



Orsted Onshore Ireland Midco Limited

Response to Request for Further Information

Proposed Oatfield Wind Farm, Co. Clare

An Coimisiún Pleanála Case No. ABP-318782-24

NOVEMBER 2025



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INTRODUCTION

Purpose of this Report

This report has been prepared by RSK Ireland on behalf of Orsted Onshore Ireland Midco Limited (the Applicant) to address a second Request for Further Information (RFI) received from An Coimisiún Pleanála in respect of the submitted Oatfield Wind Farm Planning Application (ABP-318782-24).

Application History

The planning application for the Proposed Development was submitted to An Bord Pleanála on 22 December 2023. The Applicant, Orsted Onshore Ireland Midco Ltd., submitted its response to public submissions on 19 June 2024.

Subsequently, An Bord Pleanála issued its first RFI, which was received by post on 17 January 2025 and the Applicant issued its response to same on 23 May 2025. Following the readvertisement required due to significant additional information provided, a second round of submissions was received by An Coimisiún Pleanála.

On 23 October 2025, the Applicant received a second RFI from An Coimisiún Pleanála. This RFI forms the basis of the current report. The sections below address each RFI item in turn.

Report Structure

This report has been compiled by RSK Ireland with specialist inputs from competent experts, where relevant. The details of the competent experts involved in the preparation of this report are presented in each section of this report.

Each RFI item is addressed within the sections below and includes a reproduction of the request as received from An Coimisiún Pleanála, for ease of reference. Where additional supporting documentation has been prepared, reference is made to same in the appendices section of this report.

1 RFI ITEMS 1 AND 2

1.1 Details of RFI Item 1

“Review and address the submissions from Air Nav Ireland, Shannon Airport Authority and the Irish Aviation Authority in relation to the outcome of the IFP redesign process, and expert review of potential cumulative effects on NAVAIDS (ILS), which was due to be completed in September 2025”.

1.2 Details of RFI Item 2

“Review and address the submissions from Air Nav Ireland, Shannon Airport Authority and the Irish Aviation Authority that the Proposed Development will result in unmitigable radar deflection impacts on the Woodcock Hill Radar System”.

1.3 Statement of Authority

The technical section of the below response has been prepared by Kevin Hayes of Ai Bridges who is the Founding Director and Engineering Contracts Manager at Ai Bridges Ltd. Kevin has over 20 years’ experience in telecommunications network design, aviation impact studies and project management. He has a B.Eng Hons in Electronic Engineering – Communications & Industrial Automation and M.Eng Hons in Electronic Engineering-Communications & Communications Engineering. He also managed and designed the software prediction model for the TVI & Broadband EMI Interference Studies for Wind Farms. Supporting technical information was prepared by Cyrrus Limited, a leading international consultancy providing a range of specialist aviation support services to help airports and developers manage and overcome the varied and often complex technical requirements associated with the running of an airport or delivering development projects on or adjacent to airports.

1.4 Response

1.4.1 Context for Outstanding Aviation Matters

The Applicant wishes to highlight to An Coimisiún Pleanála that they have acted in good faith at all times and have made every reasonable effort, through their appointed consultants, to engage constructively with AirNav Ireland, the Irish Aviation Authority, and Shannon Airport Authority in order to progress and close out the outstanding aviation-related matters.

As the communication timeline in Table 1.1 below demonstrates, the Applicant initiated contact, responded promptly to all correspondence received, provided technical information to facilitate discussions, and repeatedly sought clarification meetings to resolve the remaining issues highlighted by the aforementioned bodies. Despite these proactive efforts, the level of engagement from the relevant aviation bodies has been limited, inconsistent, and in several instances non-responsive, which has materially impeded the timely advancement of the planning process.

The Applicant’s clear and consistent intention has been to address all concerns collaboratively and transparently; however, the absence of substantive engagement from the aviation authorities has prevented the resolution of the outstanding points. The Applicant respectfully requests that An Coimisiún Pleanála acknowledge both the extent of their efforts and the challenges posed by the

lack of meaningful cooperation from the aviation bodies, as evidenced by the detailed timeline provided in Table 1.1.

1.4.1.1 Further Correspondence with AirNav Regarding Outstanding Technical Information

The Applicant sought to progress matters by issuing a formal letter of request to AirNav regarding outstanding technical information required to facilitate analysis of the issues highlighted by the aviation authorities. A summary of this correspondence is as follows and the letters of correspondence referenced are included in Appendix 1 of this RFI Response Document:

Following the Applicant's initial legal request to AirNav on 1 October 2025, which sought the technical information required, AirNav issued a response on 31 October 2025. In their response, AirNav stated that while some information could be shared, the technical data necessary to enable meaningful analysis could not be disclosed on the basis that it contained sensitive national-security-related material. This position was unexpected, given AirNav's previous agreement during earlier meetings to provide the technical information required to undertake the Applicant's assessment.

The Applicant subsequently issued a further legal letter on 7 November 2025, reiterating the request for the outstanding technical data. AirNav responded on 14 November 2025, asserting that *"the available data and analysis as requested in your letter dated 1 October 2025 has already been provided"* and that the reasons for withholding certain requested data had already been explained. AirNav further stated that the renewed request was "not understood" and referred again to the safeguarding zone associated with protection of radar signals, noting that its details had already been provided.

Contrary to AirNav's position, the Applicant has not received any technical assessment, qualitative analysis, or underlying data to enable the required evaluation of the alleged radar deflection impacts. The sole material received to date is the 'Schedule 1 AirNav Radar Details 2025', provided on 3 November 2025, which does not constitute the technical information previously requested nor the information that AirNav had indicated would be provided during earlier discussions.

Accordingly, the Applicant issued a further legal letter on 18 November 2025, expressly confirming that no technical or analytical material had been provided and reiterating the urgent need for the outstanding data to allow the Applicant to undertake a proper analysis of the purported deflection effects and to prepare the necessary response to the outstanding further information request. The Applicant again requested that AirNav provide the required information as a matter of the utmost priority.

