



APPENDIX 7-8

DAU RESPONSE

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DAU Response



Your Ref: Seven Hills Wind Farm
Our Ref: **G Pre00159/2020**
(Please quote in all related correspondence)

23 September 2020

David Naughton
MKO
Tuam Road
Galway
H91 VW84
Via email

Re: Preparing an Environmental Impact Assessment Report Statement (EIAR) for the proposed Seven Hills Wind Farm Development at in Cuilleenoolagh and adjacent townlands in Co. Roscommon. The site is located both northeast and southeast of the village of Dysart, approximately 1.5 kilometres away at its closest point and approximately 11 kilometres northwest/west of the town of Athlone, Co. Roscommon.

A chara

I refer to correspondence to the Department of Culture, Heritage and the Gaeltacht on (DATE) received in connection with the above.

Outlined below are heritage-related observations/recommendations of the Department under the stated heading(s).

Nature Conservation

The Department refers to your email dated 17th August 2020 and your request for observations on the preparation of the EIAR for the proposed Seven Hills Wind Farm, near Dysart, Co. Roscommon, on behalf of Gaeltech Energy Developments Ltd. And Energia Renewables Ltd.

This submission is made in the context of this Department's role in relation to nature conservation. The observations have been divided into:

1. Matters relating to the EIAR.
2. Matters relating to Appropriate Assessment.
3. Comments relating to the sites in question.

They are intended to assist you in relation to identifying potential impacts on European sites, other nature conservation sites, and biodiversity and environmental protection in general, in the context of the current proposal. Data collected and surveys carried out in connection with this proposed development may raise other issues that have not been considered here. The



observations are not exhaustive and are made without prejudice to any recommendation that may be made by this Department in the future. The Department notes that McCarthy Keville O'Sullivan Ltd. (MKO) have stated that the finalised layouts may be subject to amendment therefore the Department's comments should be viewed in the context of the information provided in the EIAR scoping report and the two map layouts supplied, Layout A and B. The Department reserves the right to comment further should there be significant amendments to the proposed layout.

The National Parks and Wildlife Service website has recently been updated and should be consulted with regard to the impact of planning and development on nature conservation. The following link gives extensive details on the standards and content NPWS expect from applications: <https://www.npws.ie/development%20consultations>.

1. Matters relating to the Environmental Impact Assessment Report (EIAR):

Ecological survey

With regard to scoping for an EIAR for a proposed development, in order to assess impacts on biodiversity, fauna, flora and habitats an ecological survey should be carried out of the proposed development site including the route of any access roads, pipelines or cables, connections to the grid etc. to survey the habitats and species present. Any improvement or reinforcement works required for access and transport anywhere along any proposed haul route(s) should be included in the EIAR and subjected to ecological impact assessment with the inclusion of mitigation measures, as appropriate. Where bridges require strengthening this may involve grouting of crevices which may function as bat roosts. Where ex-situ impacts are possible, survey work may be required, outside of the development sites. Such surveys should be carried out by suitably qualified persons at an appropriate time of the year, depending on the species being surveyed for. The EIAR should include the results of the surveys and detail the survey methodology and timing of such surveys including consistency in terms of timed vantage point surveys. It is expected by this Department that best practice will be adhered to with regard to survey methodology and if necessary non Irish methodology adapted for the Irish situation, noting specific gaps in relation to species and age of the data outlined in some guidance documents. The EIAR should cover the whole project, including construction, operation and, if applicable, restoration or decommissioning phases. Alternatives examined should also be included in the EIAR. Inland Fisheries Ireland should be consulted with regard to fish species, if applicable. For information on Geological and Geomorphological sites, the Geological Survey of Ireland, should be consulted.

Specific reference should be made to the National Biodiversity Action Plan. Any losses of biodiversity habitat associated with this proposed development (including access roads and cabling etc.) such as woodland, scrub, hedgerows and other habitats should be mitigated for. In addition, Annex 1 habitats which occur outside the Natura 2000 network are also important in terms of biodiversity conservation. The presence of any Annex I habitats outside the network should be given due consideration as part of the consideration of biodiversity



matters generally for the proposed development. The loss of Annex 1 habitats outside SACs should be avoided wherever possible.

In order to assess impacts it may be necessary to obtain hydrological and/or geological data. Any impact on water table levels or groundwater flows may impact on wetland sites some distance away. The EIAR should assess cumulative impacts with other plans or projects, if applicable. Where negative impacts are identified suitable mitigation measures should be detailed as appropriate.

