

Response to Submissions

Cooloo Wind Farm (ACP
Ref. 323761)





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1. INTRODUCTION

MKO have been instructed by Neoen Renewables Ireland Limited (the Applicant), to prepare a response to the request issued by An Coimisiún Pleanála (the Commission) on 22nd December 2025 (Third Party and Statutory Bodies Observations) in relation to the live Strategic Infrastructure Development (SID) planning application before them for consideration (ACP Ref: 323761).

The Proposed Project will comprise 9 no. wind turbines with a tip height of 180 metres (m) and will have an estimated installed capacity between c.54MW and 64.8MW, located in County Galway (the 'Proposed Project'. The Commission did not request responses to specific observations made to the planning application; rather they invited the Applicant to make a submission in response to both the third-party/prescribed body observations received.

The letter of 22nd December 2025 stated that the deadline for submitting a response to the third-party observations and prescribed body observations was 13th February 2026. MKO requested an extension to respond to the third party/ prescribed body observations by email dated 5th February 2026. An extension was granted by the Commission via email on 6th February 2026, until 27th February 2026.

1.1 Overview of the Proposed Project

The Applicant lodged a planning application to the Commission in September 2025 for the Proposed Project as set out in the public notices as follows.

"The proposed development will consist of the provision of the following:

- i. 9 no. wind turbines with the following parameters:

 - Total turbine tip height of 180 metres;
 - A rotor blade diameter of 150 to 162 metres;
 - A hub height of 99 to 105 metres;*
- ii. Permanent turbine foundations, hard-standing and assembly areas;*
- iii. Underground electrical (33kV) and communications cabling;*
- iv. 1 no. temporary construction compound (including site offices and welfare facilities);*
- v. A meteorological mast with a height of 100 metres, security fencing and associated foundation and hard-standing area;*
- vi. 1 no. new site entrance on the R332 in the townland Lisavally;*
- vii. 1 no. new access and egress point off the L6056 Local Road in the townland of Dangan Eighter;*
- viii. 1 no. new access and egress point on to an existing access track in the townland of Dangan Eighter;*
- ix. 2 no. new access and egress points off the L6301 Local Road in the townland of Cooloo and Lecarrow;*
- x. Upgrade of existing site tracks/roads and provision of new site access roads, clear span crossings, junctions and hard-standing areas;*
- xi. A new temporary access road from N63 national road and to R332 Regional Road in the townland of Slievegorm to facilitate the delivery of turbine components and other abnormal sized*
- xii. loads;*
- xiii. Demolition of an existing derelict house and adjacent outbuilding in the townland of Cooloo;*
- xiv. Peat and Spoil Management Areas;*
- xv. Tree felling and hedgerow removal;*
- xvi. Biodiversity Management and Enhancement measures;*
- xvii. Site Drainage;*
- xviii. Operational Stage site signage; and*

- xix. All ancillary apparatus and site development works above and below ground, including soft and hard landscaping.*

A 10-year planning permission and 35-year operational life of the wind farm from the date of commissioning of the entire wind farm is sought (other than temporary and permanent works specified above)."

1.2 Terminology

The terminology of project elements used within this report, remains consistent with the terminology used throughout the original planning application documents including the Environmental Impact Assessment Report (EIAR) and is outlined below.

- **'Proposed Project'**: Encompasses the entirety of the project for the purposes of this EIA in accordance with the EIA Directive. The Proposed Project is described in detail in Chapter 4 of the EIAR.
- **'Proposed Wind Farm'**: This refers to turbines and associated foundations and hard-standing areas, meteorological mast, access roads, temporary construction compound, underground cabling, peat and spoil management, site drainage, biodiversity enhancement, turbine delivery route (TDR) accommodation works and all ancillary works and apparatus. The Proposed Wind Farm is described in detail in Chapter 4 of the EIAR.
- **'Proposed Grid Connection'**: Refers to the 110kV onsite substation, battery energy storage system and 110kV underground cabling connecting to the existing Cloon 110kV substation, and all ancillary works and apparatus. The Proposed Grid Connection is described in detail in Chapter 4 of the EIAR.
- **'Site'**: Relates to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-1 of the EIAR and encompasses an area of approx. 355 hectares.
- **'Proposed Wind Farm site'**: This refers to the portion of the Site surrounding the Proposed Wind Farm but excluding the portion of the Site surrounding the Proposed Grid Connection underground cabling route.

2. RESPONSE TO THIRD-PARTY OBSERVATIONS

There were 221 no. valid observations received on the application including third party observers and prescribed bodies. Table 1 below outlines the common themes identified within the third-party observations and specifies the lead author on the project team responsible for the corresponding response.

Table 2-1 Third Party Observation Themes

Theme	Section Discussed	Lead Author(s) for Response
Planning Policy and Legislation	Section 2.1	MKO
Public Consultation & Community Engagement	Section 2.2	MKO
Land Ownership & Usage	Section 2.3	MKO
Project & Application Details	Section 2.4	MKO
Population & Human Health	Section 2.5	MKO
Biodiversity	Section 2.6	MKO
Land Soils and Geology	Section 2.7	Gavin & Doherty Geosolutions
Hydrology and Hydrogeology	Section 2.8	Hydro-Environmental Services
Noise	Section 2.9	TNEI
Climate	Section 2.10	MKO
Landscape and Visual Assessment	Section 2.11	MKO
Cultural Heritage	Section 2.12	IAC Archaeology Ltd
Traffic and Road Safety	Section 2.13	Alan Lipscombe Traffic Consultants, MKO
Telecommunications	Section 2.14	MKO
Major Accidents and Natural Disasters	Section 2.15	MKO
Decommissioning	Section 2.16	MKO

2.1 Planning Policy and Legislation

2.1.1 Galway County Development Plan Policy

A number of third-party observations referenced the planning policy relevant to the Proposed Wind Farm site. These observations mainly related to local planning policy and specifically to the Galway Local Authority Renewable Energy Strategy 2022-2028 ('the LARES').

The content of these observations was mainly focused on the classification of the portion of the application site being designated as 'Generally to be Discouraged' for wind energy development. These observations questioned the suitability of these lands for the development of wind energy infrastructure given that they have not been classified in a suitable area for this type of development.

Some observers also raised concerns regarding potential conflicts to other policies and objectives within the Galway County Development Plan (GCDFP) 2022-2028. These policy and objectives relate to natural heritage and biodiversity, wetland protection, and peatland protection.

Response

As outlined in the Planning Report submitted with the Planning Application, a robust constraints analysis has been carried out in order to determine areas suitable for turbine placement. It is demonstrated through the assessment of the Proposed Wind Farm against the LARES, that the Wind Farm site is suitable for wind energy development. The Proposed Wind Farm site scores well when examined across the opportunity and sensitivity factors set out in the LARES. This assessment is provided in section 7.2.4 of the Planning Report.

It should also be highlighted that the LARES does not specifically restrict applications for wind turbines within Generally to be Discouraged Areas, but rather, they are assessed on their merits on the principle of proper planning and sustainable development. As such and having regard to the policy appraisal in the Planning Report, it is considered that the proposed turbines outside favourable policy areas are consistent with the policies and objectives of the LARES and the GCDP, the principal development is acceptable and therefore it should be assessed on its merits by the An Coimisiún Pleanála.

As part of the Planning Report, a comprehensive assessment of the wind energy capacity was conducted, revealing that there is an insufficient quantum of favourably zoned land to reach the estimated yield in County Galway by 2030. The estimated shortfall exceeds 400MW, falling short of the 1,350 MW total capacity outlined in the LARES. It is for this reason it is critical to examine all viable areas that may be suitable for wind energy following a detailed assessment, and to maximise the potential of sites brought forward for wind energy. Where it can be demonstrated that viable sites outside of the favourable policy areas are suitable for wind energy following detailed assessment, these areas should be considered for wind energy to meet national climate and energy targets.

It is noted in this regard that Galway County Council (GCC) in their report submitted to the Commission conclude that the principle of the Proposed Wind Farm is considered to be acceptable, subject to the assessment of the proper planning and sustainable development.

An assessment of all relevant policy objectives is provided in the Planning Report which accompanied the application, please see section 7.2 Table 4 of the Planning Report for further detail.

2.1.2 Wind Energy Design Guidelines 2006

A number of third-party observations highlighted concerns with the 2006 Wind Energy Development Guidelines. They consider the guidelines to be outdated and not fit for purpose when it comes to assessing modern wind farm proposals.

Response

As set out in section 2.5.5 of the EIAR, 'Wind Energy Development Guidelines for Planning Authorities' (Department of the Environment, Heritage and Local Government (DoEHLG), 2006) (hereafter referred to as the 2006 Guidelines) remains to be the relevant document in relation to Section 28 of the Planning and Development Act 2000, as amended ('the Planning Act'). In December 2019, The Department of Local Government and Heritage published 'Draft Wind Energy Development Guidelines' (Department of Housing, Local Government and Heritage (DoHLGH) (hereafter referred to as the draft 2019 Guidelines). The draft 2019 Guidelines is an update to the 2006 Guidelines, which were the subject of a 'focused review' undertaken by the Department of Housing, Local Government and Heritage with regards to noise standards, set back distances, shadow flicker, community consultation and community dividend and grid connections.

Given the timelines involved in renewable energy project planning applications, an updated draft may be finalised during the project's assessment. It has been demonstrated in the EIAR that the Proposed Wind Farm will be capable of adhering to the relevant standards set out in the draft 2019 Guidelines, based on currently available information.

Section 5.2 of the Planning Report outlines how the Proposed Project was designed with regard to the 2006 and 2019 Guidelines.

It is noted that planning authorities/ the Commission are not bound to the provisions of the wind energy guidelines, and they can (and do) consider updated standards/requirements/specifications in assessing impacts and the proper planning and sustainable development of the area.

2.1.3 Compliance with SEA, EIA and Habitats Directive

A submission raises concerns regarding the Proposed Projects compliance with the SEA Directive, the EIA Directive and the Habitats Directive.

Response

The Strategic Environmental Assessment (SEA) Directive sets out a procedure that must be undertaken when assessing a plan or programme to which the procedure applies, not planning applications for individual projects. SEA has been undertaken of adopted planning policy at all levels, including the GCDP 2022-2028, the Regional and Spatial and Economic Strategy 2020 – 2030, and the National Planning Framework.

As detailed in Section 1.2 of Chapter 1 in the submitted Environmental Impact Assessment Report (EIAR), the EIAR complies with the EIA Directive 2011/92/EU as amended by Directive 2014/52/EU. In addition, Article 94 of the Planning and Development Regulations 2001 (as amended) sets out the information to be contained in an EIAR, with which the EIAR complies. The Environmental Impact Assessment (EIA) will be undertaken by the Commission, as the competent authority.

The EIAR provides information on the receiving environment and assesses the likely significant effects of the Proposed Project on it and proposes mitigation measures to avoid or reduce these effects. The function of the EIAR is to provide information to allow the Commission to conduct the EIA of the Proposed Project. All elements of the Proposed Project, i.e. the Proposed Wind Farm and Proposed Grid Connection have been assessed as part of the EIAR.

Article 6(3) of the Habitats Directive sets out the requirement for an Appropriate Assessment (AA) of any plan or project that is not directly related to the management of a protected site but is likely to have a significant effect on it. This assessment evaluates the potential implications for the site in light of its conservation objectives. Under Section 177U of the Planning and Development Act (as amended), the legal requirements pertaining to AA set out in Part XAB of the Planning Act, apply to this application for development permission under Section 37E. This application for planning permission is therefore accompanied by an AA Screening Report and a Natura Impact Statement (NIS). The AA will be undertaken by the Commission, as the competent authority.

2.1.4 Project Splitting

Several third-party observations to the Commission raised concerns that the Proposed Grid Connection, inclusive of the onsite 110kV substation and battery energy storage system (BESS) compound and the Proposed Wind Farm are being treated as separate applications. They suggest that the Applicant might be engaging in project splitting, dividing the project into smaller parts to downplay the overall environmental and social impacts.

Response

The Proposed Grid Connection falls within the 110kV SID threshold for electricity transmission infrastructure. As such, the Proposed Grid Connection is not included in this application and will be subject to a separate application to the Commission under Section 182A of the Planning and Development Act 2000, as amended. While the Proposed Project consists of two separate planning

applications (one for the Proposed Wind Farm and one for the Proposed Grid Connection), no project splitting has occurred as the entirety of the Proposed Project has been assessed throughout the EIAR.

Section 1.1.1 of the EIAR clearly sets out the approach in relation to the assessment of the Proposed Project. The Proposed Wind Farm and the Proposed Grid Connection (which will be subject to a separate application) have been comprehensively assessed together in the EIAR submitted with the planning application. The EIAR covers the Proposed Wind Farm and the Proposed Grid Connection as a single entity referenced as the 'Proposed Project' throughout the application.

2.1.5 **Unauthorised Development**

A submission raised concerns surrounding unauthorised development on the Proposed Wind Farm site.

Response

The Applicant is not aware of any presence of unauthorised development within the Proposed Wind Farm site. GCC, as stated in their PA report, did not identify any enforcement cases relating to the site.

