rcha Skelly

From: Bord
Sent: Tuesday 19 January 2021 08:59
To: Appeals2
Subject: FW: ABP-307939-20 - Cleanrath Windfarm Ltd. (our ref. 1912123-a)
Attachments: 191223-a - RDAU - 2021.01.18 - F1.pdf

From: Jimmy Green <JGreen@mkoireland.ie>
Sent: Monday 18 January 2021 17:26
To: Bord <bord@pleanala.ie>
Cc: MKO-Admin <info@mkoireland.ie>
Subject: ABP-307939-20 - Cleanrath Windfarm Ltd. (our ref. 1912123-a)

Good Afternoon,

I refer to the correspondence issued by the Board (dated 14th December 2020) in relation to the substitute consent for the Cleanrath wind farm development, in Co. Cork, requesting any observation in relation to the circulated submission received by the Board from the Development Applications Unit to be made one (or by) the 19th of January 2021. In this regard, please find attached a report that has been prepared by MKO, on behalf of our client, Cleanrath Windfarm Ltd., responding to the DAU submission.

I would appreciate if the Board would confirm that it can open and read the attachment (which is a 12 page pdf), a hard copy will also issue by post. Should you have any queries please do not hesitate to contact this office.

Best Regards

Jimmy Green
Principal Planner

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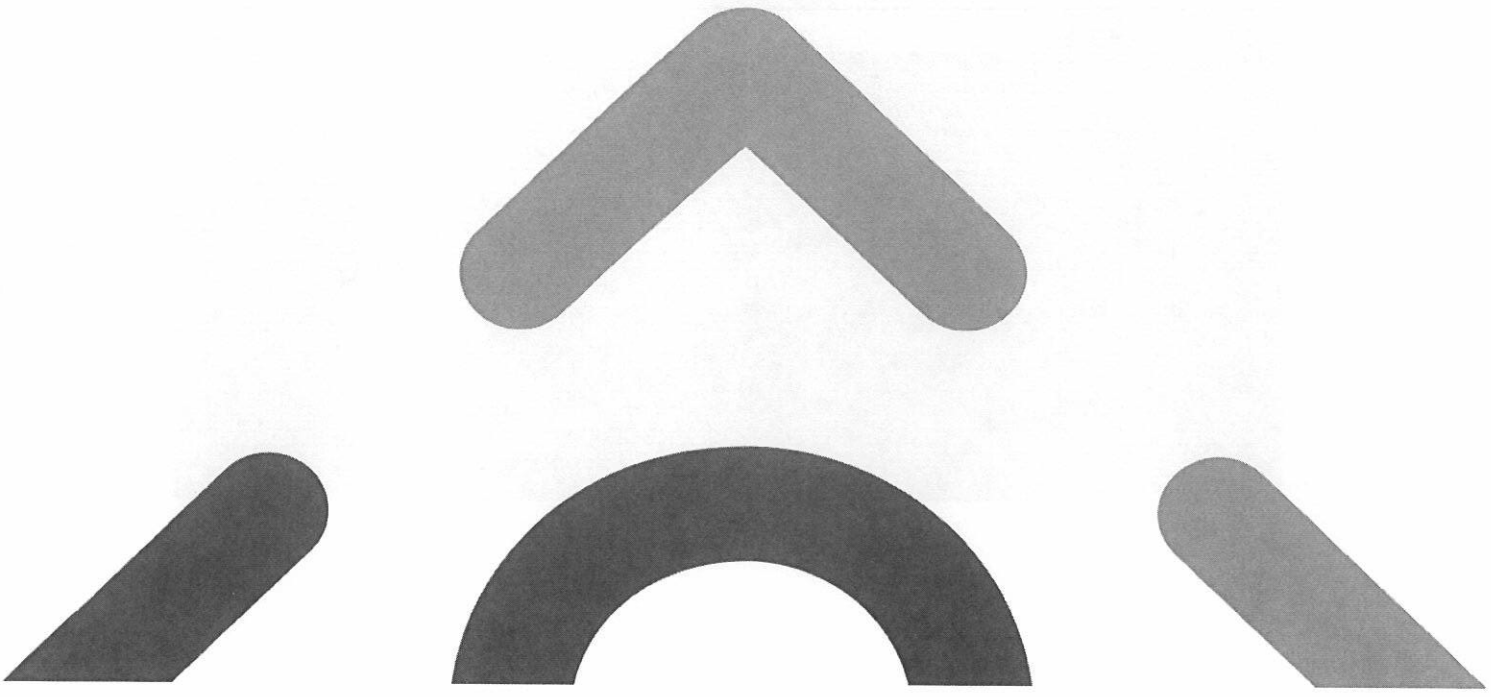
Planning and Environmental Consultants

Response to DAU Submission

ABP-307939-20
Cleanrath Wind Farm, Co. Cork



DOCUMENT DETAILS

Client:	Cleanrath Wind Farm Ltd.
Project Title:	Response to DAU Submission
Project Number:	191223-a
Document Title:	PI Ref.ABP-307939-20 – Response to DAU Submission
Document File Name:	190301-d RDAU 2021.01.15 – F
Prepared By:	MKO Tuam Road Galway Ireland H91 VW84

Planning and Environmental Consultants

Rev	Status	Date	Author(s)	Approved By
F	Final	15/01/2021	PC	PR

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1. INTRODUCTION

This report has been prepared in response to the correspondence circulated by An Board Pleanála ("the Board") dated the 14th of December 2020 in relation to the substitute consent application for the Cleanrath Wind Farm Development which is being considered under the provisions of ABP-307939-20. The application documentation submitted in support of the current application includes a remedial Environmental Impact Assessment Report (rEIAR), an Environmental Impact Assessment Report (EIAR) as well as both a remedial Natura Impact Statement (rNIS) and Natura Impact Statement (NIS).

On behalf of Cleanrath Wind Farm Ltd. (Planning refer ABP-3307939-20), MKO has prepared this report in response to the submission made by the Department of Tourism, Culture, Arts Gaeltacht, Sport and Media - (Development Applications Unit - DAU). The DAU Submission was circulated to Cleanrath Wind Farm Ltd. by An Bord Pleanála. The Board's correspondence issued under Section 131 of the Planning and Development Act, 2000 (as amended) ("the Act") and requested submission/observations in relation to the DAU submission to be made on or before the 19th of January 2021.