Hedgerows and related habitats

Hedgerows and uncultivated vegetation should be maintained where possible, as they form wildlife corridors and provide areas for birds to nest in; hedgerow trees provide a habitat for woodland flora, roosting places for bats and Badger setts may also be present. The EIAR should provide an estimate of the length/area of any hedgerow/uncultivated vegetation that will be removed. Where it is proposed that trees or hedgerows and uncultivated vegetation will be removed there should be suitable planting of native species in mitigation incorporated into the EIAR. Where possible, hedgerows, uncultivated vegetation and trees should not be removed during the nesting season (i.e. March 1st to August 31st), noting the protection afforded under the Wildlife Act 1976-2018.

Watercourses and wetlands

Wetlands are important areas for biodiversity and ground and surface water quality should be protected during construction and operation of the proposed development. The EIAR should include a detailed assessment of the hydrological impacts on wetlands from the proposed development. Any watercourse or wetland which may be impacted on should be surveyed for the presence of protected species and species listed on Annexes II and IV of the Habitats Directive. For example, these species could include otters (*Lutra lutra*) which are protected under the Wildlife Acts and listed on Annexes II and IV of the Habitats Directive, salmon (*Salmo salar*) and Lamprey (three species in Ireland) listed on Annex II of the Habitats Directive, Freshwater Pearl Mussels (*Margaritifera* species) and White-clawed Crayfish (*Austropotamobius pallipes*) which are both protected under the Wildlife Act and listed on Annex II of the Habitats Directive, Frogs (*Rana temporaria*) and Newts (*Triturus vulgaris*) protected under the Wildlife Acts and Kingfishers (*Alcedo atthis*) protected under the Wildlife Acts and listed on Annex I of the Birds Directive (Council Directive 79/409 EEC).

One of the main threats identified in the threat response plan for otter is habitat destruction (see https://www.npws.ie/sites/default/files/publications/pdf/2009_Otter_TRP.pdf). A 10m riparian buffer on both banks of a waterway is considered to comprise part of the otter habitat. Therefore any proposed development should be located at least 10m away from a waterway and should consider movements between waterways and waterbodies by otters.

Flood plains



Flood plains, if present, should be identified in the EIAR and left undeveloped to allow for the protection of these valuable habitats and provide areas for flood water retention (green infrastructure). If applicable the EIAR should take account of the guidelines for Planning Authorities entitled "*The Planning System and Flood Risk Management*" published by the Department of the Environment, Heritage and Local Government In November 2009.

Bats

Bat roosts may be present in trees, buildings and bridges. All bat species are strictly protected under EC (Birds and Natural Habitats) Regulations, 2011 and listed on Annex IV of Habitats Directive. Bat roosts can only be disturbed and/or destroyed under licence issued under the Wildlife Act and a derogation under the EC (Birds and Natural Habitats) Regulations, 2011. An assessment of the impact of the proposed wind farm on bat species should be carried out noting recent guidance available, "*Bat and Onshore Wind Turbines: Survey, Assessment and Mitigation, 2019*" published jointly by Scottish Natural Heritage and Bat Conservation Trust and other stakeholders. The Department would like to highlight new survey research on patterns of bat activity in upland wind farms¹ which indicates it is more appropriate to use 30 day survey periods with static automated detectors, in each season, and in different weather conditions to reduce sampling bias and to accurately determine when the curtailment mitigation is required during the operational phase. This survey should include use of detectors at different heights. Any proposed migratory bat friendly lighting should be proven to be effective and follow up to date guidance.

Alien invasive species

The EIAR should also address the issue of invasive alien plant and animal species such as Japanese Knotweed or Crayfish plague, and detail the methods required to ensure they are not accidentally introduced or spread during survey and or construction. Information on alien Invasive species In Ireland can be found at <http://invasives.biodiversityireland.ie/> and at <http://invasivespeciesireland.com/>.