2.2 **Public Consultation & Community Engagement**

Several third-party observations to the Commission have regard to the description of the Proposed Project in the planning application and submitted Environmental Impact Assessment Report (EIAR). Observations are made under the following themes:

- > Community Consultation & Engagement with Local Community Bodies
- > Public Notice in Newspaper

2.2.1 **Community Consultation & Engagement with Local Community Bodies**

Concerns have been raised suggesting there was a lack of community consultation process undertaken as part of this project. Submissions have claimed that there was a lack of meaningful public engagement, with insufficient information, and ineffective communication, leading to community consultation that is not in line with the draft 2019 Guidelines.

Response

A Community Engagement Report is included as Appendix 2-2 of the EIAR, which outline the steps that the Applicant has taken since project inception to ensure transparent community engagement through all phases of the project to date. This report has been prepared in line with the requirements as set out in the Draft Revised Wind Energy Development Guidelines (December 2019) – Community Engagement.

From early 2023 and over the course of 2024, there was ongoing communication between members of the local community and the project Community Liaison Officer (CLO), representing the project developers. This communication took place predominantly via email and phone and was predominantly concerned with the same themes that had been encountered earlier in the consultation process, such as visual and noise impact, property prices, etc. As a period of time had passed since the public information event in 2024, updated information was issued via post to the wider community in September 2025. The details provided included the full description of the Proposed Project seeking planning permission, as well as a map of the final layout of the Proposed Wind Farm.

The Applicant has engaged and consulted with the local community from an early stage of the pre-planning phase of the Proposed Project. This process of community engagement has proven highly valuable as a means of identifying the key concerns of the local community in relation to the Proposed Project, and the issues raised by local residents during the consultation process have informed and shaped the project proposal in several ways.

The Proposed Project will provide a direct and prolonged economic benefit to the communities surrounding the site through the Community Benefit Fund, and through employment opportunities during the construction process. The Applicant is committed to maintaining the strong community engagement approach throughout the post-application stage and, if planning permission is granted, will continue to consult with and be available to residents through the construction and operational lifespan of the Proposed Wind Farm.

As detailed in Appendix 2-2 of the EIAR, as part of the community consultation process, the CLO met/contacted a number of GAA representatives from clubs in the area around the Site. Such GAA clubs included Killkerrin-Clonbern GAA and Mountbellew GAA in Co. Galway. Information pack drops by the CLO provided details to a number of National School principals in the surrounding area. These included Briarfield National School, Cooloo National School, Barnaderg National School and Lavally National School, Co. Galway.

In addition to the Public Information Event held in January 2024, a meeting was arranged via the CLO with Moylough Community Council in February 2024. In advance the Community Council submitted a list of questions to the Applicant which had been gathered from members of the Community Council. The questions were all answered and issued back to the community council prior to the meeting taking place. All questions were discussed at the meeting and answers were uploaded to the project website. Assurance was given to the Community Council that further questions would be welcome and encouraged the committee to remain in contact.

The Applicant has made meaningful engagement with the local community a primary consideration of the Proposed Project through face-to-face, written, telephone and online contact and the community consultation process has been effective, open and transparent which they are committed to through the construction and operation of the Proposed Wind Farm.

2.2.2 Public Notice in Newspaper

Several third-party observations to the Commission raised concerns over the publishing of statutory notices for the application within the Irish Examiner newspaper and not the local paper (Tuam Herald) which was ineffective at reaching the local population.

Response

As per the requirements for SID applications, statutory notices were advertised for the application prior to lodgement within a local paper (Connacht Tribune) and national paper (Irish Examiner). The Connacht Tribune is an approved newspaper by GCC.

In addition to these advertisements and measures outlined in Section 2.2.1 above and detailed in Appendix 2-2 of the EIAR, updated information was issued in September 2025 via post to the wider community prior to the lodgement of the application. The details provided included the full description of the Proposed Project seeking planning permission, as well as a map of the final layout of the Proposed Wind Farm.

2.3 Land Ownership & Usage

In a number of third-party observations to the Commissions, the issue of landowner consents was raised regarding lands that would be required for the Proposed Project. Submissions made reference to landowner consent for trimming roadside bushes along the R332 Regional Road for access to the Site, and the lack of landowner consents provided for the laying of the Proposed Grid Connection cabling.

Response

As shown in Figures 15-18 and 15-19, the swept path analysis for turbine delivery vehicles entering into the Site at Access Junction 1 shows turning radii at this location. The analysis highlights the land take, visibility splays, and field boundary removal in order for the delivery of turbine components to enter the Site. The over-run area required will result in the removal of hedgerows and the maintenance of hedgerows for visibility splays. As outlined in Section 4 of Appendix 15-2 Traffic Management Plan (TMP), bushes/shrubs on the southern side of the [R332]* will be trimmed in order to maximise forward visibility at the proposed construction site entrance. It is estimated that the proposed trimming along the roadside will achieve 140m of forward visibility. The land directly across the road from the proposed site entrance, where roadside trimming will be conducted, is within the control of the Proposed Project and a landowner consent letter has been acquired for the planning application.

*It is acknowledged that an incorrect reference was made to the R328 in the mitigation measures outlined in Chapter 15 Section 15.1.10 of the EIAR and Section 4 of the TMP included as Appendix 15-2. See Section 2.13.5 of this response document below. The text above has been amended to correctly reference the R332.

As outlined in Section 1.1.1 of Chapter 1: Introduction and Section 2.1 of Chapter 2 of the submitted EIAR as part of the planning application, the Proposed Grid Connection is an integral part of the Proposed Project and is assessed in this EIAR, however, it will be subject to a separate, future application. The future, application for consent for the Proposed Grid Connection will be made to the Commission in accordance with the provisions of 182A of the Planning and Development Act 2000, as amended. The Proposed Grid Connection was assessed but not applied for as part of the planning application for the Proposed Wind Farm. For the purposes of an environmental impact assessment, landowner consents are not required. In the future planning application for the Cooloo grid connection, landowner consents will be acquired where necessary and included in that application. It is noted in this regard that grid connection works carried out in the public road by a statutory undertaker do not require a letter of consent, as outlined by Art. 22(g)(ii) of the Planning and Development Regulations 2001 (as amended).

2.4 Project & Application Details

Several third-party observations to the Commission have regard to the description of the Proposed Project in the planning application and submitted Environmental Impact Assessment Report (EIAR). Observations are made under the following themes:

- > Proposed Grid Connection
- > Proposed Wind Farm Export Capacity
- > Project Design
- > Application Documents

2.4.1 Proposed Grid Connection

Several third-party observations including the Barnaderry Cooloo Windfarm Action Collective CLG (hereafter referred to as the Collective) queried the details of the Proposed Grid Connection within the application and sought clarification on details of the grid connection agreement with regards to consent, assessment and maintenance of permanent infrastructure.

Response

As noted above in Section 2.1.4, the Proposed Grid Connection is not included in this application and will be subject to a separate application. The future planning application for the Proposed Grid Connection will include for an onsite substation, BESS and grid connection that will connect the Proposed Wind Farm into the national grid. As detailed in Chapter 4 Section 4.10 of the EIAR, following decommissioning of the Proposed Wind Farm at the end of its operational life, certain components of the Proposed Grid Connection including the underground electrical cabling route, onsite substation will remain in place as it will form part of the electricity grid under the ownership and control of the ESB and EirGrid.

2.4.2 Proposed Wind Farm Export Capacity

A number of third-party observations regard the stated export capacity of the Proposed Project, with claims that the output of the Proposed Wind Farm will be less than 50MW and therefore the application does not meet the SID threshold.

Response

As noted in Section 1.4 of Chapter 1 Introduction, the Proposed Wind Farm would have a combined maximum generating capacity of between 54 to 64.8 MW. The exact generating capacity of the installed turbine will be designed to match the wind regime on the Site and will be determined by the selected manufacturer. Regardless of the final selected turbine model, it can be confirmed that the Proposed Wind Farm will have a total output in excess of 50MW meeting the relevant threshold set out in the Seventh Schedule of the 2000 Act.

The Applicant engaged with the Commission under the provisions of Section 37B of the Planning Act as to whether the Proposed Project would meet the thresholds of the Seventh Schedule of the Planning Act. A letter received from the Commission dated the 19th September 2025 stated that under Section 37B (4)(A) that it is the opinion of the Commission that the Proposed Project falls within the scope of the paragraphs 37A(2)(a) and (b) of the Act. This confirmed that the Proposed Project constitutes SID and therefore the planning application should be made directly to the Commission. The determining factor considered relevant for the Proposed Project meeting the relevant threshold set out in the Seventh Schedule of the 2000 Act, was in relation to the power output in Megawatts (MW) of the Proposed Wind Farm.

2.4.3 Project Design

A number of third-party observations claim that the location of the proposed turbines do not comply with the 2006 or 2019 Wind Energy Development Guidelines with regards to minimum separation distances between turbines.

Response

It is noted that both the *Wind Energy Development Guidelines for Planning Authorities* (Department of the Environment, Heritage and Local Government (DoEHLG), 2006) (hereafter referred to as the 2006 Guidelines) and *Draft Wind Energy Development Guidelines* (Department of Housing, Local Government and Heritage (DoHLGH), December 2019) (hereafter referred to as the draft 2019 Guidelines) outline that minimum distances between wind turbines will generally be three times the rotor diameter in the crosswind direction and seven times the rotor diameter in the prevailing downwind direction to ensure optimal performance and account for turbulence and wake effects. Further to this, the 2006 Guidelines and draft 2019 Guidelines note that the principle of the minimum separation distances should be respected in regard to permission for wind energy development granted on an adjacent site.

There are no proposed, permitted, or operational wind farms within 5km of the Proposed Wind Farm site. The nearest turbine is over 7.8km to the west (permitted Cloonlusk Wind Farm). As such, the Proposed Wind Farm achieves the minimum separation distance from adjacent wind energy developments as outlined in the 2006 Guidelines and draft 2019 Guidelines.

The Proposed Wind Farm was developed to take account of all the constraints and facilitators onsite including their associated buffer zones as described in Chapter 3 Section 3.5 of the EIAR and the separation distance required between them. The turbine layout for the Proposed Wind Farm was also informed by the results of noise and shadow flicker assessments as they became available.

2.4.4 Application Documents

A third-party observation notes that there was an error on the application website in viewing the NIS document. One other third-party observation notes that a hyphen is missing from the reference to the 'observations' web page on the Commission's website (<https://www.pleanala.ie/enie/observations>) on the newspaper notice published in the Irish Examiner.

Response

The issue in viewing the NIS via the application website has since been resolved. The NIS was available for online viewing via the Commission's website during the public consultation period. It is also noted that hard copies of the application, including the NIS, were available for viewing/ purchase at the offices of the Commission and the local authority, GCC, during the public consultation period.

It is accepted that a printing error leading to the missing hyphen in the web page address exists on the newspaper notice published in the Irish Examiner. The site notice and newspaper notice in the local paper do not have this issue. It is noted that the website link, without hyphen, still directs to the Commission's website where the 'observation' webpage can be easily navigated to.

2.5 Population & Human Health

2.5.1 Shadow flicker

Several third-party observations relate to the potential for shadow flicker impacts from the proposed turbines on nearby residential receptors. The submissions state the size and scale of the proposed turbines would cause shadow flicker to occur on houses, schools and community facilities in the wider area. Several of the submissions relating to shadow flicker claim the Wind Energy Development Guidelines (2006) are outdated and insufficient for assessing the impacts of modern wind farms given the taller turbines that are being proposed now compared to when the Guidelines were originally published in 2006. One submission claims that the list of modelled properties is incomplete and omits dwellings.

Response

As outlined in Section 5.2.3 in Chapter 5 of the EIAR, there are several factors which determine the frequency and strength of any potential shadow flicker impacts from turbines. Those factors include:

1. Whether the sunlight is direct and unobstructed or diffused by clouds
2. The presence of intervening obstructions between the turbine and the observer
3. How high the sun is in the sky at a given time
4. Distance and bearing i.e., where the property is located relative to a turbine and the sun
5. Property usage and occupancy
6. Wind Direction, i.e., position of the turbine blades

7. Rotation of turbine blades

The current guidance in Ireland for shadow flicker is derived from the 2006 Guidelines and the ‘Best Practice Guidelines for the Irish Wind Energy Industry’ (Irish Wind Energy Association, 2012). The 2006 Guidelines threshold recommend that shadow flicker at neighbouring offices and dwellings within 500 metres of a proposed turbines should not exceed a total of 30 hours per year or 30 minutes per day. The 2006 Guidelines are currently under review. In 2019, the DoEHLG the draft 2019 Guidelines included recommendations that “*no existing dwelling or other affected property will experience shadow flicker as a result of the wind energy development subject of the planning application and the wind energy development shall be installed and operated in accordance with the shadow flicker study submitted to accompany the planning application, including any mitigation measures required.*”

In accordance with the 2006 Guidelines, the Shadow Flicker Study Area for the shadow flicker assessment is ten times the rotor diameter – which comes to a 1.62km buffer from all proposed turbines. As detailed in Chapter 5 Section 5.2.3.5 of the EIAR there are 218 no. third party properties (referred to ‘Sensitive Receptors’) located within 1.62 km of the proposed turbine locations. The Shadow Flicker software modelled 218 no. Sensitive Receptors for potential shadow flicker impact. Of these, a total of 171 no. Sensitive Receptors are theoretically predicted to experience shadow flicker. The Shadow Flicker Study Area and Sensitive Receptors locations are shown in Figure 5-3 of the EIAR.

