Orsted Onshore Ireland Midco Limited

3: MEMORANDUM RESPONSE TO SUBMISSIONS RECEIVED

BIODIVERSITY

Proposed Oatfield Wind Farm Project, Co. Clare: ABP Case No. ABP-318782-24

June 2024

CONTENTS

1 BIODIVERSITY

1.1 Introduction

The following memorandum has been prepared to address submissions received during the observations and submissions period associated with the Oatfield Wind Farm Planning Application. The planning application for the aforementioned Proposed Development was submitted to An Bord Pleanála on 22nd December 2023 (ABP Case Number: ABP-318782-24). The period for submissions and observations was 22nd December 2023 to 19th February 2024.

This is memorandum number 3 in the Oatfield Wind Farm submission response documentation, which addresses common themes identified within the discipline of Biodiversity (corresponding to **Chapter 7 Biodiversity** of the EIAR, submitted as part of the planning application made to An Bord Pleanála).

Within this response, reference is made to submission response on Hydrology and Hydrogeology (memorandum no. 5 of the submission response documentation, hereafter referred to as **memorandum no. 5**).

Responses to submissions received from regulatory & prescribed bodies are presented in Section 2 and responses to common themes in submissions received from the general public are presented in Section 3.

Where relevant, additional information is included in the appendices section.

1.2 Statement of authority

This memorandum has been prepared by experienced RSK Biocensus and Inis Environmental Consultants Ltd. (INIS) ecologists. The contributors to this memorandum are listed below:

Andrew Whitfield MA BA CEnv CEcol (Associate Consultant, RSK Biocensus): Andrew has over 30 years of experience in undertaking and co-ordinating ecological and environmental impact assessments across a wide variety of infrastructure projects. These include projects of varying type and scale, ranging from new nuclear power generation facilities and housing developments to major road and rail construction schemes. Andrew has undertaken Habitat Regulations Assessments (HRA) of various plans and projects including transport improvement options for the Scottish Government, water supply options for Greater London, and the Heads of the Valleys road improvements in South Wales, where Marsh Fritillary and Lesser Horseshoe Bat were a key concern. Andrew has extensive experience of undertaking Phase 1 habitat surveys, surveys for Otter, Water Vole, Badger and Red Squirrel, amphibian surveys, and butterfly and dragonfly surveys. He has given evidence at approximately 20 planning inquiries/hearings in the UK, Ireland and Africa. Andrew led the technical review of the EIAR chapter.

Howard Williams BSc CEnv CBiol MRSB MIFM (Principal Ecologist and MD, INIS): Chartered Environmentalist and Chartered Biologist who has authored and managed Ecological Impact Assessments (EcIA), Construction Environmental Management Plans

and Article 6 Appropriate Assessments (AA) for over 50 wind farm projects. Howard is an expert in the field of avian ecology and has extensive knowledge and experience of prescribing management for a range of terrestrial and aquatic protected species. Howard provided technical support during the production of the EIAR chapter.

Dr Alex Copland BSc PhD MIEnvSc MCIEEM (Technical Director, INIS): has over 25 years of professional experience working in both statutory and private companies, in third-level research institutions and with environmental NGOs. He is a full member of the Institute of Environmental Sciences (IES) and the Chartered Institute of Ecology and Environmental Management (CIEEM). He is proficient in experimental design and data analysis and has managed several large-scale, multi-disciplinary ecological projects. These have included research and targeted management work for species of conservation concern, the design and delivery of practical conservation actions with a range of stakeholders and end-users, education and interpretation on the interface between people and the environment and the development of coordinated, strategic plans for birds and biodiversity. He has written numerous scientific papers, developed and contributed to evidence-based position papers, visions and strategies on birds and habitats in Ireland. He also sits on the Editorial Panel of the scientific journal, *Irish Birds*, which publishes original ornithological research relevant to Ireland's avifauna. Alex provided technical support during the production of the EIAR chapter.

Peter O Connor BA MSc (GIS Manager, INIS): lead GIS Specialist experienced in overseeing the completion of mapping for multiple windfarm projects. Peter has experience in conducting Viewshed Analysis in support of selected Vantage Points for ornithological surveys, involving the use of Digital Terrain Models and Digital Elevation Models in addition to bespoke Viewshed Analysis plugins for QGIS. Peter also has experience with field data capture and integration into project mapping (e.g., for habitats and species), including for figures supporting EIAR chapters and associated reports. Peter led the production of figures, calculations and all other GIS inputs to the EIAR chapter.

Esther McMorrow Donnellan MSc BA (Ecologist, INIS): ecological consultant with extensive ecological survey experience, notably for habitats and bats. Esther has authored numerous ecological reports including survey reports, EcIA, Natura Impact Statements (NIS) and Environmental Impact Assessment (EIA) Reports. Esther co-authored the EIAR chapter.