Table 1.1: Timeline of Communication with AirNav Ireland, IAA and Shannon Airport

Milestone	Date	Notes
Submissions received	19 th Feb 2024	Submission received from AirNav
Submissions response submitted	Submitted 19 th June 2024	Included AiBridges and Cyrrus report which responded to AirNav submission
RFI 1	Received 17 th Jan 25, point 1 asked for engagement with IAA, Shannon Airport and AirNav Ireland	Engagement organised with IAA, Shannon Airport and AirNav (<i>refer to meeting minutes appendices in RFI response doc for dates and details</i>)

Milestone	Date	Notes
Engagement with AirNav Ireland	29 th January 2025	On-line discussion with AirNav (to obtain a clear understanding of the aviation issues
Engagement with Shannon Airport Authority	February 15 th 2025	On-line discussion with Shannon Airport Authority to obtain a clear understanding of the aviation issues
Engagement with AirNav Ireland	February 20 th 2025	On-line discussion with AirNav to obtain a clear understanding of the aviation issues relating to RADARs and other issues
Joint stakeholder meeting	20 th May 2025	All issues (IFPs due to the redesign) bar deflections are mitigatable, AirNav Ireland agreed to provide data on deflections in order for Cyrrus to do analysis and provide site specific mitigation measures (<i>refer to meeting minutes appendices in RFI response doc for dates and details</i>)
First Consultant email follow up on data	06 th June 2025	AiBridges emailed AirNav requesting the data that was discussed at the joint meeting, no response received
Second Consultant email follow up on data	19 th June 2025	AirNav responded 20 th June 2025: <i>'I apologise that I haven't gotten back to you or Cyrrus in relation to deflected targets displayed on the Woodcock Hill Radar. We have been and continue to be, fully occupied with regulatory issues related to Dublin Radars. I will get back you on this once we have some available time to progress this.'</i>
Third Consultant email follow up on data	22 nd July 2026	No response received
Fourth Consultant email follow up on data	30 th July 2025	No response received
Fifth Consultant email follow up on data	01 st Sept 2025	Phone conversation had between AiBridges and AirNav, AirNav requested to have the submission response document reissued to him for review. AirNav followed up with an email on 1 st Sept querying the meeting minutes and advising that he needed to follow up with the management team and legal team to understand if they're in a position to issue the data
Orsted legal team MHC issued first legal letter requesting the data from AirNav	01 st Oct 2025	No acknowledgement or response received
Second legal letter issued to AirNav	15 th Oct 2025	No acknowledgement or response received
Third legal letter issued to AirNav	31 st Oct 2025	Additional request for data
AirNav first Response Letter	31 st Oct 2025	Some data received, missing key technical information required
Fourth legal letter issued to AirNav	07 th November 2025	Further request for missing key technical information
AirNav second Response Letter	14 th November 2025	AirNav state available data and analysis has already been provided and cite reasons why the required technical information cannot be provided.

Milestone	Date	Notes
Fifth legal letter issued to AirNav	18 th November 2025	Legal team issue a further letter reiterating that the required technical information has still not been provided to date.

1.4.2 Technical Response

The applicant confirms that it has not received any submissions or correspondence from Air Nav Ireland, Shannon Airport Authority and the Irish Aviation Authority in relation to the outcome of the IFP redesign process, and expert review of potential cumulative effects on NAVAIDS (ILS), which was due to be completed in September 2025.

As no submissions have been received, the Applicant is unable to provide any further information in response at this point in time.

The Applicant notes that it welcomes the response from Shannon Airport Authority in relation to the IFP redesign process, that there is an acceptance that as part of redesigns to the IFPs serving Shannon Airport, that mitigations that allows for the proposed new wind turbine as obstacles can be incorporated.

The Applicant also notes that it welcomes the response from Shannon Airport Authority in relation to NAVAIDS / ILS Protection Areas, based on their review of the report by Flight Calibration Services Limited (FCSL), on behalf of the Applicant, indicated no issues with the Proposed Development of this Wind Farm.

The applicant had been made aware of a Deflections issue with the MSSR at Woodcock Hill relating to an Air Nav Telecommunications mast which is in line of sight with the Radar. Radar tracks presented during discussions with Air Nav and Wind Energy Ireland (WEI) and subsequently provided to the Applicant by WEI showed radar deflections at extreme range of the En-route Radar system. AirNav identified this as an example of deflections which has occurred and indicated their concern that similar deflections would occur due to the Oatfield Wind Farm wind turbine generators. AirNav were requested to provide the Radar data which would be modelled by the Consultants Cyrrus to assess the level of impacts at distances between 150NM¹ and 250NM to confirm if they were due to the telecoms mast or an artefact of the system operating at its maximum range. AirNav initially agreed to this request but after some delay indicated they were unable to provide the data due to confidentiality issues. This was clarified through legal correspondence between the Applicant and AirNav Ireland. Some information was provided but not all required data was made available. This is a key issue and can only be resolved through modelling the actual Radar data related to the apparent observed deflections. The Applicant confirms that it would be satisfied for AirNav to provide the data directly to the Consultant Cyrrus under a Confidentiality Agreement with a Report to be produced by them with all confidential information either redacted or not included.

The Applicant is also aware of the AirNav issues with other potential wind farm developments in the Shannon Airport and Woodcock Hill area that cumulatively could impact on the MSSR Radar and believes that a solution to the potential Radar issue exists.

The Applicant commits to working with Air Nav Ireland, Shannon Airport Authority and the Irish Aviation Authority (IAA) to clearly identify the impacts which are likely to occur through modelling in an empirical manner and to identify an optimum mitigation solution should this be required. To

¹ NM – Nautical Miles

this end, the Applicant has recently engaged with an International consultant, who has modelled and predicted empirically the level of impact of an existing and proposed additional wind farm development circa 8km from a busy International and Military Airport, with both a Primary Surveillance RADAR (PSR) and two Monopulse Secondary Surveillance Radars (MSSR). The are of similar manufacture to those at Shannon Airport and Woodcock Hill, having been provided by the same Radar manufacturer. A mitigation option was identified and implemented.