The proposed mitigation measures stated in Chapter 5 Section 5.10.3.2.7 of the EIAR, which will be employed at the potentially affected properties to ensure that the current 2006 Guidelines are complied with at any property within the Shadow Flicker Study Area. The same mitigation measures also demonstrate that the proposed turbines can be operated in accordance with the shadow flicker requirements of the draft 2019 Guidelines, i.e. zero shadow flicker occurrences, should they be adopted as currently proposed, while the planning application is being determined. The mitigation measures include both screening measures, such as planting of vegetation, and wind turbine control measures.

As stated in Section 5.2.3 of the EIAR, all turbines installed on-site will comply with the daily and annual shadow flicker recommended thresholds of 30 minutes and 30 hours, respectively as set out in the 2006 Guidelines. However, the proposed turbines can be brought in line with the draft 2019 Guidelines shadow flicker recommendation through the use of turbine control software, should this draft guidance be brought into effect.

2.5.2 Construction Impact

A number of third-party observations refer to the potential impacts of the construction phase on the receiving community. The impacts referenced in the observations include:

1. Increased Traffic Levels
2. Traffic Disruption
3. Environmental Contamination

Response

It is acknowledged that the construction of any large-scale project, including the Proposed Project, will cause some level of impact and disruption on local road users particularly in the construction phase. The traffic impact assessment, outlined in Chapter 15 of the EIAR, has used traffic count survey data, site surveys, Transport Infrastructure Ireland guidance documents, and Department of Transport recommendations. In Section 15.1.2 of Chapter 15, the receiving environment and road network is described as are the proposed delivery and haul routes. In Appendix 15-2, a project-specific Traffic Management Plan (TMP) has been prepared that sets out traffic management measures that the Applicant will commit to provide during the construction stage of the Proposed Project. The primary objective of the TMP is to minimise the disruption to local road users whilst the Proposed Project is under construction. Section 6 of the TMP states the ‘General Traffic Management Measures’ being

proposed. Measures include engagement with local people regarding traffic related matters, a dedicated Traffic Management Coordinator, an out of hours emergency number, pre- and post- construction condition survey, and re-instatement works. It is outlined that a detailed TMP will be finalised and confirmatory detailed provisions in respect of traffic management agreed with the Roads Authorities, GCC and An Garda Síochána prior to construction works and turbine delivery commencing on Site. Contact will be maintained with the Roads and Traffic Section of GCC throughout the construction phase. The Applicant will rectify any damage caused to the pavement on the existing road network that may arise from any temporary works due to the turning movement of abnormal loads as set out in Section 15.1.12.5.

The protection of the environment is a priority during all phases of the Proposed Project. The construction phase will see the use of a number of materials from fuel to concrete as various components of the Proposed Project are built. The use of such materials gives rise to potential impacts to the local environment if there are no controls, best practice construction methodologies or mitigation measures in place. As part of the EIAR assessment, a robust Construction and Environmental Management Plan (CEMP) (Appendix 4-5), a Peat and Spoil Management Plan (Appendix 4-2), mitigation measures in relation to environmental and hydrological protections, health and safety measures, and best practice work methodologies are proposed which will prioritise environmental protection. In Sections 4.6.4, 4.6.5, and 4.6.6 of Chapter 4, the proposed drainage design measures are outlined which are intended to minimise run-off from construction activities into nearby watercourses, and the control of the collected run-off across the Site. Figure 4-26 illustrates the various drainage infrastructure that will be utilised as part of the Proposed Project.

The CEMP describes further all the measures that will be utilised to protect the receiving environment and watercourses. Section 3 of the CEMP outlines the Environmental Management areas that have been considered as part of the assessment which includes protecting water quality, dust control and waste management. Section 4 of the CEMP describes the implementation of the Environmental Management proposals, and it details who will be responsible for each aspect across the construction phase. Section 7 and 8 of the CEMP states the mitigation and monitoring proposals, respectively, that will be adhered to for the duration of the construction, operation and decommissioning phases of the Proposed Project. Listed in Chapter 18 is the full schedule of all proposed mitigation and monitoring proposals across all areas of the EIAR which are intended to reduce in so far as possible the potential impacts from the Proposed Project on the receiving environment.

2.5.3 Community Impact

Two third-party observations noted the high energy electricity costs that Ireland is experiencing compared to the rest of Europe. The observations claimed that despite the high level of wind energy deployment in Ireland, Irish consumers still are paying amongst the highest amounts in Europe for electricity bills. Furthermore, the observations argue that the Cost of curtailment is being passed on to consumers through rise in electricity bills, making the Proposed Project unsustainable given the high prices being charged.

A number of third-party observations highlight property devaluation as a concern resulting from the Proposed Project being proposed near their homes.

Several third-party observations claim that the Community Benefit Fund of the Proposed Project is “vague, unenforceable and worthless”, there is “no binding, transparent agreement” and that the fund is therefore unreliable. One observation claims that the developer is not legally required to provide a Community Benefit Fund beyond RESS participation.

Response

Ireland is experiencing high energy bills due to a number of factors that include historical underinvestment in the national grid, high inflationary periods post COVID-19 and the War in Ukraine,

and a lack of electrical interconnectors to the UK and Europe. Wind energy developments in Ireland help to reduce costs to the consumer through the production of indigenous, clean and renewable energy. In its Annual 2025 Report, Wind Energy Ireland stated that Irish wind farms provided one third of the island's electricity last year – amounting to 13,364GWh of clean electricity being exported to the national grid. Within the review, a comparative study undertaken in December 2025 found that the average price of electricity on days with the least amount of wind energy was €148.55 per Megawatt hour compared to days with the most amount of wind energy, the average price was €76.41. In a cost analysis study by Baringa Partners published in January 2025, it was found that renewable energy saved Irish consumers €840 million between 2000 and 2023. The study found that the displacement of fossil fuels by renewable energy in Ireland avoided the need to burn €7.4 billion worth of gas and coal between 2000 and 2023, including almost €4 billion since 2021.

Wind curtailment refers to the dispatch-down of wind for system-wide reasons where the reduction of any and all wind generators would alleviate a problem that has occurred. In its 2023 Curtailment and Constraint report, Eirgrid stated that approximately 1,663GWh or 10.7% of produced wind energy was curtailed on the island. Curtailment forces the national grid to rely on back-up fossil fuel sources for electricity production which are often more expensive production forms than wind energy.

Concerns have been raised about the potential for the Proposed Wind Farm to have adverse effects on the value of properties of local residents. This issue has been thoroughly addressed in Section 5.6.1 of Chapter 5 of the EIAR. As outlined in the EIAR, the only Irish study, a 2023 working paper by the Centre for Economic Research on Inclusivity and Sustainability (CERIS), suggests a potential 14.7% decrease in property values within 1km of a turbine. However, the study is based on a small sample of 225 houses and acknowledges that no significant price reductions were found beyond 1km, with any observed effects diminishing over time. Given its limited dataset and working paper status, further research is needed before drawing firm conclusion.

Extensive research in the United States provides a broader perspective. The 2009 and 2013 studies by the Lawrence Berkeley National Laboratory (LBNL) analysed thousands of home sales near wind farms and found no measurable, consistent impact on property values. A 2023 study published in Energy Policy reported temporary value decreases post-announcement but found these effects faded once the wind farms became operational. In the UK, studies commissioned by RenewableUK (2014) and Climate Exchange (2016) concluded that wind farms do not have a consistent negative impact on property prices. Instead, county-wide market trends drive local house prices rather than the presence of wind farms. Overall, the existing body of research, particularly large-scale, peer-reviewed studies, does not support claims that wind farms significantly devalue nearby properties in the long term. While localized impacts may occur in specific cases, the evidence suggests these effects are not widespread or long-lasting, with house prices instead reacting negatively to the expectation of likely impacts and construction, but these prices recover during the operational phase. Furthermore, the placement of wind turbines near residential dwellings is not a new occurrence. The project design fully complies with the recommendations outlined in best practice guidance for wind energy developments in Ireland, specifically meeting the 4x tip height setback distance for the protection of residential visual amenity as set out in the draft 2019 Guidelines.

Stated in Section 4.9.3.2 of Chapter 4 in the EIAR, the Renewable Electricity Support Scheme (RESS) is a Government of Ireland initiative that provides support to renewable electricity projects in Ireland. RESS is a pivotal component of the Programme for Government and the Climate Action Plans 2021, 2023, 2024 and 2025, and is a major step in achieving Ireland's target of at least 80% renewable electricity by 2030. One of the key objectives of RESS is to provide an Enabling Framework for Community Participation through the provision of pathways and supports for communities to participate in renewable energy projects. The RESS Terms and Conditions, published by the Department of Communications, Climate Action and Environment make some high-level provisions for how this type of benefit fund will work. Any project which wants to export electricity to the national grid must abide by these broad principles. Based on the current RESS guidelines it is expected that for each megawatt hour (MWh) of electricity produced by the wind farm, the Proposed Project will contribute €2 into a community fund for the first 15 years of operation of the Proposed Wind Farm. If

this commitment is changed in upcoming Government Policy, the fund would be adjusted accordingly. Should the Proposed Project be developed under RESS, it would attract a community contribution in the region of approx. €300,000/year for 15 years for the local community, totalling €4.5 million. The value of this fund would be directly proportional to the electricity generated by the wind farm. Under current terms and conditions of RESS, the following would be required for Proposed Wind Farm:

- 1) **Direct payments** – to those living closest to the Site. A minimum €1,000 payment per annum for houses within 1km of the Proposed Project;
- 2) **Energy Efficiency** – up to 40%/year would be available for the development of energy/sustainability initiatives to benefit people living in the local area. This is to be provided to not-for-profit community enterprises.
- 3) **Administration costs** - a maximum of 10% of this fund to be made available for the administration and governance costs of the fund.
- 4) **Support for local groups** – the remainder would be available for local groups, clubs and not for profit organisations that provide services in the local area. This would include services for the elderly, local community buildings, and the development of sporting facilities such as all-weather playing pitches etc.

The Community Benefit Fund will be under the control of a development fund working group which will represent both the close neighbours of the Proposed Wind Farm and the nearby communities.

The Proposed Project will have additional community benefits separate to the Community Benefit Fund. As outlined in Section 5.10.2.2.2, the construction phase of the Proposed Project will require approximately 100 employees over the course of an 18-24 months construction phase period. The Proposed Project will give rise to employment opportunities as a result. The Proposed Wind Farm will result in an influx of skilled people into the area, bringing specialist skills for both the construction and operational phases that could result in the transfer of these skills into the local workforce, thereby having a long-term positive effect on the local skills base. Up-skilling and training of local staff in the particular requirements of the wind energy industry is likely to lead to additional opportunities for those staff as additional wind farms are constructed in Ireland. The operational and decommissioning phases of the Proposed Wind Farm will also see employment opportunities arise.

The injection of money in the form of rental income to the landowners who are participating in the Proposed Wind Farm where a rental agreement has the potential to result in an increase in household spending and demand for goods and services in the local area. This would result in local retailers and businesses experiencing a long-term positive impact on their cash flow. This will have a long-term slight positive indirect effect.

Rates payments for the Proposed Wind Farm will contribute significant funds to GCC, which will be redirected to the provision of public services within Co. Galway. These services include provisions such as road upkeep, fire services, environmental protection, street lighting, footpath maintenance etc. along with other community and cultural support initiatives.

As stated in Section 4.9.3.3 of Chapter 4 of the EIAR, in the event that the Proposed Project is granted permission and is not developed under RESS, the Applicant is committed to paying the same amount as per the RESS commitment.

2.5.4 Human Health Impacts

Several third-party observations outlined concerns regarding potential impacts on members of the community with neurodiverse conditions and sensory sensitivities from the potential noise, infrasound and vibration as well as from road closures which would impact special needs bus services and the routes they travel. Other observations are concerned with possible impacts on sleep disturbance and the increased stress of living near wind turbines.

Response

A series of scientific papers relating to the potential impacts of wind turbines on human health are listed and links provided in Appendix 5-1 Wind Farms & Health Literature Review – Chapman 2015. A number of comprehensive reviews conducted in recent years to examine whether these health effects are proven has highlighted the lack of published and high-quality scientific evidence to support adverse effects of wind turbines on health. As discussed in Section 5.6 of Ch.5 of the EIAR, while there are anecdotal reports of negative health effects on people who live very close to wind turbines, peer-reviewed research largely does not support these statements. There is currently no published credible scientific evidence to positively link wind turbines with adverse health effects. Extensive research has been carried out in the US, Canada, UK, Australia and by the World Health Organisation (2018). All studies conclude that that exposure to wind farms does not trigger adverse health effects.