Megan Doyle MSc BSc (Ecologist, INIS): ecologist awarded a distinction MSc in Biodiversity and Conservation from Trinity College Dublin and an honours BSc in Zoology from University College Dublin. Megan has extensive report writing experience, including Screening for Appropriate Assessment Reports, NIS, Environmental Impact Assessment Reports and survey reports for a range of protected species. Megan has also undertaken surveys of habitats, bats and terrestrial mammals. Megan co-authored the EIAR chapter.

Cillian Burke BSc (Ecologist, INIS): ecologist with a BSc (Hons) in Environmental Science from the University of Galway. Cillian has experience in undertaking multi-disciplinary surveys including habitat and bat surveys, as well as supporting as an Ecological Clerk of Works. Cillian has authored ecological reports including AA Screening Reports, NIS, EcIA and Biodiversity Net Gain (BNG) Reports. Cillian co-authored the EIAR chapter.

Conor Daly MSc BSc (Hons.) (Ecologist, INIS): ecologist that contributed to the writing of this EIAR. Conor was awarded an MSc in Biodiversity and Conservation and an Honours BSc in Zoology. Conor has been conducting ornithological surveys for projects since 2021 for a variety of projects including industrial estates and Windfarms (Small-Large). Conor has conducted habitat surveys to inform this EIAR. Conor has experience in Raptor conservation with ample experience with birds of prey and pressures and threats to protected species and has provided reports for EIAR and NIS reports while working with Inis Environmental Ltd. Conor has been a Qualifying member of CIEEM since 2022.

Katie Sullivan BA (Mod.) MSc is an Assistant Ecologist at INIS with a BA (Hons) in Natural Sciences (Zoology) from Trinity College Dublin and an MSc (Hons) in Wildlife Conservation and Management from University College Dublin, where her research focused on modelling the impacts of result-based agri-environmental schemes on pollinator communities in semi-natural grasslands. Katie has experience in bat, mammal, herpetological, ornithological and entomological surveying. As part of her role with INIS, Katie has small mammal trapping and several bird and bat surveys in line with Best Practice Standards. Katie has undertaken bat surveys as to inform this project. Katie is also a Qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Molly O'Hare BSc MSc carried out bat surveys on this project. She is a Bat Ecologist with Inis Environmental Consultants Ltd , has a BSc in Ecology and Environmental Biology and an MSc in Marine Biology from University College Cork. Molly has extensive Bat Surveying and Handling experience ranging from Radio Tracking, Mist Netting, Harp Trapping and Hand Netting. She also has experience with carrying out Roost Assessments, Emergence/Re-entry Surveys and various exclusion practices. She was the lead surveyor for bat surveys for this project. Molly also has experience in the preparation and writing of reports, including Ecology Reports and screening for Appropriate Assessment.

James O'Connell BSc (Hons) (Ecologist, INIS): James was awarded a BSc (Hons) in Wildlife Biology from IT Tralee. James regularly conducts ornithological surveys for various projects across Ireland. He has a broad range of ecological survey experience including Vantage Point surveys, transect surveys, habitat classification and bat surveys. James led a wide a range of ornithological field surveys to inform this EIAR Report.

Chris McKiernan BSc (Hons) (Ecologist, INIS): Chris has over three years of experience of carrying out professional ornithology surveys in Ireland on a variety of projects. They received a BSc in Ecology and Environmental Biology from UCC in 2020 and is a Qualifying member of CIEEM. Chris was heavily involved in carrying out and coordinating ornithological field surveys to inform the EIAR Report, including Vantage Point surveys, transect surveys, breeding and wintering raptor surveys, and surveys for wintering waterbirds.

Emily Marsh BSc (Hons) PGDip MSc (Ecologist, INIS): Emily has an MSc in Sustainable Resource Management awarded jointly from the University of Galway and University of Limerick, a Postgraduate Diploma in Climate Change Science & Policy from University of Bristol, and a BSc (Hons) in Environmental & Earth System Science from University College Cork. Emily's expertise is primarily in ornithological surveys, terrestrial mammal surveys and habitat assessment. She is experienced in delivering ecological

fieldwork and reporting for renewable energy projects in accordance with industry best practice standards. Emily completed ornithological survey work informing the EIAR Report including; Vantage Point surveys and surveys for breeding and wintering raptors.

Darren McCartney BSc (Ecologist and GIS Specialist, INIS): Darren has worked in both the field ecology and GIS teams at INIS and is a Qualifying member of CIEEM. He has experience of undertaking ornithological field surveys in relevant habitats and completed various surveys to inform this EIAR Report including Vantage Point surveys, transect surveys, surveys for breeding waders, surveys for breeding and wintering raptors, and surveys for wintering waterbirds. As a member of the INIS GIS team, Darren also contributed to figure production and habitat calculations for the EIAR Report.

