



An
Coimisiún
Pleanála

**Specialist Report to
Inspector
(Appendix to main
report)
ABP-321454**

Development	Brittas wind farm: Proposed development of 10 Wind Turbines, 110kV Electrical Substation and ancillary development within the townlands of Brittas, Rossestown, Clobanna, Brownstown, Killeenleigh, Kilkillahara, Brittasroad, Coolgarrane, Athinid More, Cassestown, Laghtagalla, Farranreigh, Furze, Loughlahan, Ballygammane, County Tipperary.
Type of Application	Strategic Infrastructure Development (SID)
Topic:	Adequateness of information for Appropriate
Appropriate Assessment	Assessment and EIA- Biodiversity and
EIA: Biodiversity	Ornithology
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1.0 Introduction

1.1. Scope of Report

Case reference 321454 relates to a proposed wind farm, substation and associated grid infrastructure at Brittas County Tipperary. In a memo dated 10th September 2025, the Planning Inspector requested support from the Inspectorate Ecologists in relation to the Environmental Impact Assessment (EIA) for biodiversity and ornithology, and Appropriate Assessment (AA) in view of the following:

- highlight any significant inadequacies in the documentation submitted with the application having regard to the nature of the proposed development and context of the surrounding area.
- Review of the submitted NIS and supporting documentation.
- Review of relevant chapters of the EIAR.
- Consideration of relevant consultation submissions.
- Advice on conditions to be included to address any likely main effects (if necessary) or matters to be further examined

1.1.1. This report to the Inspector and available to the Commission is a written record of my review and examination of the adequateness of submitted information for the proposed wind farm and associated infrastructure in relation to biodiversity, ornithology and the requirements for AA (including screening). In my capacity as a Senior Ecologist with An Coimisiún Pleanála, I have the relevant expertise to provide a professional opinion as to the adequacy of the information for the Inspector and the Board to undertake Appropriate Assessment (AA) and Environmental Impact Assessment (EIA) of the proposed project.

1.1.2. In my review of the biodiversity and ornithology aspects of the Environmental Impact Assessment Report (EIAR), I focus my examination on adequateness of scientific information, adherence to best practice, and also consider key issues raised in submissions including impacts on birds, protected species including bats and impacts on terrestrial habitats.

- 1.1.3. In my review of the Natura Impact Statement (NIS), I focus my examination on the requirements for screening (stage 1 AA) for Appropriate Assessment (stage 2AA) in view of the conservation objectives of relevant European Sites and any relevant issues raised in submissions.
- 1.1.4. I have reviewed the scope of the proposed development as described in the EIAR and NIS and all aspects of the proposed development which consists of the construction of a 10 -turbine wind farm (Brittas Wind farm), 110kV substation, grid connections and ancillary works including turbine delivery route.
- 1.1.5. I have reviewed and examined the following documents including relevant appendices and figures (plans and particulars):
- Natura Impact Statement including AA Screening Report and associated appendices
 - EIAR Chapter 6 Biodiversity and associated appendices (6A-D)
 - EIAR Chapter 7 Ornithology and associated appendices (7A-I)
 - Other relevant EIAR Chapters: 8 Land and Soils, 9 Water, 17 Interactions, 18 Mitigation
 - Construction and environmental management plan (CEMP)
 - Applicants' response documents to submissions: September 2025
- 1.1.6. The documents have been reviewed with respect to the following current best practice guidance:
- CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine Version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester.
 - CIEEM (2019) Ecological Impact Assessment Checklist (as relevant to Irish legislation)
 - EPA (2022) Guidelines on the information to be contained in environmental impact assessment reports.
 - EC (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC

- EC (2021) Assessment of plans and projects in relation to Natura 2000 sites. Methodological guidance on Article 6(3) and 6(4) of the Habitats Directive 92/43/EC
- EC (2020) Guidance document on wind energy development and EU nature legislation

1.2. Submissions and observations

1.2.1. I have had regard to submissions and observations related to biodiversity and AA matters and summarise key issues raised below. I have also considered the response document prepared by the Applicant addressing third party submissions and observations (September 2025).

Prescribed bodies

1.2.2. No observations relating to nature conservation or fisheries were received from prescribed bodies.

1.2.3. I note that in a submission made by the Department of Housing, Local Government and Heritage via the Development Applications Unit (14th February 2025) was confined to Archaeology only.

Public submissions

1.2.4. Third party submissions on the proposed wind farm raise concerns regarding impacts on biodiversity including:

- Impacts on bird species including mute swan, whooper swan, peregrine falcon, owls, golden plover and lapwing
- Impacts on migratory routes of bird species, links to Cabragh wetlands
- survey effort for birds
- impacts on bats
- Impacts River Suir and aquatic ecology
- Impacts on otter
- Loss of hedgerow and woodland habitat
- Reference to ecology report prepared by Roger Goodwillie in 2021 (NIS prepared for a Tree Felling License TFL00087117)

- General concerns regarding the Habitats Directive and European Sites,
- Inadequate NIS