Concerns have been raised regarding the ability for wind turbine noise to affect nearby residents with Autism Spectrum Disorder (ASD). It is acknowledged that people with ASD and other neurodivergences may experience a greater noise impact than non-neurodivergent individuals, as is discussed in literature from Howell et al. (2015). However, it should also be noted that recent studies, such as that of Li et al. (2023), discussed that while a positive correlation was noted between fine Particulate Matter exposure and negative ASD symptoms (primarily due to roads and industry), no correlation between noise and negative ASD symptoms was noted. It should be noted that this study considered noise from a mixed variety of sources, including roads, rail, air, industry and wind turbines, and solely considered noise impacts at dwellings and not workplaces and schools. Regardless, as highlighted in Section 12.4.1.4 of the EIAR, the Applicant proposes to appoint a community liaison officer who would be the first point of contact in the event that noise complaints were to occur and the mitigation strategy set out in Section 12.7 of the EIAR will be employed and that any complaints during the operational phase regarding wind turbine noise will be addressed promptly. Similarly, a suite of mitigation measures are provided in Section 5.10.3.2.7 to safeguard all sensitive receptors from shadow flicker effects. Notwithstanding these mitigation measures, should shadow flicker associated with the permitted development be perceived to cause nuisance at any home, the affected homeowner is invited to engage with the Developer. The homeowner will be asked to log the date, time and duration of shadow flicker events occurring on at least five different days. The provided log will be compared with the predicted occurrence of shadow flicker at the residence, and if necessary, a field investigation will be carried out and mitigation measures will be discussed with the homeowners. If agreement can be reached with the homeowner, then it would be arranged for the required mitigation to be implemented in cooperation with the affected party as soon as practically possible and the full costs to be borne by the wind farm operator.

Regarding the potential impact to special needs bus services and their routes, it is acknowledged that the Proposed Project will cause some disruption to local road users particularly during the construction phase of the Proposed Grid Connection. A precautionary scenario where a road closure will be required for the entire route is assumed for the purpose of the assessment. Road closures for 8 sections, amounting to 7.8km, of the public road network has been assessed. The potential diversion routes that may be used during the construction of the various sections of the grid route that are on the public road network are set out in Table 15-27 and shown in Figure 15-6b in Chapter 15 of the EIAR. For sections 3, 4, 5, 6 and 8, which comprises of 7.8 km of the total route, the diversions will result in low volumes of existing traffic on local roads being diverted onto other local roads, or onto roads of a higher standard, including the N63, R332 and the R347. For Sections 1 on the R332, 2 on the N63 and 7 on the R347, this will either result in traffic volumes on these roads being diverted onto some sections of lower standard local roads (shown in orange in Figure 15-6b), or via longer diversions onto roads of a similar standard (shown in red in Figure 15-6b). Prior to the construction of the Proposed Grid Connection, the final diversion routes that will be used during the construction of the various sections of the cabling route will be discussed and agreed with GCC.

It should be noted that the Proposed Wind Farm complies with the Draft Revised Wind Energy Guidelines 2019 (referred to as the draft Guidelines) of a 4x tip height set back from the nearest non-involved Sensitive Property in order to protect for visual amenity. It should also be noted that in

relation to noise and shadow flicker, turbine technology allows for the turbines to be controlled to achieve the necessary guideline limits, including any revised guidance requirements. Concern has also been raised for depopulation in the area due to the Proposed Wind Farm. There has been no credible evidence provided that has shown a positive correlation between Wind Farms and rural depopulation. No peer reviewed studies have proved a link between wind farm sites and depopulation. Concern has been raised in regard to the health impacts of electromagnetic fields. It should be noted that there has been no credible evidence that electromagnetic fields can impact human health, with a study by McCallum et al. (2014), stating that magnetic field levels in the vicinity of wind turbines were lower than levels produced by common household electrical devices. None of the submissions received in relation to this topic area have set out any clear and credible evidence which in any way alters the findings of the EIAR in this regard. As such, it is concluded that the information contained within the EIAR remains valid and robust.

2.6 Biodiversity

A number of Third- Party submissions were made in relation to biodiversity, the European Union Habitats Directive, and general ecology related matters.

The content of these submissions was mainly focused on the potential for collision risk with bird species using the site, the bird survey methodologies employed, the risk to bat populations using the site including Lesser Horseshoe Bat, the loss of hedgerow, the protection of Annex I habitats and rare flora. In addition, the potential for impacts to other protected wildlife were raised. Concerns regarding deficiencies in the Appropriate Assessment reports were raised in relation to the assessment of impacts on SCI species of Lough Corrib SPA. Submissions were also made regarding the cumulative assessment carried out in the EIAR and NIS.

Amongst the aspects raised with regards to ecology and biodiversity, these included:

- Habitats
 - Loss of Peatland Habitats
 - Treelines, Hedgerows, Forestry
- Fauna
 - Marsh Fritillary
 - Badger
 - Pine Marten and Red Squirrel
 - Earthworm
 - Amphibians
- Bats
 - Legal Protection of Bats and Article 12 Compliance
 - Survey Methodology and Monitoring Standards
 - Impact Pathways: Collision Risk and Barotrauma
 - Mitigation and Operational Controls
 - Site-specific Bat Connectivity: Elmhill House & T8
- Ornithology
 - Survey Approach
 - Assessment Approach
 - Mitigation and Post-consent monitoring
 - Species-specific Concerns

2.6.1 Habitats

Loss of Peatland Habitats

Several third-party submissions raised concerns regarding the impact on virgin bog, peatland and habitats which support Annex II species such as Marsh Fritillary. In particular, the proposed floating road between T7 and T9 is mentioned as a piece of infrastructure which impact the receiving environment through the excavation of peat and the hydrological regime of the area.

As outlined in Section 6.4.1.3, all margins of the mapped Article 17 Raised Bog habitat have been cut since at least the mid-1990s as evidenced from historic aerial imagery, with turbary cutting ongoing in a large part of the mapped Article 17 habitat area, as well as drainage throughout the habitat area. The entire high bog area is surrounded by either historical or active peat extraction, with small pockets of uncut areas that have not been drained, however this area is not considered an intact raised bog habitat due to the extensive extraction and drainage that has been ongoing within this area.

The peatland habitats identified within the Proposed Project have been described in full in sections 6.4.1.3 (6.4.1.3.2 and 6.4.1.3.1). The existing drainage activities has also been detailed in Section 9.3.1 of Chapter 9 of this EIAR. Detailed relevés were taken along the proposed new floating access road, which are fully detailed within Appendix 6-1 (Section 3.3) of this EIAR.

The potential for significant effects on these habitats has been assessed within Section 6.5.2.1.2 of the EIAR. Mitigation provided includes alteration of surface water hydrochemistry (mitigation by design), mitigation to prevent significant effects via air quality impacts and dust emissions. It is concluded within the EIAR that with all mitigation measures prescribed in Section 6.5.2.1.2, there will be no residual significant impacts on peatland habitats adjacent to the development footprint. However, it has been concluded that there is potential for significant residual effects peatland habitats at a County level. Additionally, there will also be a residual effect in relation to the alteration of drainage within approx. 50-100m distance of the proposed turbine T7 to T9 access road. Residual significant effects are anticipated at the County level.

The total area of habitat identified as raised bog (PB1) within the site boundary is approximately 32.29ha, while the identified cutover bog habitat areas are approximately 42.00ha. The proposed floating access road between T7 and T9 will result in the loss of approximately 0.18ha of raised bog (PB1), amounting to 0.54% of the total habitat area within the site. While this is still considered a significant residual effect due to the mapped Article 17 habitat within the location, the area to be lost is relatively small in comparison to the larger raise bog habitat area within the site boundaries. Figure 6-3 of Chapter 6 of the submitted EIAR is shown below and shows the Article 17 Habitats in proximity to the Site. It is noted that this figure is not included in the digital copy of Chapter 6 but is included in in the hard copy of the EIAR, which is publicly available at the offices of both the Commission and GCC. The figure is a visual representation of the information included in Chapter 6, Section 6.3.1.3, of the submitted EIAR and does not present any new or additional information.



- Map Legend**
-  EIAR Site Boundary
 -  Proposed Turbine Layout
 -  [7110] Active Raised Bog
 -  [4030] Dry Heath
 -  [4010] Wet Heath

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Drawing Title	
Article 17 Habitats	
Project Title	
Cooloo Wind Farm, Co. Galway	
Drawn By	Checked By
EF	RW
Project No.	Drawing No.
190723	Figure 6-3
Scale	Date
1:65,000	18/09/2025



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Treelines, Hedgerows, Forestry

A number of third-party submissions referenced the potential for impact upon trees, hedgerows, forestry and grassland habitats, and the flora and fauna associated with those habitats. The submissions state studies carried out for the EIAR assessment cannot accurately assess the impact of such a large-scale development on the receiving environment.

The potential for impacts on woodland habitats and linear features (treelines/hedgerows) has been considered within Chapter 6 of the EIAR. Section 6.4.1.2 describes the existing woodland habitats. Section 6.4.1.5.2 and Section 6.4.1.5.3 details the existing hedgerow and treeline habitats within the site. Figure 6-4, Figure 6-5 and Figure 6-6 of Chapter 6 of the submitted EIAR are shown below and shows the habitats and contextualises their diversity on the Site. It is noted that these figures are not included in the digital copy of Chapter 6 but is included in in the hard copy of the EIAR, which is publicly available at the offices of both the Commission and GCC. The figure is a visual representation of the information included in Chapter 6, Section 6.4.1, of the submitted EIAR and does not present any new or additional information.



Map Legend

- EIAR Site Boundary
- Arable crops (BC1)
- Buildings and artificial surfaces (BL3)
- Spoil and bare ground (ED2)
- Recolonising bare ground (ED3)
- Improved agricultural grassland (GA1)
- Dry meadows and grassy verges (GS2)
- Wet grassland (GS4)
- Wet grassland/Scrub (GS4/WS1)
- Raised bog (PB1)
- Cutover bog (PB4)
- Broadleaved woodland (WD1)
- Conifer plantation (WD4)
- Scrub (WS1)
- Rich fen and flush (PF1)
- Buildings and Artificial Surfaces (BL3)
- Depositing/ Lowland Rivers (FW2)
- Drainage Ditches (FW4)
- Hedgerows (WL1)
- Treelines (WL2)

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Drawing Title

Habitat Map

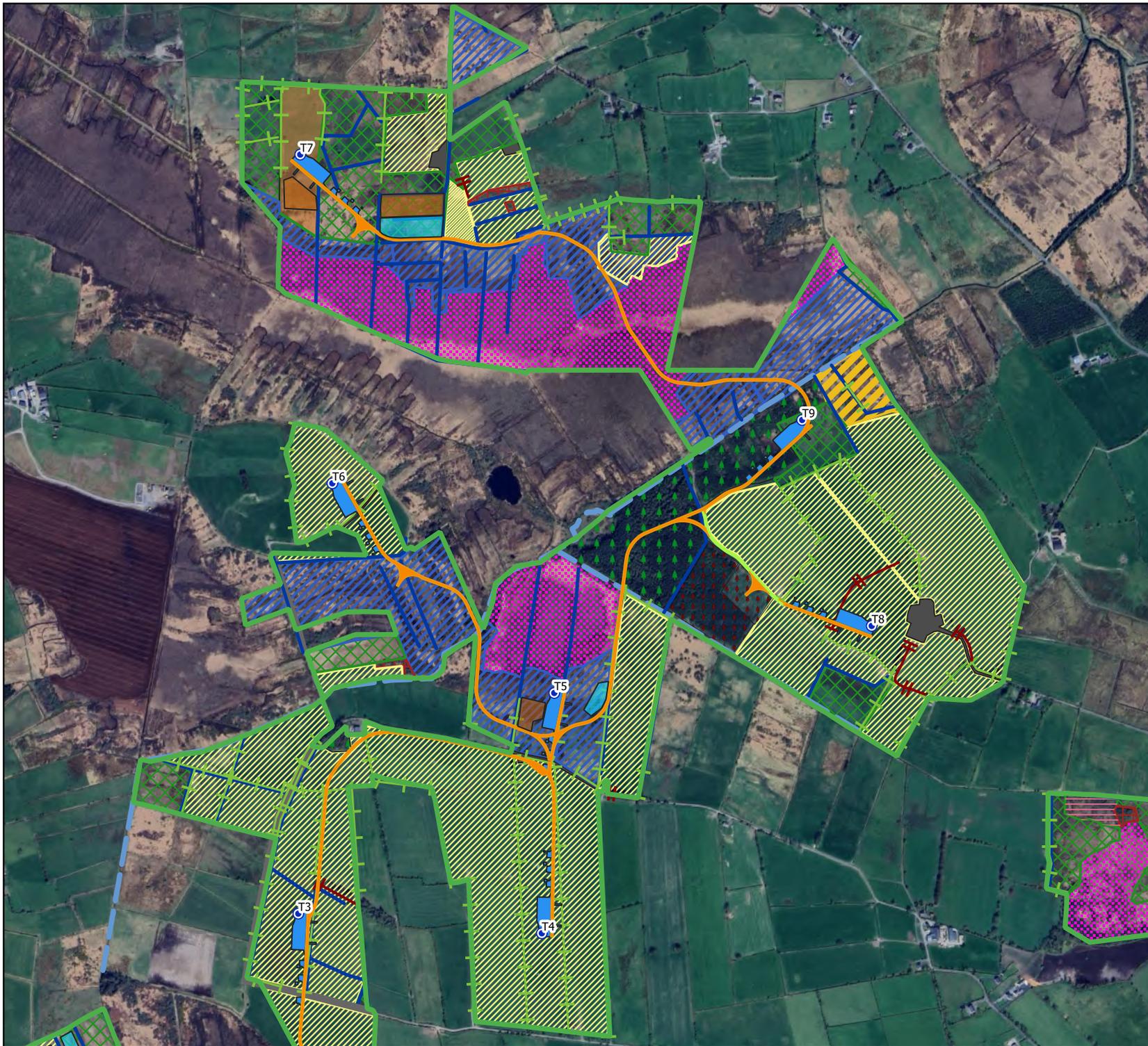
Project Title
Cooloo Wind Farm, Co. Galway

