged birds used the area around Anarget considerably more than the area around the Proposed Development, likely reflecting more attractive topography, and possibly other factors such as a communal roost or food source.

218. The occurrence of two collisions at Anarget does not, on its own, establish an equal or greater risk of collision at the Proposed Development as each development should be assessed on its own circumstances. Comparison with a project of differing turbine specification, topography, environmental conditions and recorded flight activity is not, by itself, a reliable basis for prediction. Any formal cumulative assessment across Co. Donegal is not practicable as the majority of the 210 turbines within 20 km are outside of the 15 km buffer, and only Anarget is within 6 km. The wider set of older developments are unlikely to hold usable collision data for white-tailed eagle in any case, given how recently the species has recolonised the county.

219. That said, and notwithstanding the limits of a direct comparison, we do consider the Anarget fatalities relevant contextual evidence that this species is genuinely vulnerable to collision in this general landscape, a point developed further in our Conclusion below.

220. Additional mortality on the national population of 36 white-tailed eagles was presented as being between 1% and 5% per annum and treated as an effect of Low magnitude. The population of 36 birds is based on the figure given by the Irish Raptor Study Group (IRSG) at the time the EIA Report chapter was written (12 pairs (24 birds) and an additional 12 sub adult birds). As discussed in relation to golden eagle, we consider it would have been more appropriate to have based this calculation on the breeding population alone, i.e., 24 birds, since sub-adult birds are not guaranteed to survive to breeding age; on that narrower basis, the calculated magnitude of effect would increase.

221. More fundamentally, Percival (2003)[3], the guidance underlying this assessment, directly addresses the question of reference population scale, specifically for situations with no SPA involved: it states that this is "*less clear-cut where such protected sites are not involved",* and recommends a local reference population, suggesting "*a zone of 5km within the wind farm site*" or a smaller local ecological unit, where appropriate, rather than a national total, while noting this recommendation is illustrative rather than fixed. Using the national population instead dilutes the calculated effect: the same absolute number of birds lost to collision represents a far smaller percentage of the whole national population than of the much smaller local population the guidance itself points to. A mortality increase categorised as 1–5% ("Low" magnitude, and hence, for a High-sensitivity species, "Low" significance under Percival's own significance matrix) against the national population could, on the same absolute numbers,

represent a substantially higher magnitude of effect when assessed against the smaller population the guidance actually recommends. This local-scale principle appears in the guidance's general discussion of magnitude, ahead of its separate treatment of habitat loss, collision and disturbance, so while it is illustrated there mainly by reference to displacement, it is presented as a general principle for establishing the baseline population against which any impact should be judged, there is no basis in the guidance for using a different, national-scale baseline specifically for collision risk.

222. We would also note, as raised in relation to golden eagle above, that NatureScot's own current published guidance does not endorse the draft SNH/BWEA methodology from which the Percival (2003)[3] framework derives. A methodology Percival himself describes, even at the time of writing, as "*a working version of the document, and this is still very much a methodology in development*" and specifically "i*n the process of review with regard to its application on European Union protected Special Protection Areas"*. That broader reservation aside, our narrower point here is that, even taken entirely on its own terms, the Percival framework has not been correctly applied in this instance: the assessment uses the national population as its reference scale where the guidance itself directs use of a local one.

223. In Scotland, by comparison, magnitude of an effect is routinely assessed against regional population estimates for defined biogeographic areas known as Natural Heritage Zones, see Wilson *et al*., (2015)[21], rather than a national total. No equivalent regional framework currently exists for Ireland, but the absence of a ready-made regional dataset does not, in our view, justify defaulting to the national population, given that Percival (2003)[3] itself recommends against doing so.

224. To illustrate the scale of the discrepancy: the predicted collision rate of one bird every 3.9 years has been assessed as Low Significance against the national population, reported to have grown from 10 known breeding pairs in 2024 (producing 13 chicks) to 17 pairs in 2025[22]. If the same absolute predicted mortality were instead assessed against a population confined to the pairs genuinely local to the Proposed Development, e.g., the two territories established 6 km and 10 km away, rather than the national total of 17 pairs, the calculated effect would scale up roughly in proportion to that reduction in reference population. That is, a mortality increase categorised as 1–5% (Low Significance) nationally could plausibly translate to an effect an order of magnitude higher when assessed at a scale that actually reflects the population

[21] Wilson, M. W., Austin, G. E., Gillings, S. & Wernham, C. V. (2015). Natural Heritage Zone Bird Population Estimates. SWBSG Commissioned report number SWBSG_1504, 72pp.
[22] https://www.npws.ie/news/white-tailed-eagle-reintroduction-programme-marks-successful-completion-final-release-chicks

exposed to the risk, so quite possibly into Medium or High Significance. This is illustrative rather than a substitute for a proper local/regional-scale recalculation, but it demonstrates that the choice of assessment scale is not a technicality: it is likely to be determinative of the significance conclusion reached.