1.3. Expertise and technical content of Ecological Reports

- 1.3.1. The biodiversity and ornithology assessments of the EIAR and the Natura Impact Statement (NIS) were prepared by Ecologists from Woodrow Sustainable Solutions, part of the APEM Group (APEM Group Woodrow). EIAR Chapter 6 Biodiversity provides information on the Ecological team involved in the various surveys, their qualifications and competencies and specific roles in the various ecological assessments. The NIS also provides a statement of competence for Ecologists involved (NIS, section 1.7). I am satisfied that based on the information submitted all ecologists and surveyors have the necessary competencies (demonstrated) and experience to carry out the work undertaken.
- 1.3.2. I am satisfied that in general the scope, structure and content of the EIAR and the NIS has been prepared in accordance with good practice guidance as cited in the relevant documents. There have been some updates to guidance in the interim period since the planning application was submitted including an updated Collision Risk Model (CRM) published by Nature Scot (November 2024) however, the bird impact assessment was undertaken prior to the updated model and therefore was the appropriate model at the time. CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland have also been updated but I am satisfied that the approach is in accordance with the updated version (Version 1.3, updated September 2024). The National Parks and Wildlife Service (NPWS) of the Department of Housing, Local Government and Heritage (DHLGH) published guidance in July 2025 for applicants on applications for Regulation 54 derogations for Annex IV species i.e. species requiring strict protection in the context of Articles 12 and 16 of the EC Habitats Directive (including all bat species and otter).
- 1.3.3. Based on the documentation provided, I am satisfied that the scientific information on surveys, nature conservation sites, species, habitats and their ecological significance, is adequate and up to date and included desk study, habitat and flora survey, breeding bird and non-breeding bird survey on lands within the application

site and wider study area, terrestrial mammal surveys including bat surveys and aquatic surveys.

- 1.3.4. I note that a number of submissions raised issues in relation to survey effort for birds and bats. Having reviewed the methodology, I am satisfied that in general, the ecological surveys were undertaken in line with published good practice methods and at the optimum seasonal periods (over multi-annual period). Where any limitations on surveys were encountered or where the approach deviated from guidance, this is addressed by the applicant (see Section 3.4 Bats below). Therefore, I am satisfied that an adequate baseline for the impact appraisal as part of the EIAR and the NIS has been provided.

2.0 Consideration of the Likely Significant Effects on a European Site

2.1. Article 6(3) of the Habitats Directive

This section does not comprise the Appropriate Assessment but serves to assist the Inspector and the Commission in their assessment.

Appropriate Assessment is a focused assessment of the implications of a proposed development on Sites designated Special Areas of Conservation (SAC) and Special Protection Areas (SPA) under the EU Habitats and Birds Directives in view of conservation objectives set for such sites. The assessment should be focused on the qualifying interest features only i.e. the habitats and species for which the site is designated. Therefore, in response to a submission on possible deficiencies of the NIS, species and habitats other than those listed for the relevant European sites should not be considered in the NIS and there is no deficiency in this regard. Other protected species not listed for European Sites are considered in the EIAR.

2.2. Screening for Appropriate Assessment

- 2.2.1. The first test of Article 6(3) is to establish if the proposed development is directly connected with or necessary to the management of a European sites and where this is not the case, then whether the development (either alone or in combination with other plans and projects) could result in significant effects to a European site in view of the sites conservation objectives.

- 2.2.2. The project is not directly connected with, or necessary for the management of any European Site and consequently is subject to the Appropriate Assessment Screening process. This point is misinterpreted in third party observations. Where a project is connected with the management of site, for example undertaking works within a European site to benefit conservation objectives, such a project is not subject to the provisions of Article 6(3) and AA is not required.
- 2.2.3. No part of the proposed development is within a European site. The location of proposed development is characterised by modified habitats including improved agricultural grassland, hedgerows and treelines, mixed woodland and areas of areas of wet grassland. The main channel of upper reaches of the River Suir transects the site from north to south and influences the ecology of the site with wetland habitats including wet grassland habitat with areas of characterised as conforming to Annex I habitat Molinia meadows, poor fen and flush habitat and marsh habitats recorded in the northern part of the wind farm site and adjacent to the proposed substation. The grid connection to Thurles 110kV substation will be via an underground cable installed in local roads with two watercourse crossings of tributaries of the River Suir.
- 2.2.4. A description of the proposed development including the ecological baseline is presented in Section 3 of the NIS (November 2024). All aspects of the proposed development are described including turbine design and layout, internal site access tracks and roads, site access points, turbine delivery route, construction compounds, borrow pits and material storage areas, grid connection and infrastructure, substation, construction methodology, operation and maintenance, decommissioning and timing of works. A battery energy storage system (BESS), while not part of application is included in the overall description and is considered part of the project in addition to the rerouting of 38kV overhead powerline to accommodate the development.
- 2.2.5. Seven watercourse crossings are stated to be required for access roads and underground cables. Five of these are within the wind farm site with one crossing of the River Suir required via horizontal directional drilling (HDD) and a further two river crossings of tributaries of the River Suir for the offsite grid connection. There is an absence of detail on location of works areas for the HDD crossings in the NIS.