Drawn By EF	Checked By RW
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Project No. 190723	Drawing No. Figure 6-4
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Scale 1:22,000	Date 18/09/2025
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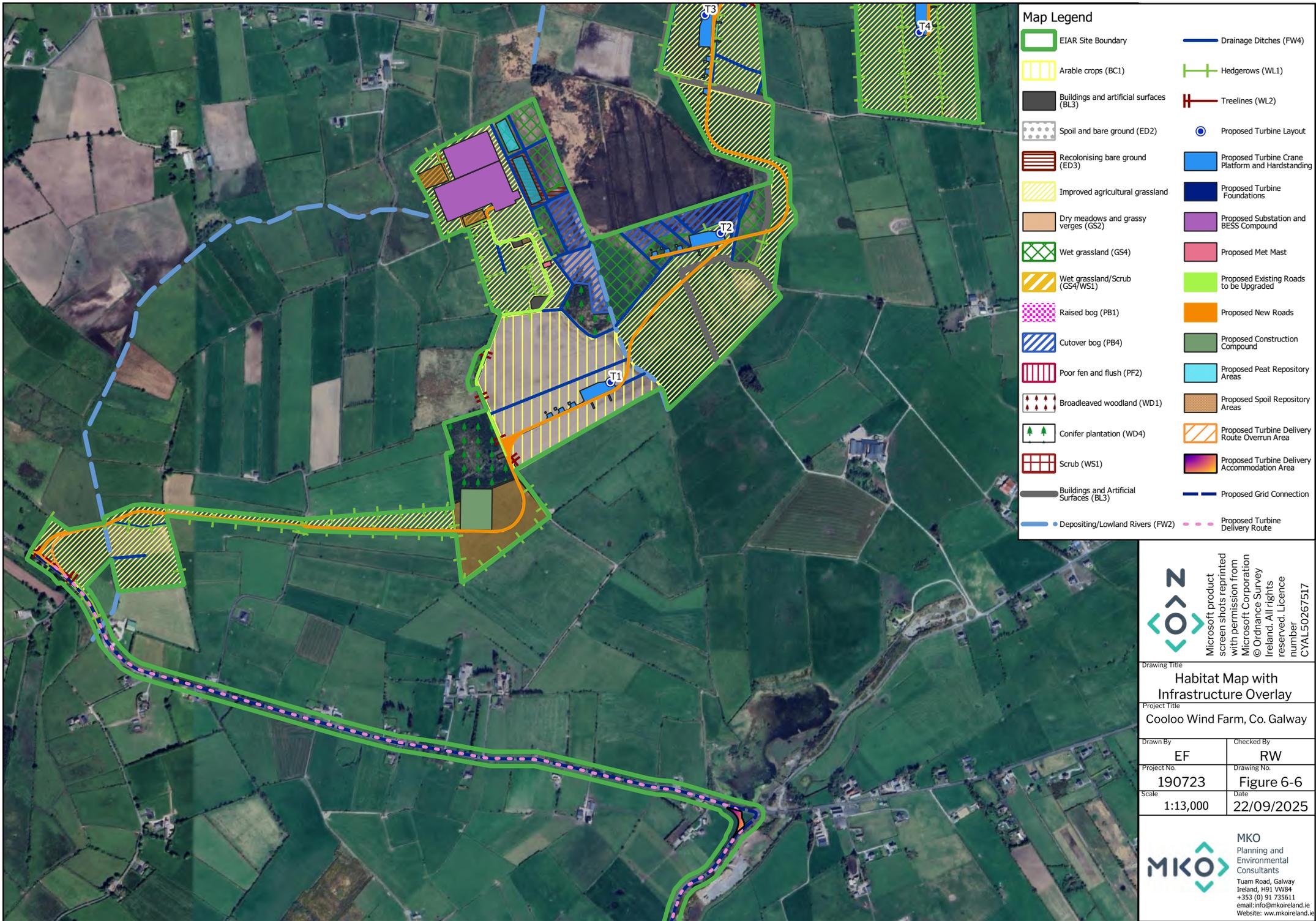
Map Legend

EIAR Site Boundary	Drainage Ditches (FW4)
Arable crops (BC1)	Hedgerows (WL1)
Buildings and artificial surfaces (BL3)	Treelines (WL2)
Spoil and bare ground (ED2)	Proposed Turbine Layout
Recolonising bare ground (ED3)	Proposed Turbine Crane Platform and Hardstanding
Improved agricultural grassland	Proposed Turbine Foundations
Dry meadows and grassy verges (GS2)	Proposed Substation and BESS Compound
Wet grassland (GS4)	Proposed Met Mast
Wet grassland/Scrub (GS4/WS1)	Proposed Existing Roads to be Upgraded
Raised bog (PB1)	Proposed New Roads
Cutover bog (PB4)	Proposed Construction Compound
Poor fen and flush (PF2)	Proposed Peat Repository Areas
Broadleaved woodland (WD1)	Proposed Spoil Repository Areas
Conifer plantation (WD4)	Proposed Turbine Delivery Route Overrun Area
Scrub (WS1)	Proposed Turbine Delivery Accommodation Area
Buildings and Artificial Surfaces (BL3)	Proposed Grid Connection
Depositing/Lowland Rivers (FW2)	Proposed Turbine Delivery Route


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Drawing Title	
Habitat Map with Infrastructure Overlay	
Project Title	
Cooloo Wind Farm, Co. Galway	
Drawn By	Checked By
EF	RW
Project No.	Drawing No.
190723	Figure 6-5
Scale	Date
1:13,000	22/09/2025


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Map Legend

EIAR Site Boundary	Drainage Ditches (FW4)
Arable crops (BC1)	Hedgerows (WL1)
Buildings and artificial surfaces (BL3)	Treelines (WL2)
Spoil and bare ground (ED2)	Proposed Turbine Layout
Recolonising bare ground (ED3)	Proposed Turbine Crane Platform and Hardstanding
Improved agricultural grassland	Proposed Turbine Foundations
Dry meadows and grassy verges (GS2)	Proposed Substation and BESS Compound
Wet grassland (GS4)	Proposed Met Mast
Wet grassland/Scrub (GS4/WS1)	Proposed Existing Roads to be Upgraded
Raised bog (PB1)	Proposed New Roads
Cutover bog (PB4)	Proposed Construction Compound
Poor fen and flush (PF2)	Proposed Peat Repository Areas
Broadleaved woodland (WD1)	Proposed Spoil Repository Areas
Conifer plantation (WD4)	Proposed Turbine Delivery Route Overrun Area
Scrub (WS1)	Proposed Turbine Delivery Accommodation Area
Buildings and Artificial Surfaces (BL3)	Proposed Grid Connection
Depositing/Lowland Rivers (FW2)	Proposed Turbine Delivery Route


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Drawing Title
Habitat Map with Infrastructure Overlay

Project Title
Cooloo Wind Farm, Co. Galway

Drawn By EF	Checked By RW
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Project No. 190723	Drawing No. Figure 6-6
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Scale 1:13,000	Date 22/09/2025
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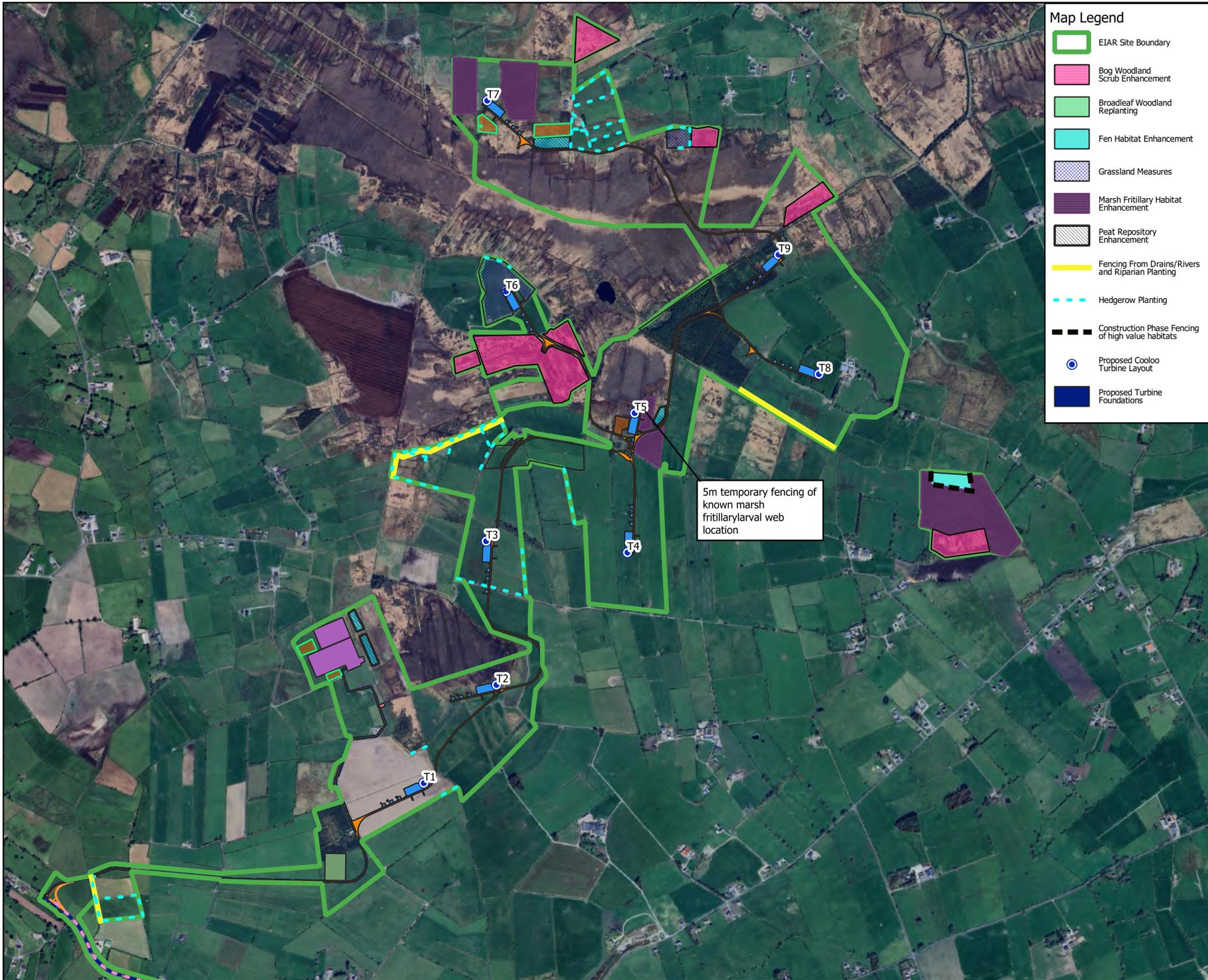

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The majority of the woodland habitats consists of monoculture, conifer plantation which accounts for 15.94ha of the Proposed Project. Native broadleaf woodland only accounts for approximately 3.80ha of the Proposed Project, and there will be a loss of approximately 0.17ha of this habitat (4% of the total area). In relation to linear habitats, there is an existing 14.9km of hedgerows and 1.30km of treelines within the site.

The assessment of potential significant effects on these habitats is fully described in Sections 6.5.2.1.3 and 6.5.2.1.4 of the EIAR. Mitigation has been provided in the way of broadleaf woodland habitat creation as well as new hedgerow and riparian planting along rivers and drains. A total of 4.7km of hedgerows will be replanted throughout the site to offset and enhance the loss of 3.74km of linear features. In total, approximately 11.5ha of broadleaved woodland will be planted throughout the site.