Michael Whelan (Consultant Ornithologist): Micheal is a field ecologist based in Co. Offaly and has been working for INIS since 2018. Michael has substantial experience of many relevant ornithological survey types and led varied surveys to inform the EIAR Report including Vantage Point surveys, transect surveys, surveys for breeding waders, surveys for breeding and wintering raptors, and surveys for wintering waterbirds.

Peig Healy MSc BSc (Environmental Specialist, INIS): ecologist awarded a distinction MSc in Environmental Leadership and an Honours BSc in International Development and Food Policy. Graduate Member of the Institute of Environmental Management and Assessment (IEMA). Peig has authored reports on sustainability and environmental research, involving policy analysis, case study review, and reporting in relation to Fisheries Policy and EIA. Peig has also produced ecological reports including AA Screening Reports, NIS and EIA Screening. Peig co-authored the EIAR chapter and was involved in bat surveys to inform the EIAR Chapter.

Ross Macklin B.Sc. (Hons), MIFM, HDip GIS, PDip IPM is an ecologist with over 16 years' professional experience in Ireland. He specialises in freshwater fisheries ecology, biology, and water quality. He has considerable experience in a wide range of ecological and environmental projects including EIAR, EcIA, AA/NIS, CEMP reporting, as well as biodiversity, water quality monitoring, invasive species, and fisheries management. Ross was involved in all aquatic surveys undertaken for the Proposed Development used to inform this EIAR Chapter. He also has expert identification skills in macrophytes, freshwater invertebrates, protected aquatic habitats and protected aquatic species including freshwater pearl mussel. His diverse project list includes work on renewable energy developments, flood relief schemes, road schemes, blueways/greenways, biodiversity projects, fisheries management projects and catchment wide water quality management. He is currently completing his Ph.D. on the ecology and impact of Common Carp (*Cyprinus carpio*) in Irish waters.

Bill Brazier B.Sc. (Hons) MIFM is an aquatic ecologist with over 10 years' professional experience in Ireland. He specialises in freshwater fisheries ecology, biology, and water quality. He has considerable experience in a wide range of ecological and environmental projects including EIAR, EcIA and AA/NIS reporting, as well as biodiversity, invasive species, and fisheries management. Bill was involved in all aquatic surveys undertaken for the Proposed Development used to inform the EIAR Chapter. His diverse project list includes work on renewal energy developments, flood relief schemes, road schemes, blueways/greenways, and biodiversity projects. He is currently completing his Ph.D. on the genetics, reproductive biology, and invasive potential impact of Common Carp (*Cyprinus carpio*) in Irish waters. Additionally, Bill runs the highly respected *Off the Scale*

magazine, Ireland's most-read recreational angling publication and is the national coordinator for the novel Anglers National Line Recycling Scheme (ANLRS).

Nick Henson MSc CEnv (Associate Director, RSK Biocensus): Nick has a wealth of experience from over 18 years as an ecological consultant. His expertise includes ecological impact assessment for a range of projects including wind farms, for which he has extensive experience of providing technical advice and leadership in the UK and Ireland. Nick provided technical support during the production of the EIAR chapter.

George Wilkinson BSc MSc (Senior Ornithologist, RSK Biocensus): George has over five years of consultancy experience and over 15 years of experience of studying and watching wildlife in the UK and overseas. George works primarily in the UK where he frequently leads ecological assessments and surveys for a variety of species and development types including wind farms and solar developments. This has included work on wind farms and other development types in Ireland. George co-authored the EIAR chapter.

1.3 Correction in species and habitat management plan (SHMP)

The version of the SHMP submitted in December 2023 (see **Appendix 7.1** of the **EIAR Chapter 7 Biodiversity**, hereafter referred to as **EIAR Chapter 7**) indicated an area of land not within the landowner agreement schedule (i.e. Figure 1.20, Figure 1.21, Figure 1.22 and Figure 1.24). This was purely a presentation matter and calculations regarding adequacy of compensatory habitats etc. were correct in the original submitted document. The figures referred to above have since been amended in an updated SHMP which can be found in Appendix 1 below.

2 REGUATORY & PRESCRIBED BODIES

2.1 Clare County Council

2.1.1 Soils & hydrology

The Planning Authority has concerns in respect of the impact of this development on surface waters and the potential contamination of water bodies both within and downstream of the site by reason of the following.

- ‘’The upland nature of the site and the soil type which includes peat’’; and,
- ‘’The hydrological connectivity of the watercourses to the Lower River Shannon SAC’’.

This is responded to in detail in Section 2.1 of **memorandum no. 5**.