- 2.2.6. Stage 1 of the AA process under Article 6(3) is presented in Section 3 of the NIS and considers European sites within a possible zone of influence due to proximity and/or the existence of ecological connections between various aspects of the proposed development and sites designated as SAC or SPA.
- 2.2.7. The only European site which warranted further consideration at the screening stage is the Lower River Suir SAC which is located c. 5.5km terrestrially and 7.8km hydrologically via the main channel of the River Suir which traverses the wind farm site and tributaries crossed by the underground grid connection.
- 2.2.8. The nearest SPA to any aspect of the proposed development is Slievefelim to Silvermines Mountains SPA designated for hen harrier, which is over 18km west of the site. I am satisfied that given this distance which is outside of the documented core range estimated for this species, combined with desk study on hen harrier breeding and roost distribution within 10km grid square and field survey that the SPA and its QI species is outside of the ZOI of this proposed development.
- 2.2.9. No pathways for potentially significant effects on other European sites were identified. The likelihood of significant effects is excluded for the following European sites:
- Devilsbit Mountain SAC (000934) 11.5 km north-east of the site
 - Slievefelim to Silvermines Mountains SPA (Site Code 004165, designated for hen harrier) 18km West of the Site
- 2.2.10. The potential source impact mechanisms identified that could affect the Lower River Suir SAC include the following.
- Emissions to surface water that could undermine water quality
 - Disturbance: otter, fish species
 - Introduction of Invasive alien species which could undermine habitat quality
 - Cumulative effects with other plans and project
- 2.2.11. The screening stage presented in the NIS goes on to consider potential impact pathways in terms of QI habitats and species listed for the Lower River Suir that could be affected (NIS Table 5) namely (conservation objective included):

- Water courses of plain to montane levels with *the Ranunculion fluitantis* and *Callitriche/Batrachion* vegetation [3260] (maintain favourable conservation condition)
- *Austropotamobius pallipes* (white-clawed Crayfish) [1092] (maintain favourable conservation condition)
- *Petromyzon marinus* (sea lamprey) [1095]. *Lampetra planeri* (Brook Lamprey) [1096], *Lampetra fluviatilis* (river lamprey) [1099] (restore favourable conservation condition for all three species)
- *Salmo salar* (Atlantic salmon) [1106] (restore favourable conservation)
- *Alosa fallax fallax* (Twaité shad) [1103] (restore favourable conservation)
- *Lutra lutra* (otter) [1355] (maintain favourable conservation condition)

2.2.12. I am satisfied that based on the source, pathway receptor model, potential impacts on other QI habitats can be excluded due to distance and lack of meaningful ecological pathways.

2.2.13. The conservation objective to restore the favourable conservation condition for Freshwater Pearl Mussel applies to the Clodiagh [Portlaw] River and Clodiagh sub catchment only which are upstream of the main channel of the lower reaches of the Suir. I am satisfied that this QI can be excluded for further detailed assessment in line with the rationale presented in the NIS.

2.3. Screening recommendation

2.3.1. Having regard to the information presented in the AA Screening Report, including the nature, size and location of the proposed development, the various infrastructure elements and likely effects during all stages of the lifespan of the proposal, the source pathway receptor model and sensitivities of the ecological receptors, I consider that Appropriate Assessment is required in view of the potential for significant effects on the Lower River Suir SAC (002137). The likelihood of significant effects on other European sites can be excluded.

2.4. Adequacy of scientific information to inform the Appropriate Assessment

2.4.1. Having reviewed the NIS I am satisfied that it in general it provides adequate information in respect of the baseline conditions. Surveys confirmed that otter utilise the drains and river channel at the wind farm site and are also evident along

watercourse crossed by the grid connection. These animals are considered potentially part of the SAC otter population due to known ranges of male and female otter on lowland watercourses. Lamprey ammocoetes (unspecified species, Brook or River) were recorded in samples taken from Rossestown stream and while no crayfish were found, they are likely to occur further downstream in the River Suir (notwithstanding decreased population due to crayfish plague), similarly for fish species including salmon and twaite shad.

- 2.4.2. The NIS considers the risks of emissions to water, disturbance of species and Invasive alien species in view of the attributes and targets set for the conservation objectives for the QI features in line with the standard requirements to inform AA and mitigation measures have been designed around these risks.

Mitigation measures

- 2.4.3. As the entirety of the proposed development is outside of the SAC, measures are focused on the avoidance of source impacts. General good practice measures are proposed, and these will be incorporated into a construction environmental management plan (CMEP) along with any additional conditions that may be prescribed. An environmental manager and an Ecological Clerk of Works (ECoW) will be appointed to oversee the implementation of all measures.
- 2.4.4. Specific mitigation measures referred to in section 5.4.3 of the NIS which I consider standard effective environmental protection measures focused on pollution prevention, management of soils and sediments, hydrocarbons and construction compounds. Sediment barriers including silt fencing will be installed before the commencement of works. The use of triple layer silt fencing at areas of highest risk of surface water run-off is proposed which is a very high level of protection relevant to a sensitive watercourse but the locations of such defences will be determined by the environmental manager and ECoW. I refer the Inspector and the Commission to EIAR Chapter 9 Water which gives greater detail on spoil and surface water management (see Section 9.4.2.1 and 9.4.2.2).
- 2.4.5. Water quality parameters for water quality monitoring are not specified, rather are pushed out to agreement pre- construction with Inland Fisheries Ireland and will be included in a Surface Water Management Plan (SWMP). I consider that it would have been preferable to have set out those monitoring parameters for the purpose

of the NIS for clarity and greater consistency with EIAR Chapter 9 Water which gives further detail on the parameters that will be included in section 9.5.1.8. As the parameters, frequency of monitoring and reporting is considered in Chapter 9, I am satisfied that it is acceptable to agree the final plan prior to construction.