It is noteworthy that in the history of discussion on aviation issues at Oatfield the minutes of a meeting held between the then Applicant (different from the present Applicant) and the IAA on the 22nd of February 2020, which focused on Woodcock Hill Radar, indicated the Woodcock Hill Radar was scheduled to be replaced by 2026. The original upgrade schedule was to commence in 2020 (to 2025). Current radars are 16 – 17 years old. Discussions with AirNav Ireland in 2025 on a possible mitigation measure solution, involving a new MSSR En-route Radar at an alternative location occurred. Opportunities to find a temporary location to substitute the MSSR at Woodcock Hill to takeover during a possible upgrade to a new Radar were also discussed.

1.4.2.1 AirNav Ireland

At the outset of their response in August 2025 to the previous RFI submission of July 2025, AirNav, as ANSP, state their role and responsibility:

“AirNav Ireland is the Air Navigation Service Provider of Air Traffic Management Services (Air Traffic Control/ Instrument Flight Procedures (IFPs), Communications, Navigation (NAVAIDs) and Surveillance for Irish Airspace and for the State Aerodromes at Dublin, Cork and Shannon.”

AirNav then outline their Conclusion to the RFI on Case ABP-318782-24 Oatfield Wind Farm by stating the following:

1.1 “AirNav Ireland recognizes the need to support sustainable energy developments in Ireland.

1.2 For formal and final assessment of the NAVAIDs and IFP impacts associated with the Oatfield Wind Farm Development, the activity outlined below continues in the expectation of completion by the end of September 2025. This will allow a definitive position to be arrived at by AirNav in respect of these areas of concern and we therefore request that any decision on this development is delayed until this data has been collated.

1.3 In relation to the Surveillance MSSR beam deflection, in the case of Woodcock Hill En Route MSSR there are no mitigations possible in our view and in the absence of in-service evidence that wind turbines erected within comparable ranges of enroute radar systems do not generate deflections, AirNav cannot support this development as it stands. The shadowing effect of the Turbines will introduce coverage gaps in controlled airspace and this will result in a change to the surveillance functional system and degradation of the probability of detection. The AirNav change management systems approved by the IAA does not allow for the functional systems changes that are less safe than the original system.

AirNav Ireland strongly objects to any further progress with this development on this basis.”

AirNav Ireland then make the further observations in relation to the above referenced case and acknowledge receipt of additional material submitted by the Applicant under RFI ("Response to Request for Further Information", May 2025; "Aviation Response Statement", July 2025). Please refer to the AirNav Ireland submission for further details of the observations.

Applicant Response to AirNav Ireland Concerns:

The Applicant welcomes the fact that AirNav recognises the need for support in relation to energy developments in Ireland. The Applicant believes that this of course needs to be balanced, with aviation safety as its foundation, with the Country's Green Energy aspirations.

The Applicant notes AirNav and Shannon Airport Authority have requested that any decision on this Proposed Development is delayed until a formal and final assessment of the NAVAIDs and IFP impacts associated is completed, so as to allow a definitive position to be arrived at by AirNav in respect of their concern on NAVAIDS and IFP impacts.

The Applicant would formally request that AirNav and Shannon Airport Authority would revert with clarification on the expected timeline of completion for the final assessments of the NAVAIDs and IFP's.

The Applicant notes AirNav's response in relation to the potential for Surveillance MSSR beam deflections on the Woodcock Hill MSSR, due to the Proposed Development. The Applicant also notes that in previous engagements on the matters relating to a number of other developments across the footprint of the "Oatfield" site over the last 10 years that AirNav previously stated in relation to the Radar Assessment that the "*Methodology of this assessment has been accepted in principle*". This Applicant has provided a Radar Assessment for the proposed Oatfield Development which follows the same "methodology". (Ref. 1.2.48, Response Statement, Response to the AirNav Ireland, Observation on the SID Application, Jan. 2024). The Applicant has commissioned Aviation Specialists, Cyrrus, to carry out a detailed Mitigations Options Study as part of a "deeper impact assessment" requested by AirNav. This study considers all of the common issues relating to wind farm impacts on radars and includes a series of mitigation options to mitigate out any potential impacts on the Woodcock Hill Radar from the Proposed Development.

The Applicant believes that methodology and approach adopted within the Mitigations Options Study should be sufficient to form the basis of further discussions with AirNav, Shannon Airport and the Irish Aviation Authority to collaborate and explore upgrade options.

The Applicant, on foot of the recent significant information received in relation to AirNav's radar sensors in operation in the State, believes that they can now obtain evidential support and specific evidence by way of simulations that will substantiate the claims and concepts contained within the Mitigations Options Study. The Applicant has recently engaged with an international consultant, who has modelled and predicted empirically the level of impact of an existing and proposed additional wind farm development circa 8km from Schiphol Airport in the Netherlands. Schiphol is a very busy International and Military Airport, with both a Primary Surveillance RADAR (PSR) and two Monopulse Secondary Surveillance Radars (MSSR). The Radars at Schiphol are of similar manufacture to those at Shannon Airport and Woodcock Hill, having been provided by the same Radar manufacturer.

The empirical effect of the wind farms on the existing Schiphol Radars was identified by the Consultant, who has the appropriate clearance to use confidential data and a mitigation option was identified and implemented. In this case, the mitigation involved the provision of a new additional MSSR which provided coverage of any area potentially Impacted with integration into the EuroControl ARTAS system, thereby ensuring full Radar tracking of all aircraft to the satisfaction of the ANSP. Note, ARTAS is the ATM Surveillance Tracker And Server, which is a system designed by Eurocontrol to operationally support Aerial surveillance and Air traffic control by establishing an accurate Air Situation Picture of all traffic over a pre- defined geographical area and then distributing the relevant surveillance information to a community of user systems. ARTAS

is a distributed system composed of a number of identical subsystems co-operating together. Each subsystem, called an ARTAS Unit, will process all surveillance sensor data to form a best track estimate of the current Air Traffic situation within a given Domain of Interest. Adjacent ARTAS Units co-ordinate their tracks to build a unique, coherent and continuous Air Situation Picture over the complete area.