2.2 Department of Housing, Local Government and Heritage

2.2.1 Requirements for bat surveys and assessments along turbine delivery route

Additional Potential Roost Assessments (PRA) and emergence surveys were carried out along the Turbine Delivery Route (TDR) in accordance with Best Practice Guidance (Collins, 2023) following concerns raised by the Department of Housing, Local Government and Heritage (DHLGH). The results are summarised below and provided as Appendix 2.

The PRA along the TDR was carried out at any structure that could support a bat roost. This included bridges, water crossings and nodes where the road will be widened to facilitate the turbine delivery. These surveys, undertaken on 16th April 2024, identified two water crossings (WC9 and WC14), with low potential for roosting bats. These water crossings were subjected to emergence surveys. As a result of emergence surveys, WC9 was not identified as a bat roost during the survey. The emergence survey results do suggest that Common Pipistrelle, Soprano Pipistrelle and Leisler’s Bat are commuting through the area and foraging on site. The emergence survey at WC14 found a Soprano Pipistrelle, with an emerging Soprano Pipistrelle observed at the water crossing. There were also Common Pipistrelle and Leisler’s Bat observed commuting and foraging at the site. The watercourse crossing identified as a confirmed bat roost will not require any structural works and potential disturbance will be consistent with the current usage of the transport infrastructure.

2.2.2 Requirements for additional Lesser Horseshoe Bat surveys due to proximity of Danes Hole, Poulnalecka SAC

As recognised in the DHLGH’s submission the bat survey effort is consistent with statutory survey requirements.

However, to provide further information a desk review and field assessment were undertaken that included potential wintering and other roosting structures relating to Lesser Horseshoe Bats in the wider area, co-ordinated connectivity activity surveys and static detector deployments between known roosts and the Proposed Development.

Bat surveys were undertaken in April and May 2024 following Best Practice Guidance (Collins, 2023), for the specific purpose of a Lesser Horseshoe Bat assessment of the wider area from the Proposed Development. Survey undertaken included a Preliminary Roost Assessment (PRA) at any structure that could support a Lesser Horseshoe Bat roost within 2.5km of the development site, emergence surveys, night-time bat connectivity (point count) surveys at locations between the known Lesser Horseshoe Bat roosts and the development site, and deployment of ground level static detectors at four locations along potential commuting corridors that connect the known Lesser Horseshoe Bat roosts in the area and the development site. The PRA identified one building structure of 'Moderate' roosting potential for Lesser Horseshoe Bat, according to Best Practice Guidance (Collins, 2023). An emergence survey was subsequently carried out and no Lesser Horseshoe Bat were recorded. The first connectivity survey was carried out adjacent to the Lesser Horseshoe Bat roost at Danes Hole, Poulnalecka SAC and recorded commuting Lesser Horseshoe Bats at three of the four survey (point count) locations. The subsequent three connectivity (point count) surveys were carried out along potential commuting corridors that connect the known Lesser Horseshoe Bat roosts at Danes Hole, Poulnalecka SAC with the Proposed Development site. No Lesser Horseshoe Bats were recorded at any of the sampling locations during these three walkover surveys. The deployed static detectors recorded Lesser Horseshoe Bats at all four locations. The low numbers per night suggest that the locations are being used as commuting pathways for small numbers of Lesser Horseshoe Bat, which confirms the previous assessment presented in the **EIAR Chapter 7**.

2.2.3 Presence of Wet Heath within the Proposed Development Area

Habitat walkover surveys were repeated on 24th April 2024. The surveys involved revisiting areas previously categorised as wet heath habitat, to confirm the presence of characteristics corresponding to Annex I habitat*, 'northern Atlantic wet heaths with Erica tetralix (4010)'.* The survey methodology followed best practice guidance (Smith *et al*., 2011) and utilised the habitat classification presented in Fossitt (2000). More detailed surveys involved using 2m x 2m relevés within previously categorised wet heath habitat to accurately determine Annex I habitat. *'Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland'* (Perrin *et al.,* 2014), was used post survey to accurately determine if wet heath habitat within the Proposed Development is of Annex I quality.

Results indicate that one area of wet heath has characteristics of Annex I 'northern Atlantic wet heaths with Erica tetralix (4010)'. Several positive indicator species were identified e.g., *Erica tetralix*, *Sphagnum capillifolium*, *Polygala serphyllfolia*, and *Succisa pratensis*. The local vicinity is relatively undisturbed with an existing track located 210m south of the habitat. This area has a total hectarage of 1.1ha and is located within the footprints of proposed access tracks and drainage, 315m east of T9.