2.4.6. Measures to prevent disturbance of otter are detailed which include pre-construction survey and methods to reduce noise and vibration. I am satisfied that as a mobile species, this approach to pre-works survey is appropriate and in line with standard practice to ensure that the baseline hasn't changed significantly since the original survey period. If an otter holt is recorded, no works will proceed until an ecologist has advised on appropriate mitigation. However, such appropriate mitigation measures are not further described. A potential otter holt has been recorded near one of the proposed stream crossings for the grid cable and this will require consideration in line with the measures described in the NIS. While outside of the SAC boundary, the applicant has considered the otter population in terms of the conservation objectives for the Lower River Suir and therefore the implications of the disturbance of this potential holt requires consideration and pre-construction survey to determine if it is an active holt. The NIS states that the crossing method will be via Horizontal Directional Drilling (HDD). This process requires temporary land take to install and pull the cable and is not an insignificant process, however no detail is provided in the NIS of where this will occur in relation to the (potential). I note that in Chapter 6 Biodiversity (6.5.1.1) a different level of information on the watercourse crossings is presented which indicates that where the bridge deck can be used HDD may not be required. I refer the Planning Inspector and the Commission to Chapter 9 Water of the EIAR which provides greater clarity on the options for river crossings, which may not necessarily require HDD if the bridge deck can accommodate the cable. More detailed mitigation measures for the management of the required watercourse crossings are also provided in Chapter 9.

2.4.7. I am satisfied that general measures to reduce disturbance from noise and vibration are proposed in the NIS. If an otter holt is confirmed during pre-construction surveys works will not progress in that area until further measures are agreed with an Ecologist. I note that NRA (2008) Guidelines for the treatment of otters prior to the construction of national road schemes is referenced in the document and this Guidance sets out the standard approach for managing this scenario should it be

encountered. Separately, disturbance of an Annex II species requires derogation under the European Communities (Birds and Natural Habitats) Regulations 2011 should pre-confirmatory surveys identify an active holt.

2.4.8. I consider that while the mitigation measures presented in the NIS in relation to the protection of watercourses is lacking in specific details in places and should have better consistency with Chapter 6 Biodiversity and Chapter 9 Water which provide greater detail on project design options (for grid connection) and location specific mitigation measures, the mitigation in the NIS is adequate to prevent adverse effects in view of the conservation objectives of the Lower River Suir SAC. The greater level of detail presented in the EIAR is designed to prevent adverse effects on water quality in the immediate receiving watercourse and surface water drainage channels of the River Suir at the wind farm site (including grid connections) which also mitigates negative effects further downstream as relevant to the SAC. As An Coimisiún Pleanála can rely on the mitigation set out in the EIAR, I consider that there is adequate detailed information available to the Commission in terms of an effective project mitigation strategy.

2.4.9. The Planning Inspector and the Commission will note that in- combination effects are considered in the screening stage by the Applicant as presented in Section 4.4.1 of the NIS. The test for likely significant effects is in relation to the proposed project alone or in combination with other plans and projects. Therefore, as potential effects from the project alone were screened in for the AA, the Planning Inspector and the Commission need to ensure that any potential in-combination effects are taken into consideration in the AA in view of any residual effects that may remain post mitigation. The Plans considered by the applicant remain relevant and therefore the consideration of potential in combination effects should be focused on any projects that could add to the risk identified by the applicant for the River Suir SAC.

Conclusion on review of NIS and information for AA

2.4.10. I consider that the mitigation measures prescribed in the NIS for the prevention of adverse effects of water quality impacts, disturbance of species and prevention of introduction of invasive species are adequate in view of the conservation objectives set for the Lower River Suir SAC. The NIS would benefit from better cross

reference with detailed measures set out in the EIAR documentation in addition to those presented in the NIS for a complete and detailed schedule of measures and monitoring parameters specific to the development site and that will also be effective in excluding adverse effects on the River Suir within the development site and SAC site integrity downstream .

3.0 Likely effects on the Environment: Biodiversity

3.1. Biodiversity

- 3.1.1. Effects on biodiversity are considered in EIAR Chapter 6 and associated appendices. Effects on bird species are considered separately in Chapter 7. Chapter 6 describes and assesses direct and indirect effects of the proposed development during construction, operation and decommissioning on biodiversity with particular attention to species and habitats protected under the Habitats and Birds Directives, the Wildlife Acts 1976 (as amended) and provisions of the European Communities (Birds and Natural Habitats) Regulations 2011 as amended.
- 3.1.2. The proposed wind farm site is characterised by variety of habitats that are reflective of past and current land management including improved agricultural grassland with hedgerow and treeline field boundaries, mixed woodland and parkland habitat planted on Brittas Estate. The River Suir which flows though the site is a key ecological feature and also influences the areas of wet grassland and marsh habitats occur in poorly drained/ less intensively managed areas within its flood plain. The habitats identified are listed among key ecological receptors (KERs) which include the following:
- Designated sites (including Lower River Suir SAC and consideration of proposed Natural Heritage areas (NHAs))
 - Habitats
 - Aquatic species (not covered in QI listed for SAC)
 - Marsh fritillary
 - Terrestrial mammals (badger, pine marten and Irish hare)

- Bats (6 x species)

3.1.3. In terms of adequacy of information to inform the EIA, I have considered the following KERs for which **likely significant impacts** have been identified in the absence of mitigation (impacts on designated sites covered in Section 2 above with overlap for water quality, invasive species and otter):

- Impacts on terrestrial habitats
- Impacts on terrestrial mammals
- Impacts on Bats

3.1.4. In considering these issues I provide a summary which set out the key findings of the relevant assessments and address key points of the submissions, the applicants approach and my evaluation of the adequacy of the response based on the evidence provided and professional opinion for the purpose of the EIA to be undertaken by An Coimisiún Pleanála.