Under the general heading of Nature Conservation, the DAU submission acknowledges that the site of the proposed development is not within or adjacent to any European Site (cSAC, SAC, pSPA or SPA), or a proposed or designated natural Heritage Area (NHA or pNHA). It goes on to note that the site is within the catchment of the Gearagh candidate Special Area of Conservation (cSAC no. 108) and provides the location of the conservation objectives for this site. In this regard, please note that these have been considered and set out in full in section 6.10 of the submitted EIAR and rEIAR, and sections 5 to 7 of the submitted rNIS and NIS.

The submission goes on to reference species of conservation importance occurring in the area as Kerry slug, bats, (Annex IV of the EU Habitats Directive) and white-tailed eagle and golden plover (Annex I of the EU Birds Directive). The DAU submission does not make further comment in relation to the Kerry slug or golden plover which are dealt with and assessed within the application documentation in the following sections:

- Kerry slug sections 6.7 of the submitted rEIAR and EIAR
- Golden plover sections 7.9 of the submitted rEIAR and EIAR, and sections 5 to 7 of the submitted rNIS and NIS respectively

The DAU submission then discusses the future potential for impacts on white-tailed eagle and Leisler's bat. It suggests potential conditions in relation to these species that may be imposed by the Board in any grant of planning permission. Section Two of this report provides a discussion of the conditions suggested by the DAU in relation to these species and clearly demonstrates how such conditions might be implemented. The discussion in relation to white tailed eagle is provided in Section 2.1 and the discussion in relation to Leisler's bat is provided in Section 2.2.

2. RESPONSE TO SUBMISSION

2.1 White-tailed Eagle

The DAU Submission states the following:

> *In relation to white-tailed sea eagle as referred to in Table 7.11 of the EIAR, the species is only establishing itself in Ireland after reintroduction, and although there was only one observation recorded during the monitoring period (notably 2020), this does not mean that eagles could not in future begin to roost close (in eagle terms) to the wind farm, for instance at Lough Allua. If this was the case, collision mortality with the blades of upland turbines is a potential threat, such as occurred at the Sillahertane wind-farm in the nearby Roughty Valley, Co. Kerry, when three eagles were killed. In the absence of assessment of this risk in terms of the topography of the wind farm relative to Lough Allua, the following type of condition is recommended:*
>
> *a) Annual and adaptive monitoring for use of Lough Allua and the wind farm area by white-tailed sea eagle will be undertaken by a competent qualified ornithologist. This monitoring will be undertaken over a sufficient observation period, and at suitable vantage points, which allow detection of roosting or overflying eagles, based on best practise. The monitoring will be carried out at the time of the year when eagle use of the area is most likely, depending on the data available from breeding or roosting eagles in the region, or on the basis of reliable reports of roosting eagles in the vicinity of the wind farm. Monitoring will be coordinated with similar monitoring being carried out at other wind farms in the region (Cork/Kerry border). The results of eagle monitoring will be reported to regional staff of the National Parks and Wildlife Service (NPWS).*
>
> *b) A precautionary management plan for eagle protection will be drawn up and implemented. This will include managing, insofar as feasible, fallen animal carcasses within the wind farm area so that they do not attract eagles into the wind farm. In the event of regular eagle occurrence in the immediate area of the wind farm, the management plan will have an effective protocol for reducing risk of collision with turbine blades.*

It is noted in the DAU submission that white tailed sea eagle is only establishing itself in Ireland following reintroduction and the suggested conditions are designed specifically to prevent any potential future impacts that may arise should the species, for which no significant effect is currently identified, establish itself in the area. It should be noted that the assessment of potential impacts on white tailed eagle that is presented in the EIAR and rEIAR is based on a comprehensive suite of bird surveys that were undertaken in strict accordance with the most relevant guidelines (SNH 2017) and over a long time period (February 2015 and March 2017, June 2018 to August 2018 and January to May 2020). The suite of surveys undertaken is fully described in Section 7.6.7 of the EIAR and rEIAR. It should be further noted that post construction surveys of the wind farm have been continued since May 2020 and are currently ongoing. These surveys are being undertaken in accordance with the same relevant guidance (SNH 2009 & 2017 as set out in Section 7.13.2 of the EIAR and rEIAR). These surveys include the following:

- Flight activity surveys: Vantage Point Surveys
- Breeding Bird Surveys: Adapted Brown & Shephard.
- Winter Walkover Surveys
- Breeding Raptor surveys
- Hen Harrier Winter Roost Surveys
- Targeted bird collision surveys (corpse searches) being undertaken with training dogs. The surveys included detection and scavenger trials, to correct for these two biases and ensure the resulting data is robust.

White tailed eagle has not been recorded at the Cleanrath Wind Farm during any of the surveys undertaken either pre or post-construction. The one observation of the species was on the 5th March 2020 and was located around 7km south west of the wind farm site. There have been no other records of the

species during any of the surveys undertaken either pre-construction or post construction up to the current date. As such, the finding of the impact assessment as presented in the EIAR and rEIAR was based on adequate survey data, followed the most appropriate and relevant impact assessment guidelines and remains valid and correct.

Notwithstanding the above, the concerns raised by the DAU with regard to potential colonisation of the area by white tailed eagles in the future are recognised and the imposition of the conditions as suggested could be facilitated. The following sections of this report describe how they could be implemented. It is noted that a comprehensive monitoring programme is set out in Appendix 7-6 of the EIAR and rEIAR and is already proposed and underway. The surveys that are currently being undertaken are described above and listed in Section 7.13.2 of the EIAR and rEIAR.

2.1.1 Proposed Condition a) Annual and Adaptive Monitoring

This section first describes the post construction and operational monitoring that will be undertaken on the Cleanrath Wind Farm Site (and is currently proposed/ongoing). It then describes the additional surveys and monitoring that could be undertaken at Lough Allua or any other suitable eagle habitat in the vicinity, should activity/potential effects be predicted following monitoring at the wind farm site.