No other evidence of Annex I *'northern Atlantic wet heaths with Erica tetralix (4010)'* was recorded within the Proposed Development Study Area. Several characteristics of this habitat was recorded within surveyed areas of wet heath (presence of *Erica tetralix, Sphagnum spp.*), however, the surveyed areas did not sufficiently meet required criteria consistent with Annex I status, due to, e.g., lack of significant coverage of positive indicator species, dominant areas of wet grassland, scrub, conifer plantations

encroaching onto the habitat, and areas of human interference and/or modifications to the surrounding landscape, e.g., drainage, tracking, forestry plantations.

This further assessment therefore determines that 1.1 ha of Annex 1 habitat will be lost to the Proposed Development rather than the 3.6 Ha identified in the **EIAR Chapter 7** and DHLGH Submission. The loss of this habitat is still assessed as significant at a Local level (slight effect), and the impact assessment and proposed mitigation measures presented in **EIAR Chapter 7** remain valid.

2.2.4 Pre-construction surveys

A preliminary list of anticipated surveys would include:

2.2.4.1 Hen harrier

Hen Harrier breeding surveys will continue prior to construction, such that all pre breeding nuptial activity, nesting activity and active nests are recorded within 2km of the entire red line boundary.

Hen Harrier winter roost surveys will continue prior to construction, such that all potential roosting locations within 1km of the red line boundary are surveyed. (Note that no roosts were located within 1km during baseline surveys).

2.2.4.2 Otter

Confirmatory surveys for active Otter holts and breeding activity will be carried out 150m upstream and downstream of watercourse crossing locations including those watercourses evaluated as unsuitable for Otter in the current appraisal. These confirmatory Otter surveys will be undertaken no more than 12 months in advance of proposed construction activities, during the period November and April when vegetation cover is reduced.

2.2.4.3 Badger

Confirmatory surveys will be carried out within 50m of either side of the red line boundary to determine if any new setts have been established in the intervening period following initial pre-planning surveys and the commencement of construction activity. These confirmatory badger surveys will be undertaken no more than 12 months in advance of proposed construction activities, during the period November and April when vegetation cover is reduced.

2.2.4.4 Bats

Confirmatory surveys will be carried out at all trees that will require felling or other major modifications (e.g., removal of rotten branches) in order to confirm the findings of previous surveys regarding the suitability of the trees for roosting bats. These trees will be subject to a ground-level visual inspection by a suitably qualified ecologist prior to any site clearance works.

All bridges of moderate suitability for bats will be subject to a confirmatory survey prior to the commencement of construction works. Bridges of negligible or low suitability do not need to be surveyed, but this will be reviewed by the Environmental Clerk of Works and Project Ecologist.

All known bat roosts within 250m of the construction works areas will be subject to confirmatory survey prior to the onset of construction works in order to identify any changes in the interim period since baseline establishment. Surveys will be carried out at a time of year that is appropriate to the type of roost e.g., June to August for maternity roosts, or November to February for hibernation roosts. This will ensure that the Project Ecologist has accurate information regarding the location and status of roosts.

2.2.4.5 General mammals

Confirmatory surveys (of suitable habitat) for the presence/absence of other mammals or their breeding/resting places within 50m of the construction works area will be undertaken prior to the commencement of vegetation and/or hedgerow clearance and excavations.

Confirmatory surveys to check for any new dens/dreys that may have arisen between the time of the original survey and start of works will be undertaken by a suitably qualified ecologist.

2.2.4.6 Marsh fritillary

Although no Marsh Fritillary were confirmed on-site, a pre-construction survey of the distribution of Devil's-bit Scabious (larval food plant of Marsh Fritillary) during the last available survey season prior to the commencement of construction works will be undertaken. This requires that any areas of Devil's-bit Scabious that are located within the red line boundary, will be trimmed/cut to ground level in the last available late April / early May period prior to the commencement of construction to avoid these areas being used by any possibly colonising adults.

2.2.4.7 Invasive species

Monitoring in the form of confirmatory surveys will be carried out by the Project Ecologist to accurately determine the current status of invasive species locations, updating those identified during baseline studies.

3 GENERAL PUBLIC

3.1 Theme 1: Loss of wildlife/biodiversity

Generic concerns were raised regarding loss of wildlife/biodiversity as a result of the Proposed Development.

Potential impacts associated with construction, operation and decommissioning of the wind farm have been thoroughly described and assessed in **EIAR Chapter 7** following best practice and appropriate guidance by appropriately qualified and experienced experts.

Section 7.8 described residual effects on Key Ecological Features (i.e., habitats and species) which, with the adoption of the mitigation measures described, including those detailed in the SHMP, are anticipated to be not significant.

3.2 Theme 2: Proximity of Gortacullin Bog NHA

Concerns were raised regarding the proximity of Proposed Development to the Gortacullin Bog NHA.