The empirical analysis of impacts was critical to identifying the extent of any impact and the appropriate mitigation, Additionally the Consultant has also empirically modelled a similar potential impact from a proposed wind farm development on an Enroute MSSR in Australia.

The Applicant believes that the mitigation options are credible and that they can provide a simulation model that quantifies empirically the exact level of impacts that may be caused by the Proposed Development on the Woodcock Hill MSSR.

The Applicant would also welcome the opportunity to now provide a validated simulation model of the existing baseline of impacts of existing operational wind turbines and telecoms mast obstacles on Woodcock Hill MSSR and Shannon MSSR. The applicant proposes that the simulation model could be used to accurately assess and quantify the exact impacts of beam deflections from the Proposed Development on the Woodcock Hill MSSR and in part provide measurable evidence to progress discussions around the optimal mitigation solutions that have been proposed.

The Applicant notes AirNav's response in relation to the shadowing impacts on the Woodcock Hill MSSR, due to the Proposed Development. The Applicant has commissioned Aviation Specialists, Cyrrus, to carry out a detailed Mitigations Options Study as part of a "deeper impact assessment" requested by AirNav. This study considers all of the common issues relating to wind farm impacts on radars and includes a series of mitigation options to mitigate out any potential impacts on the Woodcock Hill Radar from the Proposed Development.

The Applicant acknowledges that AirNav have received and reviewed the documentation which is an accurate reflection of the timeline of interactions. The Applicant also acknowledges that the meeting minutes were not furnished to all parties, which the Applicant accepts was an oversight within the consultation process, however given time constraints, verbal agreement on the meeting minutes was confirmed prior to the submission. The Applicant will therefore re-engage with AirNav and send drafts of all meeting minutes for review and comment for as to formally close out the consultation process.

The Applicant acknowledges the unique geographical location of Ireland as an island and the interface with the airspace to the west of Ireland (High-seas). The Applicant fully accepts the national importance of radar feeds from neighbouring states to ensure safe en-route airspace. The Applicant further acknowledges the role and responsibility of AirNav Ireland as the Air Navigation Service Provider of Air Traffic Management Services (Air Traffic Control/ Instrument Flight Procedures (IFPs), Communications, Navigation (NAVAIDs) and Surveillance for Irish Airspace and for the State Aerodromes at Dublin, Cork and Shannon, and in its role in the provision of a safe and efficient air traffic management service on behalf of the State.

The Applicant would be willing to contribute its share of the costs associated with any implementable and viable mitigation measure solution, as required, on a pro-rata basis with any of the listed projects that are granted a planning consent.

1.4.2.2 Shannon Airport Authority

Shannon Airport Authority have outlined in their observation, their concerns and those raised by AirNav Ireland with the Oatfield Wind Farm development. They detail their support and clarify joint concerns regarding the Proposed Development. Please refer to Shannon Airport Authority submission for further details of the observations.

Shannon Airport Authority state that this development was objected to by AirNav Ireland and Shannon Airport on three previous occasions, when submitted by multiple developers. Currently a Request for Further Information has been sought and submissions by relevant parties are required on this development to An Coimisiún Pleanála by 22nd August 2025.

Shannon Airport also go on to state that, in the main, the response statement including meeting minutes prepared by Ai Bridges who are acting as the EIAR consultant on behalf of Orsted Onshore Ireland Midco Ltd. is an accurate reflection of engagements undertaken with the developer of this proposed Wind Farm.

Shannon Airport meeting minutes furnished in the RFI response were not distributed for review or agreed with by Shannon Airport prior to the recent submission, and also notes however require a small number of corrections are required

Shannon Airport also note that the developer in the RFI response has addressed several areas of concern previously highlighted by both Shannon Airport and Air Nav Ireland:

“Three areas of concern for AirNav Ireland and Shannon Airport have been addressed: Surveillance (Radar) impacts, Instrument Flight Procedures impacts and Navigation Aids (NAVAIDs) impacts (particularly in relation to the Instrument Landing Systems (ILS) serving Shannon Airport Runway 24), have been addressed by the developer. However, these issues still remain a concern for AirNav Ireland and Shannon Airport”.

Shannon Airport states that some fundamental issues remain.

Applicant Response to Shannon Airport Authority Concerns

The Applicant notes the observations in relation to the concerns that have been raised by Shannon Airport Authority.

The Applicant notes Shannon Airport Authority response in relation to the potential for Surveillance MSSR beam deflections on the Woodcock Hill MSSR, due to the Proposed Development. The Applicant also notes that in previous engagements on the matters relating to a number of other developments across the footprint of the “Oatfield” site over the last 10 years that AirNav previously stated in relation to the Radar Assessment that the *“Methodology of this assessment has been accepted in principle”*. This Applicant has provided a Radar Assessment against the proposed Oatfield Development and which follows the same “methodology”. (Ref. 1.2.48, Response Statement, Response to the AirNav Ireland, Observation on the SID Application, Jan. 2024). The Applicant has commissioned Aviation Specialists, Cyrrus, to carry out a detailed Mitigations Options Study as part of a “deeper impact assessment” requested by AirNav. This study considers all of the common issues relating to wind farm impacts on radars and includes a series of mitigation options to mitigate out any potential impacts on the Woodcock Hill Radar from the Proposed Development.

The Applicant notes response by Shannon Airport Authority that the minutes of meetings is an accurate reflection of engagements undertaken however this requires one correction on the point of the reference to the EIA Consultant. The acting EIA Consultant for this Proposed Development is RSK Ltd.

The Applicant notes that Shannon Airport Authority have highlighted that meeting minutes were circulated of previous engagement but were not circulated to all parties concerned. The Applicant will therefore re-engage with AirNav and send drafts of all meeting minutes for review and comment for as to formally close out the consultation process. Please note, given time constraints, verbal agreement on the meeting minutes was confirmed with AirNav prior to the submission.