Bird surveys

Survey methodologies should follow best practice and if necessary be modified to reflect the Irish situation. Two full years of bird surveys is normally considered to be necessary. When survey results are being presented in an EIAR it is important that best practice is followed and that the full survey methodologies used, are detailed, including dates and times. Furthermore, it is expected that bird survey data should be presented in context and records should be supported by basic environmental data such as hourly estimates of visibility, glare arc's, cloud cover and precipitation during vantage point and walk over survey periods. Results for species need to be referenced back to the overall populations and their dynamics as, in some cases even a small risk to a population of a species could be considered significant. It is important that bird migration routes (day and night) are assessed as well as the flight lines (day and night) of bird species travelling between roosting and feeding areas. Limitations in guidance documentation, used in the analysis and discussion of results from

¹ <https://cieem.net/resource/cieem-webinar-patterns-of-bat-activity-at-upland-windfarms-implications-for-sampling-and-mitigation/>



any bird surveys, should be acknowledged, e.g. species that are covered by the guidance, data gaps and application to the Irish environment.

Impact assessment

The impact of the proposed development on the flora/ fauna and habitats present should be assessed with particular regard to:

Natura 2000 sites, i.e.:

- Special Areas of Conservation (SAC) designated under the EC Habitats Directive (Council Directive 92/43/EEC).
- Special Protection Areas (SPA) designated under the EC Birds Directive (Directive 2009/147 EC).

Other designated sites, or sites proposed for designation such as:

- Natural Heritage Areas.
- Proposed Natural Heritage Areas.
- Nature Reserves.
- Refuges for Fauna or Flora designated under the Wildlife Acts 1976 to 2012.
- Species protected under the Wildlife Acts including protected flora.

'Protected species and natural habitats', as defined in the Environmental Liability Directive (2004/35/EC) and European Communities (Environmental Liability) Regulations, 2008 including:

- Birds Directive - Annex I species and other regularly occurring migratory species, and their habitats (wherever they occur).
- Habitats Directive - Annex I habitats, Annex II species and their habitats.
- Annex IV species and their breeding sites and resting places (wherever they occur).
- important bird areas such as those identified by Birdlife International, features of the landscape which are of major importance for wild flora and fauna, such as those with a "stepping stone" and ecological corridors function, as referenced in Article 10 of the Habitats Directive.
- Other habitats of ecological value in a national to local context (such as those identified as locally important biodiversity areas within Local Biodiversity Action Plans and County Development Plans).
- Red data book species.
- Biodiversity in general.

Complete project details including Construction Management Plans (CMPs) need to be provided in order to allow an adequate EIAR and appropriate assessment to be undertaken. Applicants need to be able to demonstrate that CMPs and other such plans are adequate, mitigation is effective and supported by scientific information and analysis and that they are feasible within the physical constraints of the site. The positions, locations and sizes of construction infrastructure and mitigation such as settlement ponds, disposal sites and construction compounds may significantly affect European and other designated sites, habitats and species in their own right and could have an effect for example on drainage,



water quality, habitat loss, and disturbance. If these are undetermined at time of the assessment all potential effects of the development on the site are not being considered.

Construction Management Plans

Construction Management Plans should contain sufficient detail to avoid any post construction doubt with regard to the implementation of mitigation measures, timings and roles and responsibilities for same. There can be no doubts or lacunae regarding what is required for mitigation, pre-commencement surveys and or licencing requirements.

Construction work should not be allowed to impact on water quality and measures should be detailed in the EIAR to prevent sediment and/or fuel runoff from getting into watercourses which could adversely impact on aquatic species. See EIAR; Flood Plains for details with regard to flooding risk.

Inland Fisheries Ireland (IFI) should be consulted with regard to impacts on fish species and the applicant may find it useful to consult their publication entitled "Planning for watercourses in the urban environment" which can be downloaded from their web site.

If applicants are not in a position to state the exact location and details of cable routes at the time of application, then they need to consider the range of options that may be used within their assessment. Should the exact height and rotor diameter of the turbines not be known at EIAR stage then the assessment of impacts must be applicable to a variety of turbine heights and rotor diameters which could be used. This should be made clear in the EIAR.

It is important to note that unless post decision consultation with NPWS is specifically stated as a condition of planning, NPWS has no post consent role. However, regional staff are available for liaison regarding any associated licencing requirements and or new information arising for specific species of concern.

Cumulative and ex situ impacts

A rule of thumb often used is to include all European sites within a distance of 15km. It should be noted however that this will not always be appropriate. In some instances where there are hydrological connections a whole river catchment or a groundwater aquifer may need to be included. Similarly where bird flight paths are involved the impact may be on an SPA more than 15 kilometres away.

Other relevant Local Authorities should be consulted to determine if there are any projects or plans which, in combination with this proposed development, could impact on any European sites.