2.1.1.1 Proposed and ongoing monitoring at the Cleanrath Wind Farm Site

In line with best practise (SNH, 2009) monitoring has been and will be undertaken in Year 1, 2, 3, 5, 10 and 15 of the life-time of the wind farm. As presented, in Appendix 7-6 of the EIAR and rEIAR, a detailed post-construction Bird Monitoring Programme was prepared for the operational phase of the Cleanrath Wind Farm development. As per Section 7.13.2 of the EIAR and rEIAR, surveys commenced in January 2020 of Operational Year 1 and are ongoing. Whilst, this survey schedule has been designed in accordance with the most relevant guidance (SNH 2009), the suite of proposed surveys that are specifically relevant to white tailed eagle (as listed in table 2.1 below) could be amended so that they are undertaken on an annual basis throughout the lifetime of the wind farm if required. However, a more effective and appropriate course of action may be to amend or adapt the survey effort throughout the lifetime of the wind farm, taking into account the level of eagle activity recorded and through ongoing consultation with the NPWS, Local Authority or other relevant stakeholders. The first review of the survey scope could be undertaken after year five.

In line with the DAU submission these surveys will be undertaken from suitable vantage points monthly, as in the south-west of Ireland this species could potentially occur throughout the year. As stated in the DAU submission:

> *This monitoring will be undertaken over a sufficient observation period, and at suitable vantage points, which allow detection of roosting or overflying eagles, based on best practise. The monitoring will be carried out at the time of the year when eagle use of the area is most likely.*

The sufficiency of vantage points was confirmed by undertaking a view shed analysis, as provided in Figures 7-2, 7-2-1, 7-2-2 and 7-2-3 in the EIAR and rEIAR.

Table 2.1. below describes the bird monitoring work schedule, which is specifically relevant to white tailed eagle for each monitoring year for the Cleanrath Wind Farm development, as per Appendix 7-6 of the EIAR and rEIAR. It is noted that the proposed surveys will be undertaken throughout the entire year. The below survey schedule is the minimum survey effort proposed. The survey schedule will be adapted as necessary based on the results of the surveys, additional information that may become available on all bird species from the NPWS, the Local Authority or any other relevant data source. The Wind Farm Operator will actively seek additional information on bird activity and the results of monitoring that is ongoing in the area and will submit all monitoring data to the NPWS on an annual basis if required. If possible, following consultation with the aforementioned bodies (or any others), surveys will be designed to co-ordinate with or compliment other monitoring surveys that are currently being undertaken, with

results being appropriately and confidentially shared for the benefit of monitoring and protecting the population of white-tailed eagle and other bird species in south west Ireland.

Table 2.1. Bird monitoring work schedule for each operational monitoring year at the Cleanrath Wind Farm

Survey Type	Phase	Period	No. of Visits	Survey Method
Vantage Point Surveys	Year 1, 2, 3, 5, 10 and 15	January - December	1 visits/ VP / month for each monitoring year	Two fixed, 6-hour, Vantage Point Surveys
Corpse Searches (Bird Casualties)	Year 1, 2, 3, 5, 10 and 15	January - December	1 visit/month for each monitoring year	Targeted corpse searches at turbine bases

2.1.1.2 Potential Additional Surveys at Lough Allua or other suitable habitat

If required by the Board, the surveys of Lough Allua or other suitable habitat could be undertaken annually on a precautionary basis, and adapted as necessary throughout the lifetime of the wind farm.

However, a more effective and appropriate approach would, in our opinion, be to design any surveys of Lough Allua or other suitable habitat, based on the results of the operational surveys undertaken at the wind farm site. In the event that there is a future increase in the occurrence of white-tailed eagle identified either following the programme of monitoring described above (Section 2.1.1.1) or as a result of additional information from other sources including the NPWS, the Local Authority or any other relevant data source, this may trigger the requirement for additional adaptive surveys at Lough Allua. The survey effort would be amended or adapted following the continued analysis of the results throughout the lifetime of the wind farm, taking into account the level of eagle activity recorded and through ongoing consultation with the NPWS, Local Authority or other relevant stakeholders.

If required, it is proposed to undertake species specific surveys of suitable habitat such as Lough Allua for white-tailed eagle. In line with the DAU submission these surveys would be undertaken monthly, as in the south-west of Ireland this species could potentially occur throughout the year.

To undertake the survey, strategic locations overlooking suitable breeding or roosting habitat will be selected at each location. Surveys will be undertaken monthly during monitoring years from vantage points that ensure comprehensive coverage of the targeted area, e.g. Lough Allua. The siting of each vantage point would be confirmed with a 'recce' visit to ground truth the suitability of each location. Survey methodology will be based on Hardey et al. (2013). Six-hour watches would be undertaken monthly from each vantage point, as per Table 2.2. Breeding season surveys would be undertaken during daylight hours. Whereas winter season surveys would overlap with dawn/dusk to ensure any roost sites are identified. The survey scope may be adapted based on the results of the initial surveys. The Wind Farm Operator will submit all monitoring data to the NPWS on an annual basis if required.

Table 2.2. Bird monitoring work schedule for each operational monitoring year at Lough Allua

Survey Type	Phase	Period	No. of Visits	Survey Method
White-tailed Eagle Surveys	As required during the operational phase	January - December	1 visits/ VP / month for each monitoring year	Vantage Point Surveys, 6-hour, Hardey et al., (2013)

2.1.2 Proposed Condition b) Precautionary Management Plan

Proposed Condition b) in the DAU submission requires a precautionary management plan to be drawn up for eagle protection. This condition requires a precautionary management plan to be drawn up for eagle protection. This condition includes two parts.