The Applicant notes that Shannon Airport Authority itself notes that the areas of concerns have been addressed in the last submission by the Applicant. The Applicant states that it is committed to ongoing engagements so that all concerns can be addressed to the satisfaction of all parties to this Response.

The Applicant notes that aviation safeguarding must be the basis of all engagements regarding co-existence of wind farm developments and aviation infrastructure. The Applicant would like to draw reference to the circulated minutes of a meeting in July 2025 between Wind Energy Ireland and Renewable Energy Ireland with participation from the IAA and the Department of Transport. There was a very high-level discussion on the area of the role of the Air Navigation Service Provider and aerodrome provider that they are following systems, policies and procedures necessary for aviation safeguarding. It is the role of the AirNav as ANSP, if they identify a safety issue, that they need to mitigate even if this means an objection a to planning application, but that other mitigations that are within appropriate risk tolerance levels may be available. The IAA directed attention to EU Regulation on this matter, specifically EU Regulation 2017/373. This regulation, in the context of Irish Airspace, sets out common rules for air traffic management and air navigation by service providers, their risk-based oversight by the Irish Aviation Regulator (IAA), it provides a framework for the IAA to manage non-compliance through analysis and enforcement measures and establishes a structured system for the IAA to analyse non-compliance findings, decide on enforcement measures based on safety risk, and ensure corrective actions are taken.

Also, the Applicant would again refer to point 1.3 above whereby the applicant, believes that they can now obtain evidential support and specific evidence by way of simulations that will substantiate the claims and concepts contained within the Mitigations Options Study.

1.4.2.3 Irish Aviation Authority

In their Response the Irish Aviation Authority state that:

Following their review of the additional information submitted by the Applicant and its consultants regarding the proposed Oatfield Wind Farm, and in particular the two appendices provided by the Applicant, i.e.:

- Appendix 1 : Ai Bridges Technical Response (submitted as part of first RFI)
- Appendix 2 : Cumulative Impact Assessment Report (submitted as part of first RFI)

They note the concerns raised by AirNav Ireland (ANI), which are supported by Shannon Airport Authority (SAA), regarding the potential impact of the Proposed Development on the provision of a safe and efficient air traffic management service on behalf of the State.

The Irish Aviation Authority also notes AirNav Ireland's latest observations, submitted in response to the request for further information highlight their following key issues herein:

- **“Woodcock Hill Radar Deflection:** AirNav Ireland objects to the development due to unmitigable radar deflection impacts on the Woodcock Hill Radar system.
- **Shannon Airport Instrument Flight Procedures:** AirNav Ireland notes that redesign work is currently underway, with completion expected by the end of September 2025. Accordingly, ANI have requested a delay in decision-making to allow for the outcome of this work.
- **Shannon Airport Instrument Landing System (ILS) Protection:** AirNav Ireland has commissioned an expert review of the potential cumulative impacts on ILS protection areas. This review is ongoing and has not yet been concluded.

Therefore, we respectfully request that An Coimisiún Pleanála take account of ANI's concerns, the ongoing ANI studies, the technical requirements involved, and the complexity of the proposed mitigations when considering their decision”.

Applicant Response to IAA Concerns

The Applicant acknowledges that the IAA notes the concerns raised by AirNav, as supported by Shannon Airport Authority, regarding the provision of a safe and efficient air traffic management service on behalf of the State.

The Applicant also acknowledges that the IAA note AirNav’s concerns in relation to Woodcock Hill Radar Deflections, Shannon Airport Instrument Flight Procedures and Shannon Airport Instrument Landing System (ILS) Protection. The Applicant notes it addresses the AirNav observations in Section 1.4.2.1 of this Response and that it addresses the Shannon Airport Authority observations in Section 1.4.2.2 of this Response.

The Applicant notes the request from the IAA to An Comision Pleanála to take account of AirNav’s concerns, the IFP and ILS studies that are on-going and to also take into account of the complexity of proposed mitigations when considering their decision.

The Applicant also notes in its Response that it awaits the outcome of the re-design of the Instrument Flight Procedures and that they are open and willing to engage with AirNav, Shannon Airport and the IAA so as provide measurable evidence of mitigation solutions.

1.4.3 Summary

The Applicant acknowledges the concerns of the IAA, AirNav Ireland and the Shannon Airport Authority with respect to the Radars at Shannon Airport and Woodcock Hill and is fully committed to resolving these in order for the Proposed Development to progress. The Applicant has always been willing to engage with AirNav and has requested the data that would allow them to present the technical details of an aviation mitigation scheme for consideration by AirNav and assessment through their Safety Assurance Approvals process. Ultimately the decision on the most suitable mitigation solution has to be decided by AirNav Ireland.

The Applicant commits to working with Air Nav Ireland, Shannon Airport Authority and the IAA to clearly identify the impacts which potentially could occur or not through modelling by an independent Consultant in an empirical manner and to identify an optimum mitigation solution should this be required before a decision of An Coimisiún Pleanála is finalised.

Should AirNav Ireland, Shannon Airport Authority and IAA feel they are unable to withdraw their objections or participate with the Applicant to identify an optimum solution, despite the expert opinion justification for doing so, we would respectfully suggest that An Coimisiún Pleanála give consideration to exercising its right to convene a “limited agenda” hearing with both parties.

The Applicant would also be amenable to the Board inserting a planning condition that the Applicant agrees with AirNav Ireland, Shannon Airport Authority and the IAA in relation to the optimisation of Woodcock Hill MSSR to be undertaken and its financing prior to commencement. For example:

“Prior to the commencement of development, and following consultations with AirNav Ireland, Shannon Airport Authority and IAA as appropriate, an optimum solution for the MSSR at Woodcock Hill will be agreed with AirNav Ireland, Shannon Airport Authority and IAA as part of the detailed aviation mitigation plan which incorporates the commitments set out in the aviation technical reports submitted as further information, and which shall be submitted to, and agreed in writing with, the relevant planning authority.”

The Applicant would be willing to contribute its share of the costs associated with any implementable and viable mitigation measure solution, as required, on a pro-rata basis with any of the listed projects that are granted a planning consent.