3.2. Terrestrial Habitats

3.2.1. Habitats recorded on the wind farm site (including substation) and along the grid connection route are characterised in accordance with standard A Guide to habitats in Ireland (Fossitt, 2000) and a valuation of their conservation importance is provided based on NRA/ now TII Guidelines for Assessment of Ecological Impacts. The valuation of individual habitats in this manner could be viewed as a reductionist approach as it is the suite of habitats within the overall site that indicate the real ecological value of the area impacted. The ecological valuation at geographical scales presented in the NRA (TII) Guidelines for Assessment of Ecological Impacts (widely adopted in Ecological impact assessment in Ireland (EclA)) is based on *sites* rather than individual habitats but this is widely misinterpreted. For example, County Importance: **Sites** containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county.

3.2.2. Chapter 6 characterises the habitats on the site being of local (e.g. hedgerows) to national importance (wet grassland – links to Annex I Molina meadows and depositing/ lowland rivers). Based on the information provided, the majority of the

proposed development site is of local importance, with the River Suir and areas of species rich grassland, poor fen and flush of higher value county/ national importance.

- 3.2.3. Habitat loss is quantified in Table 6.19 in terms of habitat clearance required for infrastructure and to address turbulence and bat buffer zones. The loss of hedgerow, treeline and woodland edge habitat to accommodate the infrastructure and also to create buffer habitat for bats at a number of locations will result in the loss of 4086m of hedgerow and 1.4Ha of woodland, which is described as a significant impact at the local level. Compensatory planting is proposed to balance the habitats lost. It is stated that hedgerows cleared during the construction phase will be replanted. In the consideration of mitigation for habitats, it is not specified if this is direct replacement where removal has occurred or at other location bearing in mind the habitat removal required for turbulence impacts. Some clarification is provided in terms of reestablishing habitat connections for bats where it is proposed that compensatory planting of hedgerow/treeline habitat will be undertaken in order to maintain connectivity between the woodland surrounding T.10, replanting of hedgerow/treeline habitat just outside the 300 m buffer of T 4 will be undertaken. Replanting will also be implemented at T.7. A commitment of no net loss of hedgerow is given in the EIAR however, the precise method of how that will be achieved in terms of location specific detail and quality/ length of reinstatement is not clearly presented. The Planning Inspector and the Commission may consider adding a condition requesting that a detailed habitat compensation plan be submitted to the Local Authority in advance of works, clearly setting out hedgerow replanting locations and demonstrating no net loss as committed to in the EIAR and the area and location forestry replanting once a felling license has been secured.
- 3.2.4. Habitats identified as high value /sensitive habitats including Molina Meadows, poor fen and flush are avoided by design with the substation layout altered from its original proposed location. Chapter 6 doesn't specifically refer to hydrogeological impacts affecting wetland habitats however the habitat monitoring proposed in section 6.5.2.5 refers to possible drainage effects:

quadrat and walkover surveys will be repeated to ensure that the habitat is not impacted by constructions works, especially by any drainage in the vicinity of tracks leading to T4 from the substation field.

3.2.5. Monitoring of this habitat is proposed over a 10-year period involving repeated botanical quadrat surveys. However, no measures are detailed for intervention should it be established that the habitat is adversely impacted by drainage or construction works. As part of any condition that may be added in relation to biodiversity measures including hedgerow and woodland referred to above, I recommend that the Applicant include details of suitable adaptive monitoring and measures that could be employed to ensure that any deterioration in Molinia meadow habitat that could be attributed to the project, be remedied.

3.3. Terrestrial mammals

3.3.1. Likely significant effects on the local badger population were identified as being of county level magnitude based on the possible destruction/ abandonment of 2 active setts to accommodate turbines T9 and T4 and possible disturbance of a main sett identified within 100m of another turbine. Mitigation measures proposed include timing of works to avoid the badger breeding season and a range of distance zones from 20-50m are specified for exclusion buffers from sett entrances. It is unclear from the presentation of information how these varied specified buffers will be applied as they all relate to different aspects of work. For example, it is stated that no works will be undertaken within 20m of an active badger sett but a 30m buffer zone will be set out at sett entrances and no works will be undertaken within 50m of a sett during the breeding season. The requirement for removal/ destruction of an individual setts is not addressed although it is identified as risk for T9 and T4 and it is unclear if the proposed buffer areas can in fact be achieved at these locations based on the information provided. I consider that a worst-case scenario should be factored into the mitigation measures to accommodate a situation where a sett requires exclusion and demolition in addition to the exclusion buffers prescribed.

Recommended condition

3.3.2. I recommend that a condition be attached to ensure the protection of badgers in the event that a sett must be destroyed/ removed where the stated exclusion buffers cannot be achieved. The pre-construction survey for mammals will identify setts that are within the footprint of works areas required for turbines with particular focus on T4, T9 and T10. Where destruction of a sett (or its immediate surroundings) is unavoidable or works required make it unsuitable for occupancy, closure of the sett

be done in accordance with best practice with reference to the badger exclusion protocol set out in the TII/NRA Guidelines for the treatment of badgers prior to the construction of national road schemes¹.

- 3.3.3. Significant effects are not predicted for other terrestrial mammals recorded on the site including pine martin and clarification on the lack of likely significant effects on red Squirrel is presented in the response document which I consider to be adequate given the level of survey undertaken at the site.