2.1.2.1 Part (i) Management of Fallen Animal Carcasses

The DAU proposed Condition B, Part (i) identifies the potential that if white-tailed eagle were to re-establish themselves locally, fallen animal carcasses within the Cleanrath wind farm development could attract eagles to the wind farm. Eagles attracted to the wind farm could be at increased risk of colliding with operating turbines. Condition b) Part (i) of the DAU submission requires:

> *Managing, insofar as feasible, fallen animal carcasses within the wind farm area so that they do not attract eagles into the wind farm.*

Whilst there have been no records of white-tailed eagle on the wind farm site during the comprehensive suite of surveys undertaken and only one record greater than 7km from the site, this condition is designed to make the wind farm site less attractive to eagles, should at some time in the future, the species establish itself in the area. Cleanrath Wind Farm Ltd. would, if conditioned to do so, adopt the following protocol for the management and removal of carcasses within the wind farm site or any alternative protocol such as might be conditioned.

It is noted that sheep are the most likely fallen animal carcass species to be encountered within Cleanrath wind farm development. As is typical in the uplands of Ireland the stocking densities of sheep are low. In the absence of a practise of carcass removal it is not expected that a high density of carcasses would be encountered annually within the Cleanrath wind farm development. Notwithstanding this, to ensure that white-tailed eagles are not attracted to the Cleanrath Wind Farm site, fallen animal carcasses will be removed.

While onsite undertaking routine maintenance works, the site manager will be responsible for identifying and arranging removal of carcasses from the Cleanrath Wind Farm site. Furthermore, the bird surveyors that will be present onsite undertaking operational monitoring and local farmers will be instructed to report all observations of carcasses to the site manager to arrange for removal.

The proposed protocol to be undertaken by the site manager to ensure that the wind farm site is kept free from carcasses and that the potential for eagles to be drawn into the site is minimised is described below:

- Surveys of the wind farm site for carcasses will be undertaken on a monthly basis at a minimum throughout the lifetime of the wind farm.
- The site manager will walk/ drive transects of the entire wind farm site including all areas between turbines and to a buffer of a minimum of 100m outside the outermost turbines.
- Site managers will be trained in the survey methodology, which will include not only the search for fallen animals by sight but also the identification of signs that a carcass may be present but obscured from view. Such signs may include trails of wool/fur or congregations of scavenging species such as hooded crows or ravens.
- In addition, the survey will be supplemented by a drone flight with associated high quality imagery, which would assist in surveying concealed areas of the site.
- A log will be kept of the number of carcasses recorded and removed annually. This will be reported to the NPWS following each year if required.

2.1.2.2 Part (ii) Protocol for Reducing Collision Risk

The DAU proposed Condition B, Part (ii) requires:

In the event of regular eagle occurrence in the immediate area of the wind farm, the management plan will have an effect protocol for reducing risk of collision with turbine blades.

As previously discussed, currently no collisions of white-tailed eagle are predicted to occur at the Cleanrath wind farm development as there have been no records of the species at the site (or within 7km of it) during the extensive suite of surveys that were undertaken and are currently ongoing. The protocol set out below does not invalidate the conclusion of the evaluation that is presented in Section 7.6.7 of the EIAR and rEIAR. It follows a highly precautionary approach and proposes mitigation in response to an impact on a species that has not been identified on the site and guards against any potential future impact on that species. Cleanrath Wind Farm will undertake the protocol that is described below if conditioned to do so.

Following each monitoring year, a collision risk analysis will be undertaken for white-tailed eagle following the procedure outlined in Section 7.2.5.5 of the EIAR and rEIAR. As detailed in Table 2.1 above, it is proposed to undertake vantage point surveys January to December during each monitoring year. Vantage point surveys will be undertaken in accordance with SNH guidance (SNH 2017). Vantage point surveys are designed to quantify the level of flight activity and its distribution over the survey area. The primary purpose of the survey is to provide data to inform the collision risk model, which makes predictions of mortality, from collisions with turbines.

The results of the collision risk analysis will be used to assess whether collision risk is predicted to be significant for white-tailed eagle. If a significant effect is identified curtailment of the relevant turbine(s) will apply. The results of surveys will inform the programme of curtailment. For example, if regular white-tailed eagle flight paths are identified, curtailment need only apply to the turbine(s) that are sited in these areas. Curtailment will continue until it can be demonstrated that the risk of a collision has been reduced to avoid any significant effect on the species.

An assessment of the significance of any predicted collision will be undertaken following a highly precautionary approach, whereby a population viability analysis of the introduced species in the area will be used in conjunction with the collision risk model. The population viability analysis will be undertaken on each survey year and will use the latest information on the species, as gained from the site surveys and any other relevant data source. The assessment of significance will be undertaken in the context of any ongoing changes to the status of the introduced population.

It is noted that over the course of the lifetime of the wind farm, other measures to reduce the risk of collision with turbine blades may present themselves. Such future measures will be considered and implemented if relevant.

2.1.3 Reporting

A report summarising the findings of all the bird monitoring surveys will be submitted to the Planning Authority and NPWS within three months of each monitoring year.

Maps outlining flight lines of key target species will be produced using GIS software applications to accompany the final report at the end of each monitoring year.

2.2 Leisler's bat

The DAU Submission in relation to Leisler's bat is provided below

According to the EIAR there is significant use of the wind-farm site by Leisler's bat, with one fatality recorded during monitoring to date (pp. 6-65 – 6-66). Leisler's bat is particularly susceptible to turbine blade collisions, and, like all bat species, is listed on Annex IV of the EU Habitats Directive as a species requiring strict protection. If not already conditioned, the monitoring of bat fatalities by trained dog(s) should continue throughout the life-time of the operational wind farm.

As discussed in Appendix 6-4 and Section 6.6.2.1.2 of the EIAR and rEIAR, corpse searching surveys have been conducted monthly since January 2020. This is being undertaken using both hand searching and using a trained search dog to detect any potential bat fatalities. In addition, surveying of the wind farm continued in autumn of 2020.

Following the precautionary principle and in accordance with the SNH (2019) guidelines, any future full operation of the wind farm will be the subject of ongoing monitoring as described Appendix 6-4 of the EIAR and rEIAR. In the event that the monitoring identifies a significant effect on any bat species including Leisler's bat (or any other bat species), these effects will be mitigated as per Section 6.11.3 of the EIAR and rEIAR. SNH Guidance requires at least 3 years of post-construction monitoring to assess the effects of construction related habitat modification on bat activity and this will be undertaken. In addition, carcass searches for collision fatalities will be also undertaken in Year 5, 10 and 15 of the lifetime of the wind farm.