2 RFI ITEMS 3 AND 4

2.1 Details of RFI Item 3

“Review and address the submission from the Department of Housing, Local Government and Heritage in relation to: the further decline and diminished range of the national population of Hen Harrier (2022 National Survey published in February 2024) and the corresponding national importance of the Proposed Development site/area for Hen Harriers; the shortcomings of the Collision Risk Modelling which should have applied a cumulative assessment of risk across a wider area including the boundary of regionally important breeding area as per the Hen Harrier Threat Response Plan (published in September 2004); the inadequacy of the proposed exclusion zone around Hen Harrier nests of 300-750m and the uncertainty this large differential presents for the decision-making process; the insufficient mitigation measures for the avoidance of active Hen Harrier nests which should be extended to 15th August (from 1st March); the re-evaluation of scrub removal/control (e.g. Blackthorn) on the basis of up-to-date surveys, the use of an up-to-date results based habitat scoring approach in future habitat management (as pioneered by the Harrier EIP Project) which should be taken forward by the DAFM ACRES Cooperation projects; and the low likelihood of detecting raptor collisions on the basis of monthly avian mortality searches”.

2.2 Details of RFI Item 4

“Review and address the submission from the Department of Housing, Local Government and Heritage in relation to the enhancement of commuting habitat for Lesser Horseshoe Bat in the Northern Parcel of the SHMP”.

2.3 Statement of Authority

Dr Alex Copland PhD BSc MEnvSc MCIEEM (Technical Director, INIS) drafted the ecological inputs to the RFI response. He has over 30 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, managing staff and resources to meet budgetary constraints and the successful delivery of projects on time. These have included research and targeted management work for species of conservation concern, ecological assessments (including fieldwork and reporting) for large-scale infrastructure projects (including Strategic Infrastructure Developments) and delivering successful planning outcomes, 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. His PhD focused on the design and delivery of agri-environment schemes for bird populations in Ireland, and he subsequently designed, implemented and evaluated targeted agri-environmental measures for a range of bird species in Ireland and the EU through various agri-environmental schemes, including the Results-based Agri-environmental Pilot Scheme (RBAPS) in Ireland. In relation to Wind Farms, Alex has overseen the delivery of technical (ecology) inputs into eight Wind Farm EIAR chapters in Ireland,

totalling nearly 100 turbines and a generation capacity exceeding 350MW. He also sits on the Editorial Panel of the scientific journal, *Irish Birds*, which publishes original ornithological research relevant to Ireland's avifauna, and CIEEM's *Irish Policy Group*.

Howard Williams BSc CEnv CBiol MRSB MIFM (Lead Ecologist and Managing Director, INIS), provided technical support and review during the production of this RFI response. He is a Chartered Environmentalist and Chartered Biologist who has authored and managed Ecological Impact Assessments (EclA), Construction Environmental Management Plans and Article 6 Appropriate Assessments (AA) for more than 50 wind farm projects. He is currently advising on 900MW of onshore and offshore renewable energy projects and has advised on 800MW of successful renewable energy projects over the past 25 years.

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. He surveyed Hen Harriers in every SPA in Ireland where Hen Harrier is a qualifying interest. Of particular relevance, he has completed the planning and management aspect of Hen Harrier monitoring and surveying at wind farms during the pre-construction, during construction, operational and clear-felling stages of construction. He has extensive experience offering toolbox talks to engineers and their teams and has designed detailed PowerPoint presentations on ecological issues at wind farms for inclusion at these toolbox presentations.

2.4 Response

2.4.1 Cumulative Assessment in Relation to Hen Harrier Collision Risk Modelling (CRM)

The Department's comments regarding further Hen Harrier population decline is noted. The sections below provide a response in relation to cumulative CRM for each relevant additional wind farm currently in the planning system.

2.4.1.1 Knockshanvo Wind Farm

The collision risk for Hen Harrier within the Knockshanvo Wind Farm has been calculated at a rate of 0.078 collisions per year. The collision risk for Hen Harrier within the Proposed Oatfield Wind Farm has been calculated at a rate of 0.01 collisions per year, equating to one Hen Harrier collision every 76.15 to 87.42 years. This gives a total of 0.088 collisions per year for both Wind Farms.

Both the Knockshanvo and Oatfield EIARs state that there is no significant collision risk during the operational phase of the wind farm. The cumulative impact of collision risk is not expected to increase the overall magnitude or significance of effect on Hen Harrier.

2.4.1.2 Ballycar Wind Farm

The collision risk for Hen Harrier during operation of the Ballycar Wind Farm is calculated to be 0.0007 birds per year (0.026 birds over 35 years). The modelled Hen Harrier collision fatalities for the Proposed Oatfield Wind Farm in comparison are estimated as 0.01 birds per year, equating to one Hen Harrier collision every 76.15 to 87.42 years. This gives a total of 0.0107 collisions per year accounting for both Wind Farms.

As such, when assessed in the context of the Hen Harrier population recorded within the Proposed Oatfield Wind Farm and the Ballycar Wind Farm. The cumulative impact of collision risk is not

expected to increase the overall magnitude or significance of effect on Hen Harrier, therefore, significant cumulative impacts on collision risk are not predicted.

2.4.1.3 Carrownagowan Wind Farm

The collision risk for the Carrownagowan Wind Farm is calculated at a rate of 0.056 collisions per year, or 1.65 birds over the 30-year lifetime of the wind farm. This corresponds to a 2% increase in the background mortality rate of the local population and a 0.1% increase in the background mortality rate of the national population. Therefore, the magnitude of the collision effect is considered Low. The modelled Hen Harrier collision fatalities for the Proposed Oatfield Wind Farm in comparison are estimated as 0.01 birds per year, equating to one Hen Harrier collision every 76.15 to 87.42 years. This gives a total of 0.066 collisions per year for both Wind Farms.

As such, when assessed in the context of the Hen Harrier population recorded within the Proposed Oatfield Wind Farm and the Carrownagowan Wind Farm. Significant cumulative impacts on collision risk are not predicted.