3.4. Bats

- 3.4.1. Bat activity at the site was investigated via a number of survey techniques over multiple dates from February to October 2022 and included further static recording at height (one location) from June to October 2023. Methods employed included bat activity/ transect surveys, tree and building surveys for roost identification and emergence surveys of roost sites and static detector deployment.
- 3.4.2. Bat activity recorded at the site is reflective of the habitats present with high levels of bat activity recorded along woodland edges, hedgerows, treelines and riparian corridor. Six species including common pipistrelle, soprano pipistrelle, Leisler's bat, Myotis species, brown long-eared bat, and Nathusius' pipistrelle were recorded with most activity attributed to three common species: soprano pipistrelle (35.4%), common pipistrelle (34.8%), and Leisler's bat (26.7%).
- 3.4.3. While only one bat roost was confirmed (in stone bridge), mature trees and the entirety of the southern woodland complex are considered as roost resources for bats within the wind farm site boundary. The surrounding area also holds a number of structures which offer high suitability for maternity and hibernation roosts including Brittas Castle. Mature trees identified as supporting possible roost features will require further preconstruction roost surveys and assessment in advance of felling. While no confirmed tree roosts were identified, due to the dynamic and transient use of trees by bats it is best practice to re-survey in advance of works so that appropriate protection measures can be employed.

¹ <https://www.tii.ie/media/gtajak2/guidelines-for-the-treatment-of-badgers-prior-to-the-construction-of-a-national-road-scheme.pdf>

- 3.4.4. The applicant identifies the limitations in the deployment of static detectors and that due to the amendment of turbines throughout the design process, it was not possible to install detectors at each of the 10 turbines detailed in the final layout. Current best practice (Nature Scot, 2021, Bats and onshore wind turbines) recommends that static detectors be set up at each turbine location where possible. The applicant considers that while no data was collected within a 300m buffer area of turbine locations T.2, T.3, T.4, T.9 and T.10, the data collected across the site provides an adequate representation of habitats and likely bat activity at these turbine locations. I find this rationale reasonable in terms of T2 and T3, however, T9 and T10 are located in areas close to mixed woodland with high levels of bat activity and therefore a precautionary approach must be taken. In addition, I note that no static detector was located at the northeast area of the site which could have implications for impact prediction at T4. However, I note that the T shaped treeline will be removed at that location, reducing bat habitat in the vicinity of this turbine.
- 3.4.5. I provide a summary of the bat impact assessment submitted by the Applicant in Table 2 below. In the evaluation section, I highlight my concern that the magnitude of impact for T9 and T10 in particular may be underestimated due to the location of these turbines relative to woodland habitats and the riparian corridor. I note that bat buffer distances (buffer between bat features and turbines) are calculated and presented for the 3 different turbine models for various distances (based on 50m to 200m blade tip distances) but it is unclear what buffer distances are going to be employed for individual turbines. It is stated in the EIAR that a compromise buffer of 100m was calculated but I found it a challenge to determine what buffer distance will be utilised for T9 and T10 in relation to woodland clearance. I note that Table 6.19 of the EIAR references a 105m bat buffer and the length of hedgerow to be removed at T9 is 232.43m and for T10, 138m of hedgerow will be removed and 0.60ha of woodland.
- 3.4.6. I consider that a residual collision risk may remain for T9 and T10 despite the application of mitigation measures. Table 6.15 of the EIAR identifies 45 potential roosting features within 300m of T10, placing it in an area of higher risk. Monitoring the effectiveness of the curtailment plan as part of post construction bat monitoring will be essential to establish the efficacy of these measures and to apply adaptive

measures as soon as possible should higher levels of bat mortality be recorded than predicted in the EIAR.

Table 1 Biodiversity: Bats summary of impact assessment at wind farm site (EIAR Chapter 6 and Appendix 6B Bat Report)

Bats species	Ecological significance	Impact	Impact significance (Turbines)
6 species recorded from bat activity and static survey	All Annex IV species that require strict protection.	Collision mortality, barotrauma	Low, low -moderate levels of bat activity recorded across the site
Soprano pipistrelle	Most commonly recorded	Habitat loss and disruption of commuting and foraging habitat	No bat roosts directly impacted but matures trees identified as possible bat roosts
Common pipistrelle		Potential loss of roost sites	
Leislars Bat	Commonly recorded	Disturbance, displacement Artificial lighting	Risk levels associated with turbines vary from low-medium to medium-high for T 9 and T10
Nathusius pipistrelle	Recorded in lower numbers		
Brown long-eared Bat	Recorded in lower numbers		
Myotis sp.	Recorded in lower numbers		
	<p>In the absence of mitigation measures, likely significant impacts are predicted for local bat populations during the construction phase- individual species are not differentiated.</p> <p>In absence of mitigation, long-term likely significant impacts are predicted for local bat populations of common pipistrelle and soprano pipistrelle and Leisler's bat arising from collision risk and barotrauma.</p>		
Mitigation Measures (summary)	<ul style="list-style-type: none"> • Timing of works • Pre-construction survey • Buffer zone clear of vegetation to treeline/ hedgerow/ woodland habitat • Supervision of vegetation clearance • Retention of trees, • Re planting of hedgerows • Lighting restrictions • Curtailment- Feathering of blades (prevents rotating when not generating power) and increased cut in speeds 		