REFERENCES

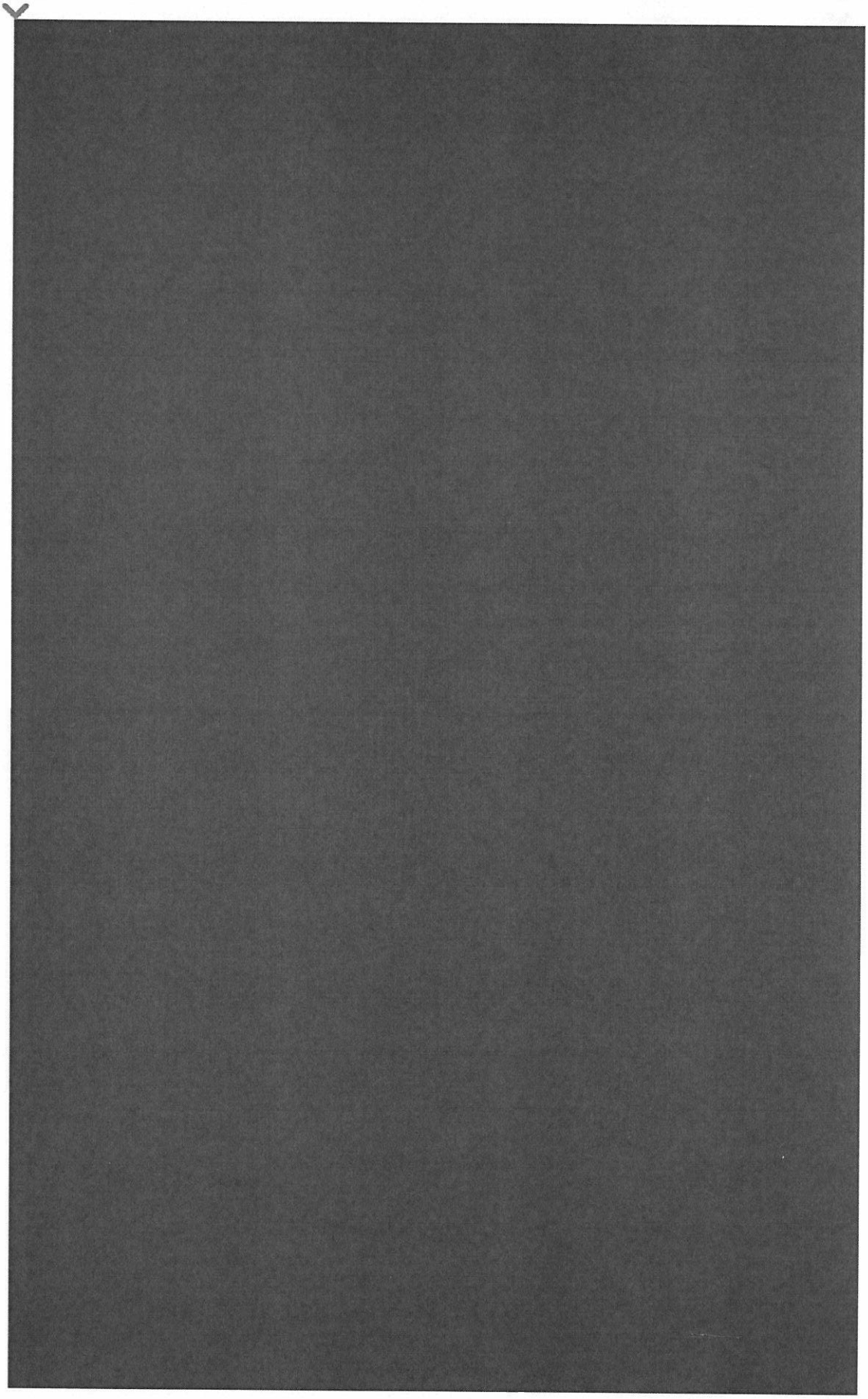
Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. & Thompson, D. (2013). *Raptors: a field guide to survey and monitoring (3rd Edition).* The Stationery Office, Edinburgh.

Percival, S.M. (2003). *Birds and wind farms in Ireland: A review of potential issues and impact assessment.* Ecological Consulting.

Scottish Natural Heritage (SNH) (2009). Monitoring the impact of onshore wind farms on birds. Scottish Natural Heritage.

SNH (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. Scottish Natural Heritage.

SNH (2019) '*Bats and onshore wind turbines: survey, Assessment and mitigation*'