The proximity of Gortacullin Bog NHA is described and fully assessed in Section 7.6.2.6. The assessment concludes:

“Considering the lack of works within Gortacullin Bog NHA, and the embedded mitigation measures within the Proposed Development design, potential effects on the integrity of Gortacullin Bog NHA from the Proposed Development are considered not significant.”

3.3 Theme 3: Presence of bat roosts in properties

A number of respondents identified bat roosts within buildings not covered by bat surveys undertaken for the Proposed Development and reported in the EIAR.

As described in **EIAR Chapter 7**, Section 7.3.2.19 Bats - Fieldwork an ecological appraisal was undertaken of all buildings within 500m of the Proposed Development. **EIAR Chapter 7**, Section 7.2.2.20: Surveys of potential bat roosts states that no buildings were present within 500m.

Bat activity surveys (**EIAR Chapter 7**, Section 7.3.2.21 Proposed Development Wind Farm Bat Activity surveys) were undertaken in accordance with relevant guidance and professional judgement sufficient to provide a good representation of bat activity during their most active periods.

3.4 Theme 4: Potential impacts on Doon Lake

The submissions suggested a lack detailed assessment of impacts on Doon Lake.

The presence of Doon Lough NHA is acknowledged in Table 7.11 of the **EIAR Chapter 7**.

Considering the distance between Doon Lough NHA and the Proposed Development (**EIAR Chapter 7**, Section 7.6.2.7), and the embedded mitigation measures within the

Proposed Development design, potential effects on the integrity of this nationally designated sites is considered not significant.

3.5 Theme 5: Inadequacies of bat survey and assessments

Concerns were raised on the potential impacts to bats, particularly on Lesser Horseshoe Bats.

Potential impacts associated with construction, operation and decommissioning of the wind farm on bats, including Lesser Horseshoe Bats have been thoroughly described and assessed in **EIAR Chapter 7** following best practice and appropriate guidance by appropriately qualified and experienced experts.

Section 7.8 of the **EIAR Chapter 7** described residual effects which, with the adoption of embedded mitigation measures including a SHMP, results in no residual effects on Key Ecological Features (i.e., habitats and species) being anticipated.

However, arising from submissions and in order to provide clarification and context, a desk review and field assessment has recently been undertaken for potential wintering and other roosting structures in the wider area. Co-ordinated connectivity activity surveys and static detector deployments between known roosts and the Proposed Development have been further undertaken and the results are presented in Appendix 2.

The assessment of potential impacts includes the adoption of embedded mitigation (Section 7.5 of **EIAR Chapter 7**) to minimise disturbance (e.g., to minimise generation of additional noise, light and vibration), with a particular focus on avoiding activity within nocturnal periods, when particularly notable species such as bats (e.g., Lesser Horseshoe Bat) are active. The adoption of such mitigation is assessed as such effects resulting in no significant impacts.

The loss of habitat as a result of clearing a buffer zone around the Turbines is included in the assessment and reported as "….in the absence of additional mitigation, the construction of the Proposed Development will cause a decrease in the availability and connectivity of suitable bat foraging and commuting habitat. As such, in the absence of additional mitigation the construction of the Proposed Development is considered to potentially have a significant negative effect on foraging and commuting bats at a Local level (slight effect) through habitat loss and fragmentation". Mitigation is proposed in the form of habitat creation as described in **EIAR Chapter 7,** Section 7.6.5 Construction Phase and Section 7.6.6 Habitat Reinstatement and Creation.

Due to an error in formatting **EIAR Chapter 7,** Section 7.7 lacks an appropriate number and title but Sections 7.6.4 - 7.6.9 describe mitigation measures required to address where potential significant effects on ecological features have been identified.

3.6 Theme 6: Potential impacts to marsh fritillary

Submissions regarding Marsh Fritillary surveys and assessments.

Whilst no evidence of Marsh Fritillary was recorded within or in close proximity to the Proposed Development site, grassland within the Proposed Development site was highly suitable for Marsh Fritillary, containing abundant Devil's-bit Scabious, and a number of nearby records of this species were identified during the desk study. The Proposed

Development site and adjacent land has therefore been identified as potentially being of local importance (higher value) for Marsh Fritillary on a precautionary basis.

The Proposed Development includes embedded mitigation during construction to minimise the loss and fragmentation of suitable Marsh Fritillary habitat (i.e., wet grassland and heath), avoid significant disturbance and minimise construction fatalities. Considering this embedded mitigation, disturbance effects on Marsh Fritillary during construction will not be significant. However, in the absence of additional mitigation, the construction of the Proposed Development will cause a decrease in the availability and connectivity of suitable Marsh Fritillary habitat. As such, in the absence of additional mitigation the construction of the Proposed Development is described as potentially having a significant negative effect on Marsh Fritillary at a local level (slight effect) through habitat loss and fragmentation.