225. Percival (2003)[3], treats a species as Very High sensitivity only where it is a Special Conservation Interest (SCI) of an SPA; white-tailed eagle, not being linked to an SPA is instead assessed as High sensitivity. Given the very small Irish populations of both white-tailed eagle and golden eagle, we are of the opinion that these species, along with other Annex 1 species holding small, declining or re-establishing Irish populations, should also be treated as Very High sensitivity, irrespective of SPA linkage. A framework that reserves its highest sensitivity category exclusively for SPA-linked populations risks systematically understating the vulnerability of small, non-SPA national populations precisely like these and the populations for which the loss of even a handful of individuals is likely to matter most.

226. Both eagle species have small populations and are K-selected, reaching reproductive age around five years of age and typically producing one offspring per year. This combination of traits leaves little capacity to absorb additional mortality. Any losses to these populations can have serious implications because recovery from such losses depends on slow reproductive turnover. This is also why we consider it appropriate to categorise both species as being of Very High sensitivity, notwithstanding that this represents a departure from the sensitivity levels set out in Percival (2003)[3] for species not linked to an SPA.

Conclusion

227. Flight activity surveys and collision risk modelling have been undertaken in accordance with accepted guidance; however, serious concerns remain. Our concerns lie with what that modelling has been measured against, and with what the wider evidence tells us about this species' actual vulnerability to collision.

228. Unlike golden eagle, whose primary response to windfarms is well-documented macro-avoidance, white-tailed eagle is recognised, including by the Applicant's own submissions, as showing materially weaker avoidance behaviour, which is precisely why a lower avoidance rate (95%, rather than the higher rates applied to golden eagle) is used in the CRM for this species. This is not a contested or anecdotal point: it is the accepted basis on which the Applicant's own model has been built. On that basis, the CRM's own worst-case output of 7.3 predicted collisions over the windfarm's 30-year life, or one bird approximately every 3.9 years represents a genuine, non-negligible predicted mortality for a species whose weaker avoidance is already factored into that figure, not a conservative upper bound.

229. We also have a genuine concern regarding how carrion removal, as proposed, would work in practice. The current grazing regime is to remain in place within the windfarm footprint itself (Para. 28), meaning livestock will continue to graze in close proximity to the turbines throughout the operational life of the development. The Applicant has not provided a carcass removal protocol, and no search schedule or frequency has been specified. Given the extent of the Proposed Development site, a sheep could die and go unnoticed for several days before being found, during which time it would continue to present exactly the attractant this mitigation is intended to remove. We consider the simplest and most effective solution would be to combine a defined, scheduled carcass search-and-removal protocol with the exclusion of grazing livestock from within 200 m of the windfarm footprint removing the underlying source of attraction from the area of greatest collision risk, rather than relying solely on reactive removal after an animal has already died.

230. The population against which this risk has been judged also understates its true magnitude. The national population, around 17 breeding pairs in 2025, remains very small, and the EIA Report's use of that national total, rather than the local population actually exposed to risk from this development, runs contrary to Percival (2003)'s own recommendation to assess magnitude at local scale when no SPA is involved. Correcting the population scale and using breeding adults only rather than including sub-adults of uncertain survival, would very plausibly move the calculated significance up by one or more categories from the Low Significance currently concluded. We also consider the species' Very High sensitivity, given its small, still-recovering Irish population, to be understated by a framework that reserves its highest sensitivity tier exclusively for SPA-linked species.

231. These points reinforce one another rather than simply adding up: a small, vulnerable population, assessed for a species whose accepted avoidance characteristics already produce a non-trivial worst-case collision figure, exposed to an unresolved attractant risk within the windfarm footprint itself, and measured against a baseline diluted well beyond what the guidance recommends, is a materially more serious combination than any single point suggests alone. Given that at least two pairs of white-tailed eagles now reside within Co. Donegal, any future assessment of this or similar developments should use a population baseline that reflects this local and regional context, rather than the national total.

232. Serious concerns also persist regarding the adequacy of survey work used to locate white-tailed eagle nests. Although it does not appear that the species is nesting within 6 km of the Proposed Development site, the limited survey effort undertaken in 2019 and 2020 is not sufficient to establish that absence conclusively. An EIA Report that has not adequately

characterised baseline conditions is deficient on that basis alone, independent of any single ecological judgement made from the data it does contain.

233. For these reasons, we concur with the Commission's original reasoning that the potential risks to white-tailed eagle have not been adequately addressed with robust scientific evidence and definitive conclusions. We are therefore of the opinion that **Refusal Reason 3 should be upheld in respect of white-tailed eagle.**