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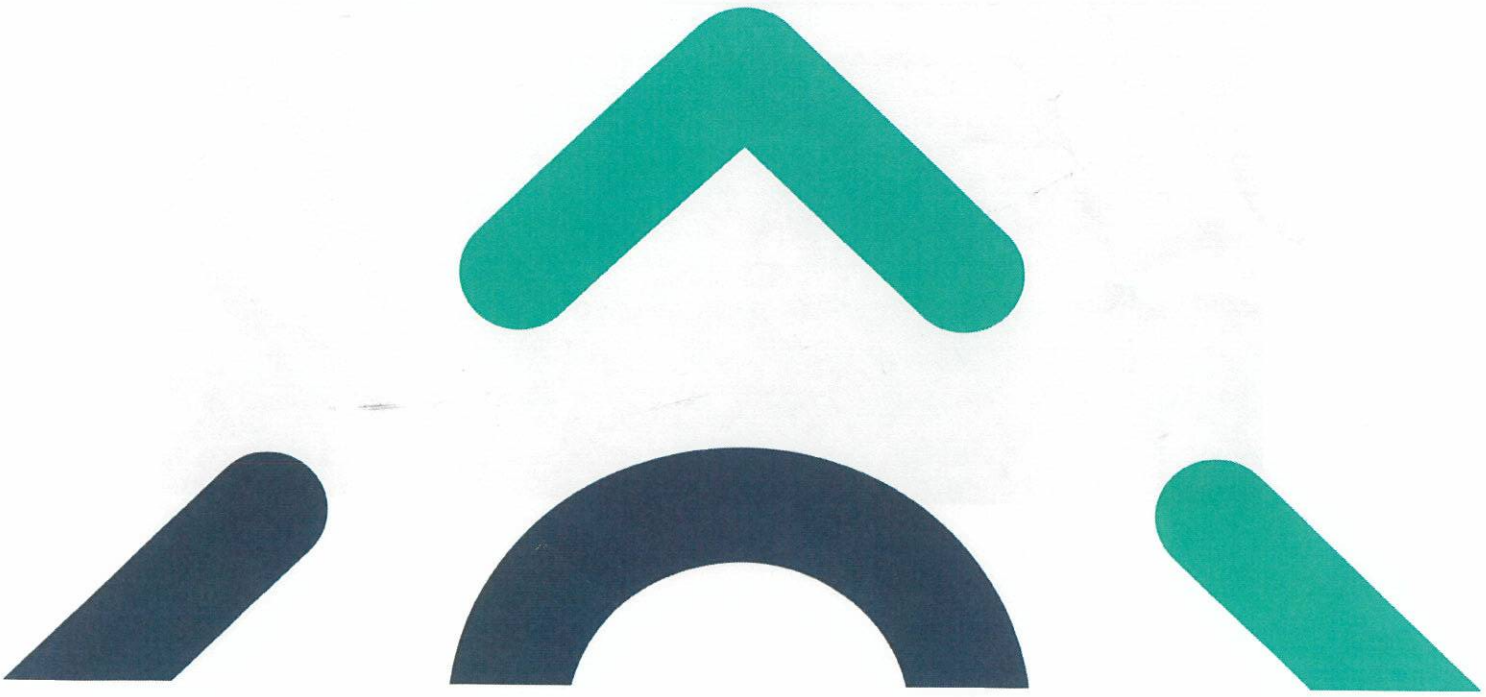
Response to DAU Submission

ABP-307939-20
Cleanrath Wind Farm, Co. Cork



DOCUMENT DETAILS

Client:	**Cleanrath Wind Farm Ltd.**
Project Title:	**Response to DAU Submission**
Project Number:	**191223-a**
Document Title:	**Pl Ref.ABP-307939-20 – Response to DAU Submission**
Document File Name:	**190301-d RDAU 2021.01.15 – F**
Prepared By:	**MKO** **Tuam Road** **Galway** **Ireland** **H91 VW84**

Planning and Environmental Consultants

Rev	Status	Date	Author(s)	Approved By
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2. RESPONSE TO SUBMISSION

2.1 White-tailed Eagle

The DAU Submission states the following:

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> a) *Annual and adaptive monitoring for use of Lough Allua and the wind farm area by white-tailed sea eagle will be undertaken by a competent qualified ornithologist. This monitoring will be undertaken over a sufficient observation period, and at suitable vantage points, which allow detection of roosting or overflying eagles, based on best practise. The monitoring will be carried out at the time of the year when eagle use of the area is most likely, depending on the data available from breeding or roosting eagles in the region, or on the basis of reliable reports of roosting eagles in the vicinity of the wind farm. Monitoring will be coordinated with similar monitoring being carried out at other wind farms in the region (Cork/Kerry border). The results of eagle monitoring will be reported to regional staff of the National Parks and Wildlife Service (NPWS).*
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It is noted in the DAU submission that white tailed sea eagle is only establishing itself in Ireland following reintroduction and the suggested conditions are designed specifically to prevent any potential future impacts that may arise should the species, for which no significant effect is currently identified, establish itself in the area. It should be noted that the assessment of potential impacts on white tailed eagle that is presented in the EIAR and rEIAR is based on a comprehensive suite of bird surveys that were undertaken in strict accordance with the most relevant guidelines (SNH 2017) and over a long time period (February 2015 and March 2017, June 2018 to August 2018 and January to May 2020). The suite of surveys undertaken is fully described in Section 7.6.7 of the EIAR and rEIAR. It should be further noted that post construction surveys of the wind farm have been continued since May 2020 and are currently ongoing. These surveys are being undertaken in accordance with the same relevant guidance (SNH 2009 & 2017 as set out in Section 7.13.2 of the EIAR and rEIAR). These surveys include the following:

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- Targeted bird collision surveys (corpse searches) being undertaken with training dogs. The surveys included detection and scavenger trials, to correct for these two biases and ensure the resulting data is robust.

White tailed eagle has not been recorded at the Cleanrath Wind Farm during any of the surveys undertaken either pre or post-construction. The one observation of the species was on the 5th March 2020 and was located around 7km south west of the wind farm site. There have been no other records of the

species during any of the surveys undertaken either pre-construction or post construction up to the current date. As such, the finding of the impact assessment as presented in the EIAR and rEIAR was based on adequate survey data, followed the most appropriate and relevant impact assessment guidelines and remains valid and correct.

Notwithstanding the above, the concerns raised by the DAU with regard to potential colonisation of the area by white tailed eagles in the future are recognised and the imposition of the conditions as suggested could be facilitated. The following sections of this report describe how they could be implemented. It is noted that a comprehensive monitoring programme is set out in Appendix 7-6 of the EIAR and rEIAR and is already proposed and underway. The surveys that are currently being undertaken are described above and listed in Section 7.13.2 of the EIAR and rEIAR.

2.1.1 Proposed Condition a) Annual and Adaptive Monitoring

This section first describes the post construction and operational monitoring that will be undertaken on the Cleanrath Wind Farm Site (and is currently proposed/ongoing). It then describes the additional surveys and monitoring that could be undertaken at Lough Allua or any other suitable eagle habitat in the vicinity, should activity/potential effects be predicted following monitoring at the wind farm site.

2.1.1.1 Proposed and ongoing monitoring at the Cleanrath Wind Farm Site

In line with best practise (SNH, 2009) monitoring has been and will be undertaken in Year 1, 2, 3, 5, 10 and 15 of the life-time of the wind farm. As presented, in Appendix 7-6 of the EIAR and rEIAR, a detailed post-construction Bird Monitoring Programme was prepared for the operational phase of the Cleanrath Wind Farm development. As per Section 7.13.2 of the EIAR and rEIAR, surveys commenced in January 2020 of Operational Year 1 and are ongoing. Whilst, this survey schedule has been designed in accordance with the most relevant guidance (SNH 2009), the suite of proposed surveys that are specifically relevant to white tailed eagle (as listed in table 2.1 below) could be amended so that they are undertaken on an annual basis throughout the lifetime of the wind farm if required. However, a more effective and appropriate course of action may be to amend or adapt the survey effort throughout the lifetime of the wind farm, taking into account the level of eagle activity recorded and through ongoing consultation with the NPWS, Local Authority or other relevant stakeholders. The first review of the survey scope could be undertaken after year five.