Section 7.6.6 of **EIAR Chapter 7** states "*Habitats will be created in proportion with the type and extent of habitat loss during construction (Table 7.23).*" The design and management of this habitat will take into consideration the suitability of this habitat for the Key Ecological Features identified in this EIAR chapter. The locations of habitat reinstatement and enhancement measures will take into consideration the risk of operational effects (e.g., turbine collisions), with creation of features which could bring sensitive species (e.g., bats) into proximity with wind turbines will be avoided. Detailed habitat re-instatement and creation is described in the SHMP for the Proposed Development. This includes the creation and/or enhancement of the following habitats identified as being important in the context of the Proposed Development: heath and bog, grassland, scrub and hedgerows, and conifer plantation. The total study area in which habitats will be managed comprised 173.66ha of managed habitats and 14.48km of linear managed habitats (e.g., hedgerows). This significantly exceeds the habitat loss anticipated within the Proposed Development (Table 7.23) and will provide a significant biodiversity enhancement (including for the Key Ecological Features identified in this EIAR Chapter). Details of habitat management regimes are specified in the SHMP."

Despite the lack of sightings from targeted surveys, the potential presence of Marsh Fritillary in the development area is acknowledged in **EIAR Chapter 7**, Section 7.6.3.1, Section 7.6.3.2 and Section 7.6.3.3, where its stated that "*The Proposed Development and adjacent land has therefore been identified as potentially being of Local importance (Higher value) for Marsh Fritillary on a precautionary basis*." The NBDC data relates to the recorded presence of the butterfly in the relevant 10km squares not the development site itself.

Comments regarding a lack of sightings of the butterfly, reported in **EIAR Chapter 7**, relate to all stages of the butterfly.

In the reporting of Survey Results, a note regarding Transect 11 being "unknown" relates to the surveyor being unable to access the specific area due to livestock being present. The surveyor could see from the side of the field that there was abundant Devil's-bit Scabious but could not enter the field and check for larval webs. Whilst this is a constraint, surveys in other adjacent areas, maintaining suitable habitat did not yield evidence of Marsh Fritillary presence. Nevertheless, as described above and in **EIAR Chapter 7** the potential presence of Marsh Fritillary in the development area is acknowledged, Section 7.6.3.1, Section 7.6.3.2 and Section 7.6.3.3 "*The Proposed Development and adjacent land has therefore been identified as potentially being of Local importance (Higher value)*

for Marsh Fritillary on a precautionary basis." and impacts assessed accordingly. Pre-construction surveys will be undertaken to confirm or revise the current occupancy habitat records and prescribe any required micro-design, retiming of works, vegetation management and, as a last resort, relocation of larval webs.

Marsh Fritillary Web surveys were undertaken on 6th September. Habitat surveys (not Marsh Fritillary surveys were undertaken in July and August.

The 10 Marsh Fritillary webs reported in **EIAR Chapter 7**, Section 7.3.2.5 refer to the historic data obtained from review of the NBDC not surveys undertaken for this assessment.

Larval webbing was not "….*recorded within and adjacent to the development area".* Suitable habitat was, however, recorded and reported in **EIAR Chapter 7**, Section 7.4.3.1.

3.7 Theme 7: Lack of consideration of Monterey pine beetle in EIAR

Concerns were raised about the recently discovered Monterey Pine Beetle within the vicinity of the Proposed Development.

Guidance from Department of Agriculture, Food and the Marine[1] notes that the beetle is not thought to be a pest of economic significance for Ireland and its finding will not affect the movement of Irish spruce logs and timber and other non-pine species. As stated in Section 7.4.2.7 of **EIAR Chapter 7**, the dominant species of the conifer plantations is Sitka Spruce (WD4) and the majority of timber to be felled and removed is therefore unaffected.

EIAR Chapter 5 Project Description, Section 5.1.1.3 Removal of Forestry and Replant Lands states that "*The construction of the Proposed Development will require the clear-felling of commercial conifer plantation and replanting in accordance with the licensing requirements of the Forest Service of the Department of Agriculture, Food and the Marine.*" Any such licence will stipulate any required restrictions/controls.

3.8 Theme 8: Potential presence of freshwater pearl mussel and otter at watercourse crossings

Reference was made to the potential presence of Freshwater Pearl Mussel and Otter in a watercourse associated with HDD crossing of the GCR.