	<p>(curtailment (shown in scientific literature to reduce bat fatalities by 30-90%))</p> <ul style="list-style-type: none"> • Increase cut in speeds during bat activity season (April to Oct) on turbines T7,T9 and T10, T4, T5 in autumn and T8 spring and summer with monitoring to inform any further adjustments to curtailment over operational phase • Post construction monitoring- bat activity and fatality monitoring (with dogs)
Residual effects	No likely significant effects predicted by Applicant
Evaluation and recommendation on Bat impact assessment	
<p>I am satisfied that mitigation measures proposed are in line with current best practice including feathering and curtailment (Eurobat guidelines for consideration of bats in wind farm projects (2014) NatureScot 2021 and EC 2019) and are proven effective mitigation measures applied to reduce risks to an acceptable level -that being considered one where population level impacts are excluded.</p> <p>Leisler's bat, Common and Soprano pipistrelle are considered high collision risk species. Therefore, where higher numbers of passes have been recorded there is a commensurate increased risk in collision or barotrauma caused by coming into airspace of turbine blades. With the application of mitigation measures, I concur with prediction of no significant impacts on turbines 1-8. However, I consider that a residual long-term risk of impact of moderate magnitude at the local level for the three bat species for T9 and T10 remains despite the application of mitigation measures due to their proximity and positioning relative to the woodland resource and River Suir riparian area.</p> <p>As no bat roosts were identified that require removal, a derogation under Regulation 54 of the European communities (Birds and Natural Habitats) Regulations 2011-2021 is not required to accompany this planning application based on the information presented in the EIAR. However, it is the responsibility of the Developer to ensure that if any bat roosts are identified during the site clearance stage that a derogation is obtained if disturbance is likely.</p>	

4.0 Likely effects on the Environment: Ornithology

4.1. Ornithology / birds

- 4.1.1. EIAR Chapter 7 (including appendices) examines direct and indirect impacts on birds during the various stages of the proposed development including construction, operation and decommissioning.

- 4.1.2. A suite of standard bird surveys was undertaken over two years from October 2021 to September 2023 to provide up to date information on birds present at the proposed development site and likely impacts arising. I am satisfied that the general approach is in line with standard methodology following Scottish Natural Heritage Guidance (2017) as quoted. Surveys undertaken at the wind farm and substation site included vantage point survey (breeding and non-breeding season) to inform the collision risk model, breeding and winter bird transect survey and breeding wader survey. Kingfisher survey and dusk survey for crepuscular species was also undertaken. Surveys of the wider area for breeding raptors including barn owl and potential winter hen harrier roost sites were also undertaken. A hinterland survey of the wider area was also undertaken which provides information on general winter waterbird occupancy of wetland sites within a 10km radius and possible movements of birds between those sites in the vicinity of the proposed wind farm (See Appendix 7-A).
- 4.1.3. Additional surveys for breeding wader species including lapwing and snipe were carried out in May and June 2024.
- 4.1.4. Table 7-10 presents a detailed list of bird species recorded in terms of conservation status, typical numbers recorded and ecological valuation in terms geographical scale. Detailed species accounts are provided for individual bird species in terms of abundance, conservation status, vulnerability to collision and disturbance. The bird species recorded are reflective of the habitats present on the site and influenced by the River Suir and wetlands present with bird numbers of county/ regional importance for eight species of wintering birds including golden plover, lapwing and snipe, cormorant, black headed gull, grey heron. Regularly occurring numbers of local importance were recorded for mallard, mute swan and teal.
- 4.1.5. In submission by third parties, the importance of the site for swans and geese was raised. Over the survey period, mute swan recorded in locally important numbers and there were infrequent recordings of low numbers of whooper swan and very infrequent recordings of greylag goose in very low numbers. I am satisfied that these species have been adequately considered and assessed as part of the EIAR and Response document.

- 4.1.6. Wetlands in the wider area including Cabragh wetland pNHA are considered as part of the assessment and in the context of likely movements of wintering waterbirds around wetland resources including the proposed development site with particular reference to dispersing flocks of lapwing and golden plover and other wader and duck species.
- 4.1.7. A population of breeding lapwing at the site is assessed as being of national importance as up to 6 pairs were recorded attempting to breed within the wind farm site. This wader species is in unfavourable conservation status and red-listed on Birds of Conservation Concern Ireland (BoCCI) due to severe long-term declines in its breeding population. The presence of up to six pairs recorded on wetland habitat near the proposed substation location represents >1% of the national breeding population. Breeding success at the site was recorded as very low (in line with national trends) with just one pair potentially raising chicks in 2023. Numbers of lapwing recorded over the wintering period are considered of county/ regional importance (peak of 500) with wintering golden plover numbers also of county/ regional importance recorded. I consider the likely impact on these species in terms of disturbance (breeding lapwing) and collision risk in more detail below.
- 4.1.8. A number of raptor species were recorded during the bird surveys with peregrine falcon confirmed breeding at Brittas castle within 600m of the nearest turbines. Buzzard was the most frequently recorded raptor species with a confirmed breeding nest site in woodland at the site (moderate effect on local population due to collision risk estimate). Kestrel was the second most frequently recorded raptor during surveys (moderate effect on local breeding population from collision risk). Sparrowhawk was recorded frequently at the site however with low frequency in rotor area and the CRM estimate is low for this species
- 4.1.9. As per SNH recommendations, not all species recorded are categorised as target species, for example it is noted that most passerine species and general lowland farmland birds are not considered to be particularly susceptible to impacts from wind farms, however they may be affected by habitat losses associated with site vegetation and hedgerow clearance.
- 4.1.10. I note that some submissions on the proposed development considered that there were inadequacies in the bird surveys undertaken and that there was an absence of

assessments of certain bird species. I consider that the suite of surveys and birds recorded at the wind farm and substation site over the period 2021-2023 (and hinterland surveys) presents a very comprehensive list of species that are representative of the habitats present and a robust baseline for assessment and dispels any suggestion of a lack of data.