In line with the DAU submission these surveys will be undertaken from suitable vantage points monthly, as in the south-west of Ireland this species could potentially occur throughout the year. As stated in the DAU submission:

> *This monitoring will be undertaken over a sufficient observation period, and at suitable vantage points, which allow detection of roosting or overflying eagles, based on best practise. The monitoring will be carried out at the time of the year when eagle use of the area is most likely.*

The sufficiency of vantage points was confirmed by undertaking a view shed analysis, as provided in Figures 7-2, 7-2-1, 7-2-2 and 7-2-3 in the EIAR and rEIAR.

Table 2.1. below describes the bird monitoring work schedule, which is specifically relevant to white tailed eagle for each monitoring year for the Cleanrath Wind Farm development, as per Appendix 7-6 of the EIAR and rEIAR. It is noted that the proposed surveys will be undertaken throughout the entire year. The below survey schedule is the minimum survey effort proposed. The survey schedule will be adapted as necessary based on the results of the surveys, additional information that may become available on all bird species from the NPWS, the Local Authority or any other relevant data source. The Wind Farm Operator will actively seek additional information on bird activity and the results of monitoring that is ongoing in the area and will submit all monitoring data to the NPWS on an annual basis if required. If possible, following consultation with the aforementioned bodies (or any others), surveys will be designed to co-ordinate with or compliment other monitoring surveys that are currently being undertaken, with

results being appropriately and confidentially shared for the benefit of monitoring and protecting the population of white-tailed eagle and other bird species in south west Ireland.

Table 2.1. Bird monitoring work schedule for each operational monitoring year at the Cleanrath Wind Farm

Survey Type	Phase	Period	No. of Visits	Survey Method
Vantage Point Surveys	Year 1, 2, 3, 5, 10 and 15	January - December	1 visits/ VP / month for each monitoring year	Two fixed, 6-hour, Vantage Point Surveys
Corpse Searches (Bird Casualties)	Year 1, 2, 3, 5, 10 and 15	January - December	1 visit/month for each monitoring year	Targeted corpse searches at turbine bases

2.1.1.2 Potential Additional Surveys at Lough Allua or other suitable habitat

If required by the Board, the surveys of Lough Allua or other suitable habitat could be undertaken annually on a precautionary basis, and adapted as necessary throughout the lifetime of the wind farm.

However, a more effective and appropriate approach would, in our opinion, be to design any surveys of Lough Allua or other suitable habitat, based on the results of the operational surveys undertaken at the wind farm site. In the event that there is a future increase in the occurrence of white-tailed eagle identified either following the programme of monitoring described above (Section 2.1.1.1) or as a result of additional information from other sources including the NPWS, the Local Authority or any other relevant data source, this may trigger the requirement for additional adaptive surveys at Lough Allua. The survey effort would be amended or adapted following the continued analysis of the results throughout the lifetime of the wind farm, taking into account the level of eagle activity recorded and through ongoing consultation with the NPWS, Local Authority or other relevant stakeholders.

If required, it is proposed to undertake species specific surveys of suitable habitat such as Lough Allua for white-tailed eagle. In line with the DAU submission these surveys would be undertaken monthly, as in the south-west of Ireland this species could potentially occur throughout the year.

To undertake the survey, strategic locations overlooking suitable breeding or roosting habitat will be selected at each location. Surveys will be undertaken monthly during monitoring years from vantage points that ensure comprehensive coverage of the targeted area, e.g. Lough Allua. The siting of each vantage point would be confirmed with a 'recce' visit to ground truth the suitability of each location. Survey methodology will be based on Hardey et al. (2013). Six-hour watches would be undertaken monthly from each vantage point, as per Table 2.2. Breeding season surveys would be undertaken during daylight hours. Whereas winter season surveys would overlap with dawn/dusk to ensure any roost sites are identified. The survey scope may be adapted based on the results of the initial surveys. The Wind Farm Operator will submit all monitoring data to the NPWS on an annual basis if required.

Table 2.2. Bird monitoring work schedule for each operational monitoring year at Lough Allua

Survey Type	Phase	Period	No. of Visits	Survey Method
White-tailed Eagle Surveys	As required during the operational phase	January - December	1 visits/ VP / month for each monitoring year	Vantage Point Surveys, 6-hour, Hardey et al., (2013)

2.1.2 Proposed Condition b) Precautionary Management Plan

Proposed Condition b) in the DAU submission requires a precautionary management plan to be drawn up for eagle protection. This condition requires a precautionary management plan to be drawn up for eagle protection. This condition includes two parts.

2.1.2.1 Part (i) Management of Fallen Animal Carcasses

The DAU proposed Condition B, Part (i) identifies the potential that if white-tailed eagle were to re-establish themselves locally, fallen animal carcasses within the Cleanrath wind farm development could attract eagles to the wind farm. Eagles attracted to the wind farm could be at increased risk of colliding with operating turbines. Condition b) Part (i) of the DAU submission requires:

> *Managing, insofar as feasible, fallen animal carcasses within the wind farm area so that they do not attract eagles into the wind farm.*

Whilst there have been no records of white-tailed eagle on the wind farm site during the comprehensive suite of surveys undertaken and only one record greater than 7km from the site, this condition is designed to make the wind farm site less attractive to eagles, should at some time in the future, the species establish itself in the area. Cleanrath Wind Farm Ltd. would, if conditioned to do so, adopt the following protocol for the management and removal of carcasses within the wind farm site or any alternative protocol such as might be conditioned.