Post construction monitoring

This Department recognises the importance of pre and post construction monitoring, such as recommended in Drewitt et al. (2006), and Bat Conservation Ireland (2012). The applicant



should not use any proposed post construction monitoring as mitigation to supplement inadequate information in the assessment. Please refer to Circular Letter PD 2/07 and NPWS 1/07 on this issue. This can be downloaded from the Department's website <https://www.npws.ie/development-consultations>.

The EIAR process should identify any pre and post construction monitoring which should be carried out. The post construction monitoring should include bird and bat strikes/fatalities including the impact on any such results of the removal of carcasses by scavengers. Monitoring results should be made available to the competent authority and copied to this Department. A plan of action needs to be agreed at planning stage with the Planning Authority if the results in future show a significant mortality of birds and/or bat species. It is important to note again that unless post decision consultation with NPWS is specifically stated as a condition of planning, NPWS has no post consent role. However, regional staff are available for liaison regarding any associated licencing requirements and or new information arising for specific species of concern.

Note: any significant change to mitigation may require amendment and where a licence has expired; there will be a need for new licence applications for protected species.

Licenses

Where there are impacts on protected species and their habitats, resting or breeding places, licenses may be required under the Wildlife Act 1976-2018 or derogations under the EC (Birds and Natural Habitats) Regulations 2011, as amended. In particular, bats and otters are **strictly** protected under Annex IV of the Habitats Directive. A copy of Circular Letter NPWS 2/07 entitled "*Guidance on Compliance with Regulation 23 of the Habitats Regulations 1997 – strict protection of certain species/applications for derogation licences*" can be found on the Departmental web site at www.npws.ie/sites/default/files/general/circular-npws-02-07.pdf.

It should be noted that the Regulations of 1997 have since been superseded by the European Communities (Birds and Natural Habitats) Regulations 2011, as amended. Part 6 of those Regulations is now the relevant section dealing with the protection of flora and fauna. Reference to Regulation 23 in the circular letter should be taken to mean Regulation 51 in the current Regulations.

In addition, the EIAR should take account of species protected under sections 21, 22 and 23 of the Wildlife Acts if there are any impacts on other protected species or their resting or breeding places, such as on protected plants, badger setts or birds' nests. And will also need to be cognisant of article 5 (d) of the Birds Directive. For that reason uncultivated vegetation, including hedges and trees, should not be removed during the nesting season (i.e. March 1st to August 31st).

In order to apply for any such licenses or derogations as mentioned above the results of a survey should be submitted to the National Parks and Wildlife Service of this Department. Such surveys are to be carried out by appropriately qualified person/s at an appropriate time



of the year. Details of survey methodology should be provided. Should this survey work take place well before construction commences, it is recommended that an additional ecological survey of the development site should take place immediately prior to construction to ensure no significant change in the findings of the baseline ecological survey has occurred. If there has been any significant change mitigation, this may require amendment and where a licence has expired, there will be a need for new licence applications for the protected species.

Baseline data

Along with the standard NPWS data requests which is recommended, other sources of habitat and species information beyond those already identified include (but are not be limited to): the National Biodiversity Data Centre (www.biodiversityireland.ie), Inland Fisheries Ireland (www.fisheriesireland.ie), BirdWatch Ireland (www.birdwatchireland.ie), Irish Raptor Study Group, Golden Eagle Trust and Bat Conservation Ireland (www.batconservationireland.org). Data may also exist at a County level within the Planning Authority. Some guidance and reference documents are provided in the Appendix to this letter.

2. Matters relating to the Appropriate Assessment (AA):

In order to carry out the Appropriate Assessment screening, and/or prepare a Natura Impact Statement (NIS), information about the relevant European sites including their conservation objectives will need to be collected. Screening for appropriate assessment should focus on the likely significant effects of the proposed development and related activities on European sites noting that impacts to sites via air and water may occur over large distances. Details of designated sites and species and conservation objectives can be found on <http://www.npws.ie/>. Site-specific, as opposed to generic, conservation objectives are now available for many sites. Each conservation objective for a qualifying interest (QI) habitat or species is defined by a list of attributes and targets and is often supported by further documentation. Where these are not available for a site, an examination of the attributes that are used to define site-specific conservation objectives for the same QIs in other sites can be usefully used to ensure the full ecological implications of a proposal for a site's conservation objective and its integrity are assessed. It is advised, as per the notes and guidelines in the site-specific conservation objectives that any reports quoting conservation objectives should give the version number and date, so that it can be ensured and established that the most up-to-date versions including map boundaries² are used in the preparation of Natura Impact Statements and in undertaking appropriate assessments. In addition, the Article 12 and 17 reports under the Birds and Habitats Directives should be referenced <https://www.npws.ie/publications>.