There are no known Freshwater Pearl Mussel (*Margaritifera margaritifera*) records in the Owenogarney_SC_010, Owenogarney_SC_020, Shannon [Lower]_SC_100 and Ballygirreen_SC_010 river sub-catchments. This assessment was based on an extensive literature review and also examination of NPWS sensitive species data. However, following the precautionary principle and to account for any lacunae in data for the species, environmental DNA (eDNA) samples were collected from the Broadford River, Owenogarney River, Gourna River and River Blackwater in August 2023 and analysed for freshwater pearl mussel eDNA, this indicated the species' absence within the vicinity of the Proposed Development. Nevertheless, even should Freshwater Pearl Mussel be

[1] https://www.gov.ie/en/publication/b62ba-monterey-pine-engraver-pseudips-mexicanus-discovered-in-co-clare/

present, the conclusions of **EIAR Chapter 7** remain valid that "….*embedded mitigation, and the scope for effects, effects on aquatic species through disturbance, pollution and associated mortality during the construction of the Proposed Development are considered not significant. The status of aquatic habitats and species will continue to be monitored during and post-construction (see Section 7.9), the findings of which will inform any requirement for additional mitigation.*"

The presence of Otter is acknowledged within or within close proximity to the Proposed Development and therefore considered as a Key Ecological Feature (**EIAR Chapter 7**, Section 7.4.5.1). As described in Section 7.5 of **EIAR Chapter 7**, "*the Proposed Development includes embedded mitigation during construction to minimise loss, fragmentation and pollution of suitable Otter habitat, and to avoid significant disturbance (e.g., of aquatic habitat for foraging and commuting, and of terrestrial habitat suitable for dens). Notably, best practice construction measures (Section 7.5.1) and ecological supervision (Section 7.5.4) will prevent pollution of watercourses and ensure suitable habitat for holts within/near work areas are identified (through pre-construction surveys) and appropriate mitigation is subsequently adopted. Considering the level of Otter activity recorded within the ecological baseline of the Proposed Development, and this embedded mitigation, construction effects on Otter through habitat loss and fragmentation, pollution and disturbance are considered not significant.*"

3.9 Theme 9: Inadequacies of invasive species surveys

Submissions made reference to a stand of Japanese Knotweed additional to those recorded in the EIAR.

The presence of Japanese Knotweed is acknowledged and assessed in **EIAR Chapter 7**. Reference to pre-construction surveys is made in the CEMP and an Invasive Species Management Plan is included in the EIAR as **Appendix G** which will be implemented for all recorded invasive species.

3.10 Theme 10: Potential impacts to hedgerows and mature trees along the turbine delivery route

Concern was noted regarding potential impact to vegetation along the Turbine Delivery Route.

The TDR has been fully evaluated in terms of potential habitat loss including for hedgerows and mature trees. Section 7.8 of **EIAR Chapter 7** describes residual effects which, with the adoption of embedded mitigation measures including a SHMP, results in no residual effects on Key Ecological Features (i.e., habitats and species) being anticipated.

3.11 Theme 11: Mitigation measures

Submissions raised concern that monitoring is proposed as mitigation.

Section 7.9 of **EIAR Chapter 7** states that monitoring will be undertaken to "…. *ensure the mitigation measures specified in this EIAR chapter are satisfying their aims and inform any additional management measures and/or changes in management practices.*"

The monitoring measures proposed are therefore for purposed of assessing the effectiveness of the mitigation measures proposed, allowing the Applicant to make any necessary adjustments required to ensure that the goals of the mitigation measures proposed are achieved.

3.12 Theme 12: Requirement for Natura Impact Statement to contain complete, precise and definitive conclusions

The submissions received identified the need to provide complete, precise and definitive findings and conclusions as to the effects of the Proposed Development on protected sites concerned.

A Screening Report for Appropriate Assessment was presented as part of the Application and provides a review of relevant European Union (EU) designated sites of nature conservation value (termed 'European Sites' or 'Natura 2000 sites') and identifies any potential Likely Significant Effects (LSE) from the Proposed Development on these EU designated sites.

Where potential Likely Significant Effects on a European Site were identified, an Appropriate Assessment was undertaken to identify any adverse effects on the integrity of the European Site; a report to inform this (the Natura Impact Statement report) was subsequently prepared and submitted by RSK Biocensus and Inis Environmental Consultants as part of the Application. These reports accompany **EIAR Chapter 7** and **EIAR Chapter 8 Ornithology** for the Proposed Development (submitted as part of the planning application to ABP on 22nd December 2023).

The Natura Impact Statement (NIS) report assesses whether the Proposed Development is anticipated to result in any adverse effects on the integrity of any European sites. Where likely adverse effects on the integrity of a European site are identified, the NIS report prescribes mitigation measures for the avoidance of such effects.

The NIS report objectively concluded that, following an examination, analysis and evaluation of relevant information, including in particular the nature of the predicted impacts from the Proposed Development and the implementation of mitigation measures, the Proposed Development will not adversely affect (either directly or indirectly) the integrity of any European site, either alone or in combination with other plans or projects.