The BMEP in Appendix 6-4 provides detailed species composition and locations for the proposed hedgerow and broadleaf woodland replanting, specifically in Sections 3.3.1 and 3.3.2. Ongoing maintenance and monitoring measures have been provided within the BMEP to ensure that these habitats are established and the success is monitored. A site-specific monitoring and evaluation programme is necessary to ensure that the success of the proposed measures remains long-term. It will also assist in situations where the habitat establishment may not have been successful by providing evidence of shortcomings, allowing a revised management plan to be formulated. Figure 3-1 of the BMEP of the submitted EIAR is shown below and shows highlighting the proposed locations across the Site that will see proposed biodiversity measures take place. It is noted that this figure is not included in the digital copy of the BMEP but is included in the hard copy of the EIAR, which is publicly available at the offices of both the Commission and GCC. The figure is a visual representation of the information included in the BMEP, Section 3.3, of the submitted EIAR and does not present any new or additional information.

A temporary residual effect has been identified in relation to woodland and hedgerow replanting, given that there will be an interim period between the removal/loss of hedgerows and the replanting of hedgerow and woodland habitats. However, this will be a temporary residual effect and will not be long-term once the BMEP is implemented.



Map Legend

	EIA Site Boundary		Proposed Turbine Crane Platform and Hardstanding
	Bog Woodland Scrub Enhancement		Proposed Substation and BESS Compound
	Broadleaf Woodland Replanting		Proposed Met Mast
	Fen Habitat Enhancement		Proposed Existing Roads to be Upgraded
	Grassland Measures		Proposed New Roads
	Marsh Fritillary Habitat Enhancement		Proposed Construction Compound
	Peat Repository Enhancement		Proposed Peat Repository Areas
	Fencing From Drains/Rivers and Riparian Planting		Proposed Spoil Repository Areas
	Hedgerow Planting		Proposed Turbine Delivery Route Overrun Area
	Construction Phase Fencing of high value habitats		Proposed Turbine Delivery Accommodation Area
	Proposed Cooloo Turbine Layout		Proposed Turbine Delivery Route
	Proposed Turbine Foundations		Proposed Grid Connection Route

5m temporary fencing of known marsh fritillary larval web location


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Drawing Title
Proposed Biodiversity Measures

Project Title
Cooloo Wind Farm, Co. Galway

Drawn By	EF	Checked By	RW
Project No.	190723	Drawing No.	Figure 3-1
Scale	1:21,000	Date	22/09/2025


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2.6.2 Fauna

Marsh Fritillary

A number of third-party observations make reference to the potential impact on Marsh Fritillary butterfly, which is an Annex II species. The observations state the findings of the EIAR outline that larval webs were found near the location of the proposed T5 and that the disturbance, dust and drainage associated with the construction phase of the Proposed Project would threaten the species survival.

Larval webs were also recorded within a field to the northwest of the Proposed Wind Farm site which was proposed as a potential woodland replanting area early in the design of the Proposed Project. Following the discovery of webs within this area, the layout design was altered to avoid this field. This field is no longer located within the Proposed Wind Farm boundaries. Additionally, the substation was initially proposed to be located within one of the fields discovered as containing larval webs before mitigation by design was applied to the finalised Proposed Wind Farm layout to avoid impacts on this species. There is no infrastructure proposed within this habitat area. A singular larval web was recorded within the proposed access road near T5. The road layout was re-designed to avoid the singular larval web.

The potential for significant effect on Marsh Fritillary breeding habitat is assessed in Section 6.5.2.2.5 of the EIAR, with mitigation provided to prevent loss of breeding habitat and dust mitigation during the construction phases of the Proposed Project. The potential for any hydrological impacts has also been considered in Section 9.5.2.16 of Chapter 9 of the EIAR and it was determined that ‘due to the already cutover nature and existing extensive drainage at these locations, no significant additional effects on remaining areas of intact bog nearby.’

Similarly, the potential for any impacts on breeding marsh fritillary during the operational phase of the Proposed Project has been considered in Section 6.5.3.2, stating:

‘it is not anticipated that the operation of the Proposed Project will have any effect on marsh fritillary or habitat for the species during the operation of the Proposed Project. Implementation of the BMEP measures during the operational phase of the development will ensure that habitats are managed for marsh fritillary during the operational life of the Proposed Project having a positive impact on this species as well as other local invertebrate/pollinator species.’

The BMEP (Appendix 6-4 of the EIAR) also outlines measures for the protection of Marsh Fritillary during the construction phase of the Proposed Project, as well as measures to enhance existing, and create additional habitat for marsh fritillary.

As outlined in Section 3.1 of the BMEP, known marsh fritillary suitable habitat containing larval webs (including the larval web identified within proximity of T5) identified during 2024 surveys. The fencing will contain signage strictly prohibiting entry to these areas. This will denote the area where strictly no machinery, storage of materials or entry of construction site personnel will be permitted. The protective fencing will be inspected and signed off by the supervising Ecological Clerk of Works (ECoW) prior to commencement of the Proposed Project. Section 3.1.2. outlines a suite of measures designed to protect and maintain the existing identified marsh fritillary breeding habitat within the Proposed Project boundaries. None of these identified areas have any proposed infrastructure located within the known breeding habitat areas. Section 3.4.2 of the BMEP also proposed to create an additional 12.76ha of suitable marsh fritillary habitat within the Proposed Project site boundaries. A management regime to maintain this newly created habitat has also been provided in Section 3.4.2.1 of the BMEP.

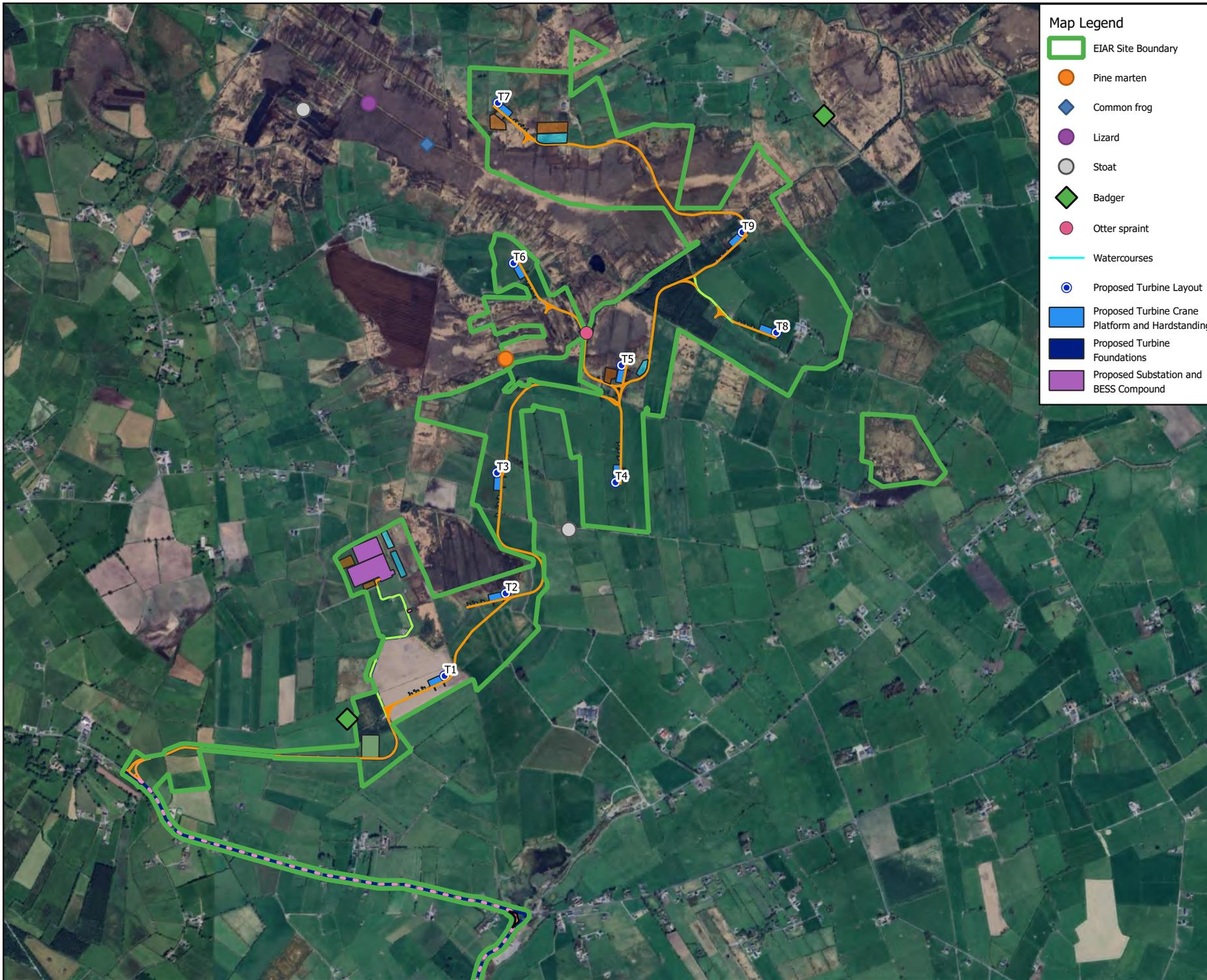
Badger

A number of third-party observations state the habitats which support badger populations would be impacted by the Proposed Project.

As detailed in Section 6.2.3.3.1 of the EIAR, badger surveys were undertaken during all of the multidisciplinary walkover surveys undertaken between 2021-2025.

As presented in Section 6.4.3.1 of the EIAR, no signs of badger foraging activity were recorded within the Proposed Wind Farm site, and no badger setts were recorded within the Proposed Wind Farm. Only two incidental records were found during the ornithological survey effort outside of the Proposed Wind Farm site. Section 6.4.3.1 also details the presence of supporting badger habitat within conifer plantation and linear features found on site. Therefore, taking a precautionary approach given the likelihood of the Proposed Project being used by this species, it was assessed that there may be direct and indirect impacts upon these species, and mitigation has been provided in Section 6.5.2.2.1 to prevent any significant effects on badgers.

Figure 6-7 of Chapter 6 of the submitted EIAR is shown below and shows the areas within which evidence of fauna was observed across the Site. It is noted that this figure is not included in the digital copy of Chapter 6 but is included in the hard copy of the EIAR, which is publicly available at the offices of both the Commission and GCC. The figure is a visual representation of the information included in Chapter 6, Section 6.4.3, of the submitted EIAR and does not present any new or additional information.



Map Legend

EIAR Site Boundary	Proposed Met Mast
Pine marten	Proposed Existing Roads to be Upgraded
Common frog	Proposed New Roads
Lizard	Proposed Construction Compound
Stoat	Peat Repository Area
Badger	Spoil Repository Area
Otter spraint	Proposed Turbine Delivery Route Overrun Area
Watercourses	Proposed Turbine Delivery Accommodation Area
Proposed Turbine Layout	Proposed Grid Connection
Proposed Turbine Crane Platform and Hardstanding	Proposed Turbine Delivery Route
Proposed Turbine Foundations	
Proposed Substation and BESS Compound	


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Drawing Title
Fauna Signs

Project Title
Cooloo Wind Farm, Co. Galway

Drawn By EF	Checked By RW
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Project No. 190723	Drawing No. Figure 6-7
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Scale 1:25,000	Date 22/09/2025
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Pine Marten and Red Squirrel

Several third-party submissions make reference to the potential impact of the Proposed Project on pine marten and red squirrel.

As outlined in Section 6.5.2.2.3 of Chapter 6 of the EIAR, no pine marten dens or red squirrel dreys were found within the EIAR site boundary. No direct impacts to these species via habitat loss or mortality are anticipated. However, taking a precautionary approach, mitigation has been provided in Section 6.5.2.2.3 to prevent any significant effects on these species as a result of the Proposed Project.

Earthworm

A number of observations from third-parties reference the potential for impact upon on soil biodiversity and ecosystem function, and earthworm populations from wind turbine induced vibrational noise. The observations state that these noise impacts are particularly concerning on agricultural soils. The observations claim that these impacts are not addressed by the submitted EIAR.

The Proposed Project infrastructure will be located largely within a lower-value, highly improved agricultural landscape (improved agricultural grassland - GA1) and to a lesser extent on cutover bog (PB4) and raised bog (PB1) habitats. Due to the high-water table and therefore lack of oxygen within bog habitats, this prevents earthworms from living within these habitats. Additionally, low-diversity and monocultural grassland habitats similar to the GA1 habitats found within infrastructure locations are not highly suitable for earthworms given that they lack food diversity and may have a nutrient depletion.

As provided in Appendix 6-4, a biodiversity management and enhancement plan (BMEP) has been provided. Within the BMEP is it proposed to create 4.45ha of long-flowering meadows as well as create and enhance seminatural marsh fritillary suitable habitat with the objective of creating species-rich low management, nutrient habitats which will provide favourable habitat for earthworm populations.

Amphibians

A number of third-party submissions are concerned regarding the potential impacts on amphibian migration and habitat disruption.

Incidental records of amphibians recorded within the Proposed Wind Farm during the walkover surveys included a record of the adult common frog within a cutover bog/raised bog habitat in the northeast of the site, south of the proposed road between T7 and T9. Frog spawn was also recorded on one occasion in 2022 along a roadside drain, and the common frog was heard on a number of occasions throughout the survey effort. Therefore, it is assumed that the common frog utilises the site regularly. No further evidence of amphibians, including newts, were recorded within the Proposed Project.