The Departmental guidance document on Appropriate Assessment is available on the NPWS website at <https://www.npws.ie/development-consultations> and in EU Commission guidance entitled:

² <https://www.npws.ie/maps-and-data/designated-site-data>



- “Wind energy developments and Natura 2000”³
- "Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC"⁴;
- 2018 Commission notice "Managing Natura 2000 sites The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC"⁵

More recent CJEU and Irish case law has clarified some issues and should also be consulted.

3. Further to the above general comments please find below specific observations relating to the site in question:

The Department notes that the proposed development is in close proximity to a number of Natura 2000 sites, Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs). The Department is concerned that the proposed development may significantly affect the integrity of a number of European sites. These concerns relate to potential impacts upon bird species (e.g. Greenland white-front Geese), both within and outside of the SPAs as well as impacts on Annex I habitats outside the designated sites (e.g. calcareous grassland) that support Qualifying Interests (QI) for the sites (e.g. Turloughs), Specifically, the Department notes that Annex I semi-natural grassland habitats have been recorded within/adjacent to the two linked development sites. The Irish Semi Natural Grassland Survey, IWM 78⁶ dataset should be referenced and the habitat survey within the proposed development sites should include an assessment of Annex I habitats; noting the loss of Annex I habitats outside designated areas, as outlined already, should be avoided wherever possible.

The Department highlights that the topography of the two linked development sites and potential constraints regarding the selection of vantage points, for ornithological surveys. Notwithstanding the above, the vantage point surveys should be undertaken in a manner that ensures sufficient data is collected to allow an assessment of the importance of all the flight paths into, out of and between sites.

Consequently, the Department recommends that technological solutions (e.g. Radar, telemetry based tracking studies) are considered in conjunction with VPs surveys to ensure

³ https://ec.europa.eu/environment/nature/natura2000/management/docs/Wind_farms.pdf

⁴

http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf

⁵

https://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_6_nov_2018_en.pdf

⁶ O’Neill, F.H., Martin, J.R., Devaney, F.M. & Perrin, P.M. (2013) The Irish semi-natural grasslands survey 2007-2012. Irish Wildlife Manuals, No. 78. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Ireland.



sufficient data is compiled for assessment. This is because an appropriate assessment must contain complete, precise and definitive findings and conclusions with regard to the implications of a proposal for the conservation objectives and integrity of a European site(s). Furthermore, surveys should be designed to also include an assessment of improved agricultural lands. These types of intensified landscape features have the potential to provide feeding habitat and attract wintering wildfowl species (e.g. whooper swan and GWF Goose).

The proposed development is located in a limestone / karst landscape with all of the complex hydrological features and characteristics. The Department recommends a detailed hydrological assessment is carried out in terms of the potential impacts arising from the proposed development on Natura 2000, NHAs and pNHAs within the zone of influence; noting that designated sites at some distance can be intrinsically linked and supported by the surrounding habitats (e.g. agricultural fields) and hydrological processes.

The Department advise that pre – consent ground investigations, data gathering infrastructure or testing that take place in a location that may affect an ecological feature (e.g. NHAs/ pNHA's and European sites SACs and SPAs), may require consent (i.e. are not exempted development) from the planning authority and or the Ministers consent from NPWS/ DHPLG.

Finally, the Department also highlights the following (non- exhaustive) specific sites and their Qualifying Interest (QI); Special Conservation Interest (SCI) that should be assessed in the Natura Impact Statement and considered in the EIAR:

Lough Croan Turlough SAC (000610) & SPA (004139):

- Turloughs [3180]
- Shoveler (*Anas clypeata*) [A056]
- Golden Plover (*Pluvialis apricaria*) [A140]
- Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]
- Wetland and Waterbirds [A999]

River Suck Callows NHA (000222) & SPA (004097):

- Whooper Swan (*Cygnus cygnus*) [A038]
- Wigeon (*Anas penelope*) [A050]
- Golden Plover (*Pluvialis apricaria*) [A140]
- Lapwing (*Vanellus vanellus*) [A142]
- Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]
- Wetland and Waterbirds [A999]
- Peatlands [4]