2.4.1.4 Fahybeg Wind Farm

Hen Harrier was not selected for CRM, the reasoning stated within the Fahybeg Wind Farm EIAR is that species with < 200 flight seconds in the Collisions Risk Zone/500m turbine buffer were not subject to CRM due to collision risk being below negligible levels. Hen Harrier was recorded for a total of 43 seconds in the period 2019-2021 within the 30-180m collision risk zone within the 500m turbine buffer. This shows a negligible level of activity and falls beneath the threshold for CRM. The modelled Hen Harrier collision fatalities for the Proposed Oatfield Wind Farm in comparison are estimated as 0.01 birds per year, equating to one Hen Harrier collision every 76.15 to 87.42 years. As such, when assessed in the context of the Hen Harrier population recorded within the Proposed Oatfield Wind Farm and the Fahybeg Wind Farm, significant cumulative impacts on collision risk are not predicted.

2.4.1.5 Lackareagh Wind Farm

The collision risk for wintering Hen Harrier for the Lackareagh Wind Farm has been calculated at a rate of one bird every 584 years, breeding Hen Harrier collision risk has been calculated at a rate of one bird every 203 years with a maximum blade length of 77.5m. The total estimated collision risk (breeding and wintering populations) for the lifetime of the Lackareagh Wind Farm is 0.23, this predicted collision risk is insignificant over the 35- year lifetime of the Wind Farm. The modelled Hen Harrier collision fatalities for the Proposed Oatfield Wind Farm in comparison are estimated as 0.01 birds per year, equating to one Hen Harrier collision every 76.15 to 87.42 years. As such, when assessed in the context of the Hen Harrier population recorded within the Proposed Oatfield Wind Farm and the Lackareagh Wind Farm. Significant cumulative impacts are not predicted.

2.4.1.6 Collision Risk Cumulative Impacts (All Wind Farms)

The total annual collision risk for Hen Harrier for all six projects is estimated at 0.155 birds/annum. This equates (for the lifespan of all six projects) to a total of 5.6 fatalities during their 30-35 years lifespan. Note that this estimated value is for all six projects if approved and constructed, of which Oatfield contributes 0.46 fatalities (8.2%) over the 35-year lifespan of the project.

The local population of Hen Harrier is estimated (in 2022) to be 5-9 pairs (Slieve Aughties and Slieve Bernagh to Keeper Hill areas; Ruddock et al., 2024), having declined by 58.8% in the preceding seven years (since 2015; Ruddock et al., 2016). This indicates an annual population

decline locally of 8.4%. As a result, the additional impacts arising from the collision risks associated with the six Wind Farms would be c.2% increase in background mortality for the local population, which would be low magnitude of effect and, in EPA terms for assessing significance of impacts (EPA, 2022), be considered as a not significant impact.

2.4.2 Proposed Exclusion Zone for Hen Harrier (Nesting Buffers) and Mitigation Measures

The Department's comments regarding the setbacks proposed for Hen Harrier nests are noted. However, the guidance for **non-SPA** nest setbacks for Hen Harrier (as in the case of the Proposed Development) is 300-750m, as indicated in NatureScot Research Report 1283 - Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species (Goodship & Furness, 2022).

2.4.2.1 Construction Phase – Ecology Protocol

The above report states, “*For activities with a high potential for visual and audial disturbance (e.g. forestry operations), a larger buffer zone between 500-1000m may be necessary during the breeding period*” and this distance would be relevant to the Construction (and Decommissioning) Phase during the nesting season.

For Oatfield Wind Farm, we would recommend the employment of a Hen Harrier expert for the construction phase of the project who would advise the construction team on a real-time basis of any potential nest prospecting and viable nests. We would then recommend limiting construction activities within 750m of any confirmed nest during the breeding season (Goodship & Furness, 2022). This restriction puts a lot of heavy construction activity into the wettest period of the year so we would caveat that the Hen Harrier expert would retain the ability to allow certain heavy lifting works to take place during the breeding season (in strict consultation with NPWS) if they are satisfied that those works would not impact the Hen Harrier nests success, i.e. stage 2 – 3 week old Hen harrier chicks – this scenario worked successfully on the Ballyhouras project in Co. Cork where Hen Harriers fledged chicks every year during construction and five years thereafter within 300m of an active turbine.

2.4.2.2 Operational Phase - Ecology Protocol

The NatureScot Research Report states “*Hen harrier will nest at 200 to 300m from an operational wind turbine (Madders and Whitfield 2006) or closer (Ruddock and Whitfield, 2007)*”. As a result, we would recommend that curtailment is considered within 300m of an active Hen Harrier nest, subject to the protocol detailed below. This protocol is based on the very successful protocol agreed with NPWS on the Ballyhouras Project, where successful Hen Harriers fledged in multiple years within 300m of an active turbine.

Protocol for Hen Harrier breeding within 300m of operational turbines:

- Breeding season vantage point assessments, in accordance with SNH (2017), will commence in February on all suitable breeding habitats, by a suitably qualified and appropriately experienced ecologist and continue during the breeding season until the end of August at Oatfield Wind Farm.
- If pre-breeding activity (nuptial flights, nest site prospecting) is noted by a surveyor within 300m of an operational turbine, this site will be given additional survey time to confirm breeding. If breeding is confirmed, NPWS will be notified.

- Mitigation may necessitate the curtailment of turbine(s) for some of the breeding season based on an assessment by NPWS and the advice of the on-site Ornithologist.

2.4.2.3 Predator Control

Nest predators of Hen Harriers, including Fox and corvids, have been shown to have a negative impact on breeding Hen Harriers (Ruddock *et al.*, 2024). Ruddock *et al.* (2017) attributed 20% of breeding failures to predation by Foxes and Hooded Crows, and the recent Hen Harrier Threat Response plan (NPWS, 2024) states that joint measure to reduce the impact of predators is required. As a result and based upon the very positive effect on Hen Harrier breeding success proximal to the Ballyhouras Wind Farm, where a licensed corvid culling programme (Construction and Operational Phases) operated (in conjunction with habitat management measures), a similar corvid control programme will be implemented for Oatfield.