The potential for significant effects on amphibians has been considered in Section 6.4.3.5 and Section 6.6.4 (Table 6-18) of Chapter 6 of the EIAR. The chapter concludes:

The Proposed Project will not result in a significant loss of suitable habitat for reptiles and amphibians. It is considered that suitable habitat is extremely widespread in the study area and beyond.

Therefore, given that the suitable habitat for the only recorded amphibian within the Proposed Project (common frog) is widespread within the local area and moreover will be retained following the completion of the Proposed Project, mitigation was not deemed as required to prevent any significant effects on this species.

2.6.3 Bats

2.6.3.1 Legal Protection of Bats and Article 12 Compliance

Submissions raised concerns that the presence of Annex IV bat species triggers strict protection obligations under the Habitats Directive and asserted that the EIAR does not demonstrate that proposed mitigation measures reduce impacts to a level compliant with Article 12, including suggestions that permission cannot be granted in the absence of zero risk.

Response

All bat species in Ireland are afforded strict protection under Article 12 of the EU Habitats Directive. The EIAR acknowledges the presence of Annex IV bat species within the receiving environment and, informed by the detailed assessment presented in the Bat Survey Report (Appendix 6-2), undertakes a proportionate, site-specific assessment of potential interactions with bats in line with best-practice guidance with respect to the following pathways: (i) collision mortality, barotrauma and other injuries; (ii) loss or damage to commuting and foraging habitat; (iii) loss or damage to roosts; and (iv) displacement of individuals or populations.

Article 12 of the Habitats Directive prohibits 'deliberate' impacts on Annex IV species, including capture, killing, disturbance, deterioration and destruction of breeding and resting places. As outlined in Chapter 6 of the EIAR and the Bat Survey Report (Appendix 6-2), the Proposed Wind Farm has been specifically designed to avoid such deliberate impacts. All practicable means and mitigations have been prescribed to avoid, beyond reasonable scientific doubt, the potential for such deliberate impacts. As such, the Proposed Project is in compliance with Article 12 of the Habitats Directive.

2.6.3.2 Survey Methodology and Monitoring Standards

Submissions questioned the adequacy of the bat survey methodology and monitoring strategy, citing the absence of nacelle-level monitoring, the reliance on ground-level surveys and transects, and referencing Behr et al. (2023) in support of calls for additional monitoring and standardisation.

Response

As described in the dedicated Bat Report (Appendix 6-2), the bat survey methodology and impact assessment were undertaken in accordance with recognised and current best-practice guidance, including *NatureScot (2021) Bats and Onshore Wind Turbines – Survey, Assessment and Mitigation* and *Collins (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines*. The baseline survey programme was designed to characterise bat assemblage, activity patterns and habitat use across the Site, and to inform a comprehensive and proportionate assessment of potential collision risk and habitat-related impacts in line with best practice guidance.

Post-construction bat monitoring is proposed in line with best practice guidance to establish the operational baseline and to evaluate the effectiveness of the site-specific mitigation strategy. Where monitoring reveals a potential change in collision risk at specific turbines, further targeted monitoring (including nacelle-level acoustic monitoring, where appropriate) and site-specific operational mitigation will be implemented and refined in accordance with best-practice guidance.

In line with best practice guidance, NatureScot (2021) identifies pre-construction nacelle-mounted monitoring as appropriate where existing infrastructure is present (e.g. operational turbines), where meteorological masts are available, or where other supporting evidence indicates a high likelihood of bat activity within the rotor-swept zone. None of these scenarios apply at the Proposed Wind Farm site. Accordingly, surveys at turbine height were not required to support the EIAR, and the ground-level

static detector and transect survey programme is considered sufficient and proportionate to characterise baseline bat activity across the Site in accordance with best-practice guidance. Overall, a comprehensive assessment was achieved and the potential for collision risk to local bat species was fully assessed in accordance with best practice guidance.

2.6.3.3 Impact Pathways: Collision Risk and Barotrauma

Submissions raised concerns regarding the potential for bat mortality through collision with turbine blades and pressure-related injury (barotrauma) and questioned the compatibility of wind turbines with bat flight behaviour.

Response

As described in the dedicated Bat Report submitted as Appendix 6-2 to the EIAR, the bat survey methodology and assessment followed the most recent recognised industry best practice i.e. *Bats and Onshore Wind Turbines: Survey, Assessment and Mitigation* (NatureScot, 2021). Therefore, the risk to bats was fully assessed in accordance with best practice guidance.

An adaptive mitigation and monitoring plan, including bat buffers, blade feathering and 3 years post-construction monitoring, has been devised for the Proposed Wind Farm in line with NatureScot guidance to safeguard bats. This adaptive monitoring plan will assess potential changes in bat activity post-construction and can be adjusted as deemed necessary to ensure bats are safeguarded accordingly. MKO considers the proposed mitigation and monitoring plan outlined in Sections 6.1 and 6.2 of Appendix 6-2 of the EIAR to be appropriate and in line with best practice guidance to ensure no significant impacts on local bat populations occurs during the operational phase. Provided the Proposed Wind Farm is operated in line with the proposed mitigation and monitoring plan, no residual significant effects on bats is anticipated as a result of collisions or barotrauma.

2.6.3.4 Mitigation and Operational Controls (Including Curtailment)

Submissions asserted that the EIAR does not commit to validated curtailment systems and argued that operational mitigation measures are insufficient to address potential bat mortality. Further submissions sought additional measures including multi-season and multi-year surveys, monitoring of bat activity at blade height, carcass searches with bias correction, and the application of adaptive mitigation based on operational monitoring results. In addition, the Department of Housing, Local Government and Heritage recommended refinements to the proposed lighting specifications to further minimise potential disturbance to bats.

Response

The EIAR applies the mitigation hierarchy through embedded design avoidance, impact reduction measures, habitat reinstatement and enhancement, and post-construction monitoring. Potential disturbance to bat commuting routes has been minimised through the retention of key linear features where practicable, with temporary losses addressed through reinstatement and enhancement measures set out within the Bat Report (Appendix 6-2) and the Biodiversity Management and Enhancement Plan (BMEP; Appendix 6-4), to maintain and strengthen habitat connectivity over the long term.

As outlined in the Bat Report (Appendix 6-2), post-construction monitoring will comprise a multi-season and multi-year programme, with at least three years of monitoring proposed in accordance with relevant guidance. Monitoring will include static detector surveys, walked activity transects and systematic carcass searches at turbines to record any bat fatalities resulting from collision. Carcass searches will be undertaken in accordance with current best-practice guidance and will include searcher efficiency trials and assessment of scavenger removal rates, allowing appropriate bias correction to be

applied when estimating collision mortality. This approach provides a robust, standardised approach for assessing potential impacts and informing adaptive operational mitigation.

The EIAR commits to the use of bat-sensitive lighting in accordance with ILP Guidance Note 08/23: *Bats and Artificial Lighting at Night*. Where lighting is required during construction and operation, directional lighting will be used to prevent overspill onto woodland and forestry edges and other linear features used by commuting and foraging bats. Luminaires will be designed to minimise upward and lateral light spill, with appropriate shielding and directional accessories, and lighting will be directed away from mature trees and treelines.

The Applicant also commits to the Dark Sky Ireland lighting principles, including that lighting will be justified, used only where necessary, directed where required, and of the minimum intensity appropriate for safety and operational needs. In this context, the Department of Housing, Local Government and Heritage's recommendation to specify warm white lighting with a correlated colour temperature (CCT) of $\leq 2700\text{K}$, rather than the more general "warm white" specification ($< 3000\text{K}$) referenced in Dark Sky Ireland guidance, is welcomed and will be incorporated into the detailed lighting design where practicable and subject to safety and operational requirements.

Limited aviation lighting will be required on turbines in accordance with aviation safety requirements. Post-construction monitoring will assess any potential for lighting-related effects on bats. Significant effects as a result of lighting are not anticipated; however, should monitoring identify any lighting-related disturbance to bats, site-specific mitigation measures will be reviewed and refined to avoid such effects.

MKO considers the proposed mitigation and monitoring plan outlined in Sections 6.1 and 6.2 of Appendix 6-2 of the EIAR to be appropriate and in line with best practice guidance to ensure no significant impacts on local bat populations occurs during the operational phase. Provided the Proposed Wind Farm is operated in line with the proposed mitigation and monitoring plan, no residual significant effects on bats is anticipated.

2.6.3.5 Site-specific Bat Connectivity: Elmhill House & T8

Submissions raised concerns regarding the removal of hedgerows and potential effects on bat commuting routes, the proximity of a confirmed bat roost at Elmhill House to Turbine 8, and the potential for bats emerging from this roost to commute through the vicinity of Turbine 8 to access foraging habitat. Submissions also raised claims regarding potential effects of turbine-generated "ultrasound" on bat navigation.

Response

Hedgerows and treelines are recognised as important commuting and foraging features for bats. The Proposed Wind Farm has been designed to retain and avoid key linear features where practicable. Where limited removal of hedgerows or treelines is required to facilitate access or infrastructure, this is addressed through replacement planting and habitat enhancement measures set out within the Biodiversity Management and Enhancement Plan (BMEP; Appendix 6-4). These measures are designed to maintain and strengthen habitat connectivity over the medium to long term, resulting in no net loss of linear habitat connectivity across the Site.

A confirmed small soprano pipistrelle roost of less than 20 individuals is present at Elmhill House, approximately 180 m east of Turbine 8 and will be avoided and retained as part of the Proposed Wind Farm. Walked transect surveys indicate that soprano pipistrelles emerging from this roost primarily commute eastwards along treeline networks into the wider landscape, away from Turbine 8. Bat activity recorded to the west of Turbine 8 is dominated by common pipistrelles and is considered to reflect use

by bats commuting along separate linear features within the wider landscape, rather than bats originating from the Elmhill House roost.

The EIAR acknowledges that Turbine 8 is located in an area where relatively higher levels of common pipistrelle activity were recorded during specific survey periods. However, per-detector results indicate that elevated median activity was recorded at multiple turbine locations across the Site (including Turbines 1, 2, 3, 4 and 7) during different seasons, and that Turbine 8 does not represent a unique activity hotspot in the context of overall site-wide bat activity patterns. This reflects the dynamic and seasonally variable distribution of bat activity across the Site, rather than the presence of a single consistently high-activity turbine location. This sensitivity has been considered within the site-specific assessment (Appendix 6-2, Bat Report) for Turbine 8, including the application of bat buffers to minimise interaction with key linear features in this area.

With respect to claims regarding turbine “ultrasound” affecting bat navigation, there is no robust evidence that operational wind turbines emit ultrasonic sound at levels that interfere with bat echolocation or navigation. The EIAR therefore focuses on established impact pathways (collision, barotrauma and habitat connectivity) and manages these through design, mitigation and adaptive operational controls.

Post-construction bat monitoring will be undertaken, with particular attention to activity patterns and any evidence of collision risk at Turbine 8. Should monitoring indicate changes in collision risk at this turbine, site-specific operational mitigation, including curtailment, will be implemented and refined in accordance with best-practice guidance

2.6.3.5.2 **Bats Conclusion**

The EIAR and Bat Survey Report provide a robust, evidence-based assessment of potential impacts on bats associated with the Proposed Wind Farm. With the implementation of the embedded design measures, mitigation and enhancement measures, and the post-construction monitoring and adaptive operational mitigation framework, no significant long-term residual effects on bat populations are anticipated.

2.6.4 **Ornithology**

2.6.4.1 **Survey Approach**

2.6.4.1.1 **Survey Guidelines**

Concerns were raised as to the use of SNH (2017) for guidance on survey methodology.

Response

The methodology outlined in this submission is not specifically designed to survey a wind farm and a project of this scale and complexity. SNH (2017) survey guidelines were specifically designed with wind farms in mind and allows for the collection of a robust dataset which can be relied upon for an impact assessment. These methodologies are industry best practices for surveying at proposed wind farm sites. Furthermore, the methodologies do not include flight activity surveys for collision risk analysis, or surveys of the hinterland to assess the impacts on species in the wider area, both of which are outlined in SNH (2017) and have been completed as part of the comprehensive suite of surveys undertaken at the Proposed Wind Farm Site. In the absence of specific national bird survey guidelines for Ireland, the ornithological surveys were designed and undertaken in full accordance with the guidance document ‘Recommended bird survey methods to inform impact assessment of onshore wind farms’ (SNH, 2017). This survey guidance is widely accepted in the Irish onshore wind farm industry to provide best practice recommendations for undertaking bird surveys at a proposed wind farm site at the time of

survey. These guidelines have recently been updated in NatureScot (2025), after the survey period ended. However, the survey methods employed remain consistent and compliant with the updated guidance in NatureScot (2025).