- Birds [12]

Killeglan Grassland SAC (002214):

- Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]

Four Roads Turlough SAC (001637) & SPA (004140):

- Turloughs [3180]
- Golden Plover (*Pluvialis apricaria*) [A140]
- Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]
- Wetland and Waterbirds [A999]

Ballynamona Bog and Corkip Lough SAC (002339):

- Turloughs [3180]
- Active raised bogs [7110]
- Degraded raised bogs still capable of natural regeneration [7120]
- Depressions on peat substrates of the *Rhynchosporion* [7150]
- Bog woodland [91D0]

Lough Ree SAC (000440) & SPA (004064)

Feacle Turlough pNHA (001634).

Appendix – Additional Guidance and References

1. The Departmental Wind Energy Planning Guidelines
2. Windfarms on Peatland (2008-2010) Mires and Peat volume 4.
3. Best Practice guidance for Habitat Survey and Mapping by George F Smith, Paul O'Donoghue, Katie O'Hora and Eamon Delaney, 2011. The Heritage Council.
4. Pearce-Higgins, James W., Stephen, Leigh, Langston, Rowena H. W., Bainbridge, Ian P. and Bullman. Rhys (2009). "The distribution of breeding birds around upland wind farms". *Journal of Applied Ecology*, 46, p1323-1331.
5. Johnson, Gregory D. and Arnett Edward 8. "A Bibliography of Bat Fatality Activity and Interactions with Wind Turbines" (June 2004 updated February 2010) Bat Conservation International.
6. Pearce-Higgins, James W., Stephen, Leigh, Douse, Andy, and Langston, Rowena H. W. (2012). "Greater impacts of wind farms on bird populations during construction than subsequent operation: results of a multisite and multi-species analysis". *Journal of Applied Ecology*. 49. p386-394.



7. Rodrigues, Let ai, (2014). "Guidelines for consideration of bats in wind farm projects". Eurobats Publication Series NO.6 UNEP and Eurobats.
8. The Departmental guidance document on Appropriate Assessment which is available on the NPWS web site at <https://www.npws.ie/protected-sites/guidance-appropriate-assessment-planning-authorities>
9. The EU Commission guidance entitled "Assessment of plans and projects significantly affecting Natura 2000 sites, Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC" which can be downloaded from http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm
10. Bat Conservation Ireland (2012) Wind Turbine/Wind Farm Development Bat Survey Guidelines. Version 2.8, December 2012.
11. Drewitt, Allan Land Longston Rowena H. W. (2006) "Assessing the impacts of wind farms on birds". Ibis 148. p29-42.
12. <https://cieem.net/resource/cieem-webinar-patterns-of-bat-activity-at-upland-windfarms-implications-for-sampling-and-mitigation/>
13. May R, Nygård T, Falkdalen U, Åström J, Hamre Ø, Stokke BG. Paint it black: Efficacy of increased wind turbine rotor blade visibility to reduce avian fatalities. Ecol Evol. 2020;00:1–9. <https://doi.org/10.1002/ece3.6592>

NPWS Circular Letters (available from www.npws.ie)

14. Circular Letter NPWS 2/07: *Guidance on Compliance with Regulation 23 of the Habitats Regulations 1997 – Strict Protection of Certain Species/Derogation Licences.*
(It should be noted however that the Regulations of 1997 have since been revoked and that Part 6 of the European Communities (Birds and Natural Habitats) Regulations 2011-2015 is now the relevant part dealing with the protection of flora and fauna. In particular reference to Regulation 23 in the circular letter should be taken to mean Regulation 51 in the current Regulations.)
15. Circular Letter PD 2/07 and NPWS 1/07: *Compliance Conditions in respect of Developments requiring (1) Environmental Impact Assessment (EIA); or (2) having potential impacts on Natura 2000 sites*
16. Circular NPWS 1/10 & PSSP 2/10: *Appropriate Assessment under Article 6 of the Habitats Directive: guidance for Planning Authorities*

You are requested to send further communications to the Development Applications Unit (DAU) manager.dau@chg.gov.ie, or to the following address:

The Manager
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Is mise, le meas

A handwritten signature in blue ink, appearing to read 'Connor Rooney', is written above a horizontal line.

Connor Rooney
Development Applications Unit