4.1.11. Twelve species are included in the collision risk modelling (CRM) based on recordings within rotor areas (from vantage point surveys). Details of the CRM are presented in EIAR Appendix 7H. The rationale behind the selection of turbine model for use in the CRM is presented as representing the worst-case scenario and I highlight that predicted collisions should only be considered indicative of the likely effects of the proposed wind farm on birds. As referenced in the methodology section, I note that Nature Scot has published an updated model (2025) however, as the assessment was undertaken previous to this update, the model used is adequate to provide an estimate of collision risk.

4.1.12. The Inspector and the Commission will note that a number of avoidance levels are used in the CRM for lapwing and golden plover in particular. The rationale for this is presented in more detail in Appendix 7H 5.5 and I insert that text for ease of reference. I bring the Planning Inspector and the Commissioners attention to the fact that this approach has been used in other wind farm applications and accepted by An Coimisiún Pleanála. Based on the scientific rationale provided, I consider that the avoidance rate of 99.5% is acceptable for the CRM for golden plover and lapwing.

From Appendix 7H: Brittas Wind Farm Collision risk Modelling (October 2024)

Collision risk for wader species, including golden plovers and lapwing are generally considered to be low due to manoeuvrability in flight (Mc Guinness et al., 2015). A review by Gittings (2022)² of postconstruction monitoring studies at three wind farm sites in the UK that support wintering golden plover, found that there is empirical evidence that higher avoidance rates should be applied for non-breeding golden plovers; and avoidance ranging from 99.6% to 99.8% would generate more realistic modelled outputs, which

² Gittings, T (2022), Ballivor Wind Farm: Golden Plover Avoidance Rates Collision Risk Assessment (pleanala.ie) An Bord Pleanála Case reference: 316212

are in line with avoidance rates applied for wintering geese (SNH, 2013). Although not specifically reviewed by Gittings (2022), two of these wind farm sites also supported lapwing and based on these studies it is clear that both golden plover and lapwing exhibited very high degrees of turbine avoidance behaviour, well in excess of 99% – see post-construction monitoring reports for Blood Hill Wind Farm (Percival et al., 2008) and Goole Fields Wind Farm (Percival et al., 2018a, 2018b). Taking account of the findings from these studies, it is recommended that the impact assessment for golden plover and lapwing assess the effects of predicted collision risk by the applying higher, empirically derived avoidance rates suggested by these studies. Testing population level effects at 99.5% (precautionary) and 99.8% avoidance is considered appropriate, with reference to the default 98% avoidance included to remain in line with SNH (2018a) guidance on the application of default avoidance rates.

- 4.1.13. Impacts during construction phase in terms of habitat loss/ alteration and disturbance has been determined for a suite of species. No significant effects are predicted for any species with short term low to very low magnitude of effect (based on Percival, 2003 criteria) predicted for species examined.
- 4.1.14. Notwithstanding the design of the proposed development which avoids the areas of wetland habitat of significance for breeding lapwing, given the sensitivity of breeding lapwing to disturbance and the existing pressures on the species, I consider that the potential impacts (pre- mitigation) may be underestimated for both the construction and operational phase. The magnitude of effects is presented in terms of the National population levels however, this approach has been criticised by the Department of Housing, Local Government and Heritage in submissions on other wind farm developments as underestimating impacts at the county/ regional level. Therefore, based on the criteria used in Chapter 7, the magnitude of population level effect resulting from the potential displacement or disturbance of up to 6 pairs of lapwing in view of the likely county breeding population would result in a short term adverse effect of high significance on the regional scale during construction and a potential long term moderate effect on the regional scale for the operational phase (equivalent of low significance in EPA assessment terms) if suitable alternative habitat is not available in the local area.

- 4.1.15. Potential barrier effects on bird species are considered in Section 7.4.4 of the EIAR. The proposed development was found not to be within a significant migration route; however, it may disrupt birds moving along the River Suir with particular reference to Cormorant. Significant effects are not predicted for this impact mechanism.
- 4.1.16. Cumulative effects of displacement and collision risk with other wind farms and other development are considered in a comprehensive review in Section 7.4.7.3. I consider that this is a good example of a cumulative impact assessment for both displacement and collision risk.
- 4.1.17. Mitigation and monitoring measures are presented in section 7.5 of the EIAR and I consider that the measures are in line with standard best practice including embedded mitigation in design measures and protection of water quality. Specific measures are detailed for the protection of breeding lapwing, snipe, kestrel, peregrine falcon and swift. Post construction monitoring is proposed to confirm effectiveness of these measures. Standard post construction monitoring is proposed for the wind farm and includes monitoring for bird fatalities for years 1, 2, 3, 5, 7, 10, 15.

Conclusion for ornithology

- 4.1.18. A summary of residual impacts of the proposed development on bird species is presented in EIAR table 7-17. In general, I consider that the impact assessment has been undertaken in line with standard practice and that the findings in relation to residual effects are reasonable. I consider that the impact prediction pre-mitigation for breeding Llapwing in particular may be underestimated in terms of the regional impact for the reasons described above, however I am satisfied that taking account of the mitigation measures and adaptive monitoring proposed that significant effects on the county/ regional and national population levels will be avoided.

Signed:



Maeve Flynn BSc. PhD, MCIEEM
Inspectorate Ecologist

6th February 2026