Details of the corvid culling programme are as follows:

- Subject to approval from NPWS, all corvids will be controlled under a Section 42 licence within a 1km radius of the Wind Farm.
- Control methods will use 2No. walk-in ladder traps, strategically placed to optimise results without impacting on non-target species
- Timing of control will focus on the pre-nesting period to reduce corvid numbers in advance of the nesting period.
- All control activities will be logged with results provided back to NPWS as part of the Section 42 licencing requirements.

Note that the comprehensive suite of measures proposed for Oatfield Wind Farm, to include the extensive habitat management work to maintain, enhance and create optimal foraging habitats for Hen Harrier, along with the proposed predator control programme, will collectively benefit Hen Harriers breeding in proximity to the Wind Farm, based on the very positive results evident from these measures operating in the Ballyhouras wind farm.

The mitigation habitats proximal to the Wind Farm reduce the time required by adult Hen Harriers for foraging at distance from the nest location and therefore the time those birds are not protecting the nest. The adults will guard the nest from predators, so reducing the time the adults have to forage away from the nest site will also reduce predator impacts. When these habitat management measures (as detailed in the Oatfield Hen Harrier Management Plan) proximal to nesting areas are combined with the predator control programme described above, we would expect to see very positive outcomes for Hen Harrier reproductive success around Oatfield, as we have recorded for the Hen Harrier population associated with the area around the Ballyhouras Wind Farm.

Please note that the development and operational team at Orsted for the Oatfield project was also the development and operational team for the Ballyhouras project so the correct implementation of the Hen Harrier mitigation will be understood very well by Orsted. The application of the detailed measures around exclusion zones was followed extremely well by the Orsted development and operational team at Ballyhouras with ongoing contact with NPWS when required leading to successful outcomes for breeding Hen Harrier throughout construction and operational stages.

Mr Howard Williams designed and policed the Ballyhouras mitigation and has also designed the Oatfield Wind Farm mitigation – the mitigation as proposed represents best in class protection for Hen Harrier throughout construction and operation of the wind farm.

2.4.3 Scrub as Important Nesting and Winter Roost Habitat for Hen Harrier

It is noted that the Department mentioned the need for any proposed habitat management for Hen Harrier at the site to build upon the foundations of the NPWS Farm Plan Scheme, the Hen Harrier EIP Project (2017 to 2022) and the more recent DAFM ACRES General and Cooperation Projects. We will ensure that all future management measures fully align with these updated best practice frameworks.

We acknowledge the Department's emphasis on the importance of scrub, particularly Blackthorn, as both nesting and winter roost habitat for Hen Harrier. Accordingly, any proposed removal or control of scrub will be supported by up-to-date surveys to ensure there is no detrimental loss or deterioration of this essential habitat, including habitat used by Hen Harrier prey species.

Note that the results based habitat scoring approach is not considered appropriate or required as a support for the proposed habitat management. The aim of the habitat management is to achieve optimum results in every case, and a results-based approach is not required as scheme participation is not voluntary. Nevertheless, the monitoring and evaluation will be informed by methodology developed through the Hen Harrier EIP Project and continued under the ACRES Cooperation Projects the outputs of which will guide all future habitat management actions.

2.4.4 Avian Fatality Searches

It is noted that the Department has highlighted that although monthly avian mortality searches are proposed, the likelihood of detecting raptor collisions is expected to be low because scavengers can remove carcasses within a few days. In response, we will incorporate additional measures to increase detection rates. These will include increasing search frequency during higher risk periods, applying established carcass persistence and searcher efficiency trials to adjust and interpret results accurately and ensuring that trained personnel carry out systematic searches. Together, these measures will strengthen the monitoring approach and provide more reliable information on potential avian fatalities.

2.4.5 Enhancement of commuting habitat for Lesser Horseshoe Bat in the Northern Parcel of the SHMP

The Department's comments regarding the enhancement of commuting habitat for Lesser Horseshoe Bat in the northern parcel of the Proposed Development's Species and Habitat Management Plan (SHMP) are noted. As detailed in the SHMP, existing areas of suitable scrub and hedgerow will be retained within the Study Area. In areas where the extent of scrub and hedgerow is limited, additional scrub and hedgerow will be created, either through active management or by allowing the expansion of Gorse and native hardwood scrub. Small areas of established Gorse and Willow scrub can be trimmed to prevent unacceptable encroachment onto grassland and access routes, but they must not be removed, burnt or killed. In particular, scrub and hedgerow management should seek to maximise the surface area of this habitat to provide the greatest possible extent of suitable Hen Harrier foraging habitat. In regard to Lesser Horseshoe Bat, particular attention will be given to the northern section of the managed areas in order to enhance commuting hedgerow habitat.

Habitat management prescriptions for scrub and hedgerows are listed below:

- Retain existing areas of scrub and hedgerows;
- Reinstate scrub and hedgerows where there is evidence of recent removal;

- Create new areas of scrub and hedgerows where the extent of this habitat is limited, and allow the expansion of native hardwood scrub into areas of improved agricultural land;
- Trim established areas of Gorse and Willow scrub and hedgerows as the only means of preventing further encroachment onto grassland and access routes, 1-26 repeating annually if necessary, with cutting kept a minimum of 1m from the hedgerow base;
- Avoid any burning of, or herbicide use on, areas of established scrub;
- Maintain hedgerows to prevent the hedge 'escaping' (i.e., hedgerows which have not been topped, allowing the hedgerow to become a line of trees), with hedgerow trees left uncut and the remainder of the hedgerow cut into an 'A' shape (i.e., wider at the base than at the top);
- Divide large (i.e., exceeding 1ha) areas of established scrub by cutting rides in accordance with the schedule described herein;
- Existing hedgerows with gaps of 5m or less will be planted with native species; and
- Pile hedge cuttings into heaps and leave to decay naturally.

Collectively, these measures will enhance the landscape for **both** foraging Lesser Horseshoe Bat and Hen harrier.

3 REFERENCES

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