It is noted that sheep are the most likely fallen animal carcass species to be encountered within Cleanrath wind farm development. As is typical in the uplands of Ireland the stocking densities of sheep are low. In the absence of a practise of carcass removal it is not expected that a high density of carcasses would be encountered annually within the Cleanrath wind farm development. Notwithstanding this, to ensure that white-tailed eagles are not attracted to the Cleanrath Wind Farm site, fallen animal carcasses will be removed.

While onsite undertaking routine maintenance works, the site manager will be responsible for identifying and arranging removal of carcasses from the Cleanrath Wind Farm site. Furthermore, the bird surveyors that will be present onsite undertaking operational monitoring and local farmers will be instructed to report all observations of carcasses to the site manager to arrange for removal.

The proposed protocol to be undertaken by the site manager to ensure that the wind farm site is kept free from carcasses and that the potential for eagles to be drawn into the site is minimised is described below:

- Surveys of the wind farm site for carcasses will be undertaken on a monthly basis at a minimum throughout the lifetime of the wind farm.
- The site manager will walk/ drive transects of the entire wind farm site including all areas between turbines and to a buffer of a minimum of 100m outside the outermost turbines.
- Site managers will be trained in the survey methodology, which will include not only the search for fallen animals by sight but also the identification of signs that a carcass may be present but obscured from view. Such signs may include trails of wool/fur or congregations of scavenging species such as hooded crows or ravens.
- In addition, the survey will be supplemented by a drone flight with associated high quality imagery, which would assist in surveying concealed areas of the site.
- A log will be kept of the number of carcasses recorded and removed annually. This will be reported to the NPWS following each year if required.

2.1.2.2 Part (ii) Protocol for Reducing Collision Risk

The DAU proposed Condition B, Part (ii) requires:

In the event of regular eagle occurrence in the immediate area of the wind farm, the management plan will have an effect protocol for reducing risk of collision with turbine blades.

As previously discussed, currently no collisions of white-tailed eagle are predicted to occur at the Cleanrath wind farm development as there have been no records of the species at the site (or within 7km of it) during the extensive suite of surveys that were undertaken and are currently ongoing. The protocol set out below does not invalidate the conclusion of the evaluation that is presented in Section 7.6.7 of the EIAR and rEIAR. It follows a highly precautionary approach and proposes mitigation in response to an impact on a species that has not been identified on the site and guards against any potential future impact on that species. Cleanrath Wind Farm will undertake the protocol that is described below if conditioned to do so.

Following each monitoring year, a collision risk analysis will be undertaken for white-tailed eagle following the procedure outlined in Section 7.2.5.5 of the EIAR and rEIAR. As detailed in Table 2.1 above, it is proposed to undertake vantage point surveys January to December during each monitoring year. Vantage point surveys will be undertaken in accordance with SNH guidance (SNH 2017). Vantage point surveys are designed to quantify the level of flight activity and its distribution over the survey area. The primary purpose of the survey is to provide data to inform the collision risk model, which makes predictions of mortality, from collisions with turbines.

The results of the collision risk analysis will be used to assess whether collision risk is predicted to be significant for white-tailed eagle. If a significant effect is identified curtailment of the relevant turbine(s) will apply. The results of surveys will inform the programme of curtailment. For example, if regular white-tailed eagle flight paths are identified, curtailment need only apply to the turbine(s) that are sited in these areas. Curtailment will continue until it can be demonstrated that the risk of a collision has been reduced to avoid any significant effect on the species.

An assessment of the significance of any predicted collision will be undertaken following a highly precautionary approach, whereby a population viability analysis of the introduced species in the area will be used in conjunction with the collision risk model. The population viability analysis will be undertaken on each survey year and will use the latest information on the species, as gained from the site surveys and any other relevant data source. The assessment of significance will be undertaken in the context of any ongoing changes to the status of the introduced population.

It is noted that over the course of the lifetime of the wind farm, other measures to reduce the risk of collision with turbine blades may present themselves. Such future measures will be considered and implemented if relevant.

2.1.3 Reporting

A report summarising the findings of all the bird monitoring surveys will be submitted to the Planning Authority and NPWS within three months of each monitoring year.

Maps outlining flight lines of key target species will be produced using GIS software applications to accompany the final report at the end of each monitoring year.

2.2 Leisler's bat

The DAU Submission in relation to Leisler's bat is provided below

According to the EIAR there is significant use of the wind-farm site by Leisler's bat, with one fatality recorded during monitoring to date (pp. 6-65 – 6-66). Leisler's bat is particularly susceptible to turbine blade collisions, and, like all bat species, is listed on Annex IV of the EU Habitats Directive as a species requiring strict protection. If not already conditioned, the monitoring of bat fatalities by trained dog(s) should continue throughout the life-time of the operational wind farm.

As discussed in Appendix 6-4 and Section 6.6.2.1.2 of the EIAR and rEIAR, corpse searching surveys have been conducted monthly since January 2020. This is being undertaken using both hand searching and using a trained search dog to detect any potential bat fatalities. In addition, surveying of the wind farm continued in autumn of 2020.

Following the precautionary principle and in accordance with the SNH (2019) guidelines, any future full operation of the wind farm will be the subject of ongoing monitoring as described Appendix 6-4 of the EIAR and rEIAR. In the event that the monitoring identifies a significant effect on any bat species including Leisler's bat (or any other bat species), these effects will be mitigated as per Section 6.11.3 of the EIAR and rEIAR. SNH Guidance requires at least 3 years of post-construction monitoring to assess the effects of construction related habitat modification on bat activity and this will be undertaken. In addition, carcass searches for collision fatalities will be also undertaken in Year 5, 10 and 15 of the lifetime of the wind farm.

REFERENCES

Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. & Thompson, D. (2013). *Raptors: a field guide to survey and monitoring (3rd Edition).* The Stationery Office, Edinburgh.

Percival, S.M. (2003). *Birds and wind farms in Ireland: A review of potential issues and impact assessment.* Ecological Consulting.

Scottish Natural Heritage (SNH) (2009). Monitoring the impact of onshore wind farms on birds. Scottish Natural Heritage.

SNH (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. Scottish Natural Heritage.

SNH (2019) '*Bats and onshore wind turbines: survey, Assessment and mitigation*'