A submission suggested that the EIAR policy and guidance section selectively referenced academic studies and omitted research with findings unfavourable to wind farm development. The EIAR Chapter 7 Section 7.1.2 (Legislation, Guidance and Policy Context) refers to the relevant legislation to the assessment process and guidance on conducting an assessment. These documents do not evaluate research on the favorability of wind farm developments.

2.6.4.1.2 **Vantage Point Survey Detectability**

A submission questioned the accuracy of the Vantage Point Surveys methodology provided in SNH (2017) in relation to detection rates declining with distance from the vantage point data.

Response

Survey methodology followed SNH (2017) survey guidelines, which were specifically designed with wind farms in mind and allow for the collection of flight activity information suitable for use in a collision risk model. It is acknowledged that bird detectability will decrease with distance. However, the viewsheds at the Proposed Wind Farm site provide extensive coverage of farmland and peatland within 1km of the surveyor's location, where detectability is considered to be highest. As such, the data collected provides accurate information on the species assemblage and level of flight activity within these habitat types during surveys. Because farmland and peatland are the main habitat types within the Proposed Wind Farm site, the dataset provides a representative sample of the species assemblage and flight activity throughout the Proposed Wind Farm site.

2.6.4.1.3 **Nocturnal Surveys**

A submission raised concern that the guidelines followed during field surveys for the Proposed Wind Farm to not take account of night-time bird activity, and in particular the lack of thermal imaging and passive audio recording surveys to give a measure of night-time activity at the Proposed Wind Farm site.

Response

It is acknowledged that some birds, particularly waterbirds, commute between feeding and roosting locations during periods of low light, typically before sunrise or after sunset. However, the survey scope that was undertaken at the Proposed Wind Farm site included the low light periods before sunrise or after sunset during the migratory/wintering season surveys: as described in the EIAR Chapter 7 Section 7.2.3.2.1, Vantage Point Surveys were conducted during periods of low light one hour after sunset or one hour before sunrise. Furthermore, as outlined in Appendix 7-6 Collision Risk Assessment, the nocturnal activity of birds recorded at the Proposed Wind Farm site has been accounted for within the collision risk model: within the model, crepuscular species are presumed to be active for 25% of the night.

2.6.4.1.4 **Survey Effort**

A submission queried the field survey effort conducted at the Proposed Wind Farm site.

Response

As stated in the EIAR Chapter 7 Section 7.2.3.2, dedicated multi-year and multi-season ornithological field surveys were conducted from October 2019 to March 2022 and again from August 2023 to March

2025, consisting of three breeding seasons (April – September) and five winter seasons (October – March). As described in Section 7.2.3.2.1, these included Vantage Point Surveys to monitor flight activity that is used to inform a Collision Risk Model, which is described in full in Appendix 7-6 Collision Risk Assessment. Mitigation specific to birds is described in Chapter 7 Section 7.6. Note that carcass search surveys can only be conducted where there are already existing turbines.

2.6.4.1.5 **Survey Coverage**

Submissions queried field survey coverage at the Proposed Wind Farm site, particularly in relation to dedicated barn owl and hen harrier surveys. These surveys conducted were targeted towards areas of suitable habitat where these species may be present. These habitat types were not present in all areas of the Proposed Wind Farm site, therefore did not occur in all areas.

Response

A submission also queried whether the Vantage Point Survey coverage was adequate. As outlined in the EIAR Chapter 7 Section 7.2.3.2.1, a viewshed analysis was conducted to ensure the Vantage Point Surveys had adequate coverage of the Proposed Wind Farm site and turbines to inform the collision risk assessment.

2.6.4.2 **Assessment Approach**

2.6.4.2.1 **Significance of Impacts**

Submissions queried the impact assessment process used in the EIAR and how the significance of impacts was determined.

Response

The significance of impacts on birds is described in the EIAR Chapter 7 Section 7.5. This includes the impact of collision risk, disturbance/displacement and habitat loss. Cumulative impacts on birds are described in Section 7.7 of the EIAR.

As stated in Section 7.1.2 of the EIAR, the EIAR has been prepared in accordance with the requirements of EU Environmental Impact Assessment Directive 2014/52/EU. As described in Section 7.2.4.5 of the EIAR, the impact assessment is quantified following two widely accepted assessment criteria for bird species in Ireland: Percival (2003) and the Environmental Protection Agency (EPA, 2022), which provide the best available guidance applicable to birds in Ireland to quantify the magnitude of impacts. The two assessment criteria have been used to independently characterise impacts to inform a robust assessment of potential effects. The significance of the impacts is characterised based on this guidance for each key ornithological receptor within the relevant geographical framework (described in Section 7.2.4.1 of the EIAR). Key Ornithological Receptors are assessed in Section 7.5.2 of the EIAR, which includes an assessment of barn owl, hen harrier, merlin, whooper swan, golden plover and lapwing as well as other protected species.

2.6.4.2.2 **Collision Risk Impacts**

Submissions raised concerns over the use of the Band (2007) model to predict collision risk estimates for birds. A submission queried the origin of the assumptions made in the Band (2007) model. Band (2007) outlines a number of assumptions in the modelling process. These assumptions arise from the modelling methodology itself and are not cited from other literature.

Response

As stated in the EIAR Chapter 7 Section 7.2.4.4, the Band (2007) model is the standard modelling methodology for terrestrial wind farms recommended by NatureScot. More recently, this modelling methodology has been updated in Band (2024). However, Band (2024) states that ‘collision risk estimates resulting from application of this report should not differ substantively from those deriving from correct application of the earlier [NatureScot] guidance’.

A submission queried why collision risk was not estimated for birds not recorded flying at potential collision risk height during Vantage Point Surveys. Following Band (2007; 2024) guidance, collision risk modelling is informed by the results of Vantage Point Surveys, which cover a specific known area and are conducted for a standardised length of time. Collision risk can only be predicted for a species if it was recorded at potential collision risk height during Vantage Point Surveys (if a bird was not recorded at potential collision risk height, then the collision risk will calculate at zero).

Submission queried the avoidance factors used in the collision risk assessment, in particular those of whooper swan. The avoidance factors used during the collision risk modelling process are those from NatureScot guidance (SNH, 2016). NatureScot guidance provides the best available avoidance rate estimates from these species for Ireland.

2.6.4.2.3 **Cumulative Impacts**

A number of third-party submissions query the cumulative impacts of the Proposed Project.

Response

The cumulative impacts of the development are assessed in the EIAR Chapter 7 Section 7.7.

2.6.4.3 **Mitigation and Post-consent Monitoring**

Submissions queried the design and oversight of post-consent monitoring of the Proposed Wind Farm site.

Response

As part of the EIAR application, a bird mitigation plan and monitoring programme were prepared (EIAR Appendix 7-7 Bird Mitigation Plan and Appendix 7-8 Bird Monitoring Programme). These were designed based on the avian community present and their use of the Proposed Wind Farm site, as recorded during baseline surveys. Mitigation regarding potential bird collisions with turbines will occur during the operational phase of the Proposed Wind Farm as that is when potential collisions could occur.

Post-consent monitoring will be overseen by an appropriately qualified ecologist or ornithologist. As described in the EIAR Appendix 7-8 Bird Monitoring Programme Section 2.4, monitoring reports will be submitted to the planning authority and the National Parks and Wildlife Service at the end of each monitoring year to demonstrate compliance with the mitigation plan and monitoring programme.

2.6.4.4 **Species-specific Concerns**

2.6.4.4.1 **Whooper Swan**

A number of submissions queried the impact of the Proposed Wind Farm on whooper swan activity and habitat, including a submission that raised concern over the effects of the Proposed Wind Farm on a turlough used by whooper swans located near the Castle.

Submissions queried the impact assessment process for whooper swan, particularly in relation to wetlands (such as Horseleap Lough) in the surrounding area, and the location of the raw data and maps used for assessment.

Response

As stated in the EIAR Chapter 7 Section 7.2.3.2.4, Waterbird Distribution and Abundance Surveys were conducted at significant wetlands and waterbodies within 5km of the Proposed Wind Farm site during the 2019/2020, 2020/2021, 2021/2022, 2023/2024 and 2024/2025 winter and passage seasons. The area surveyed exceeded the 500m for foraging waterbirds and 1km for roosting waterbirds required by SNH (2017) and follows the recommendations of SNH (2016). The results of this survey were considered in the impact assessment; the assessment for whooper swan specifically is in Section 7.5.2.5 of the EIAR.

As described in the EIAR Chapter 7 Section 7.2.4.5, the impact assessment is quantified following two accepted assessment criteria for bird species in Ireland: Percival (2003) and the Environmental Protection Agency (EPA, 2022). The two assessment criteria have been used to independently characterise impacts to inform a robust assessment of potential effects on whooper swan. The data used in this assessment, including flight-path maps, are presented in the EIAR Appendix 7-4 Survey Data and, where appropriate, Appendix 7-5 Confidential Survey Data. As above, loughs and turloughs in the area were surveyed during the Waterbird Distribution and Abundance Surveys within 5km of the Proposed Wind Farm site during the 2019/2020, 2020/2021, 2021/2022, 2023/2024 and 2024/2025 winter and passage seasons (see Section 7.2.3.2.4 of the EIAR).

As detailed in the Section 7.6.1 of the EIAR, the turbine layout has been designed to avoid siting turbines in proximity to Horseleap Lough, which is utilised by whooper swan. The nearest turbine is over 800m from the wetland. This avoids habitat loss, ameliorates disturbance during construction and displacement during operation, and reduces the potential for collisions as birds fly to and from the wetland. In addition, Section 7.6.2 of the EIAR outlines a Construction and Environmental Management Plan with specific measures for all bird species using the Proposed Wind Farm site, including whooper swan.

2.6.4.4.2 **Golden Plover**

Submissions queried the mitigation methods proposed for golden plover.

Response

It is acknowledged that there has not been opportunity to test the effectiveness of tethered bird control kites in reducing collisions at wind farms. This method has been tested more extensively in deterring birds for crop protection and at reducing bird numbers/flyovers in airfields and landfill sites. However, the purpose of the kites is to deter golden plover from foraging or roosting on grassland within the turbine area, therefore such research applies in this context. A Bird Monitoring Programme (EIAR Appendix 7-8) has been prepared to monitor the effectiveness of this mitigation plan by an appropriately qualified ecologist. The information collected during this monitoring will inform how this mitigation measure can be used in future.

2.6.4.4.3 **Hen Harrier**

Submissions queried hen harrier collision risk and the lack of mitigation measures specifically proposed for this species.

As outlined in the EIAR Chapter 7 Section 7.5.2.2, a low effect significance was determined for direct habitat loss and disturbance/displacement, while a very low effect significance was determined for collision risk. No mitigation measures are specifically proposed for hen harrier, however, as detailed in

the Section 7.6.1 of the EIAR, the turbine layout has been designed to avoid siting turbines in proximity to the regularly used hen harrier roost at Cloonboo More. The nearest turbine is over 700m from the section of bog habitat in which hen harrier are roosting. This avoids habitat loss at the bog, ameliorates disturbance during construction and displacement during operation, and reduces the potential for collisions as hen harrier enter and leave the roost. In addition, Section 7.6.2 of the EIAR outlines a Construction and Environmental Management Plan with specific measures for all bird species using the Proposed Wind Farm site, including hen harrier.

2.6.4.4.4 **Barn Owl**

A submission queried the location of the data collected for barn owl and queried the impact of the Proposed Wind Farm on barn owl activity and habitat.

Response

All of the field survey data used in this assessment are presented in the EIAR Appendix 7-4 Survey Data and, where appropriate, Appendix 7-5 Confidential Survey Data. Records containing barn owl information such as potential roost sites are considered ecologically sensitive and placed in Appendix 7-5 Confidential Survey Data. The significance of impacts to birds, including barn owl, is described in the EIAR Chapter 7 Section 7.5. This includes the impact of collision risk, disturbance/displacement and habitat loss.

2.6.4.4.5 **Curlew**

A submission queried the effects associated with curlew and how the development could impact the Curlew Conservation Programme for breeding curlew populations in Ireland.

Response

As stated in the EIAR Chapter 7 Section 7.3.7, there was no evidence of breeding curlew at the Proposed Wind Farm site during surveys.

2.6.4.4.6 **Ground-nesting Waders**

A submission queried the effects associated with ground-nesting waders including curlew, lapwing and snipe.

Response

As stated in the EIAR Chapter 7 Section 7.3.7, there was no evidence of breeding curlew at the Proposed Wind Farm site during surveys. Lapwing were breeding at Horseleap Lough and there was a probable breeding snipe territory in the Proposed Wind Farm site and a second to the north of the Proposed Wind Farm site. The potential effects of the development on both of these species has been assessed in full in Section 7.5.2 of the EIAR.

2.6.4.4.7 **Migratory Birds**

Submissions raised concerns about migratory birds using the site.

Response

A full description of the baseline avian community and their use of the site is presented in the EIAR Chapter 7 Section 7.3.7. Key ornithological receptors are identified in Section 7.4.2 and the potential impacts of the Proposed Wind Farm on these species are assessed in Section 7.5.2, including

displacement and barrier effects and collision risk. The potential for the site to be used by migrating birds was considered at each of these stages. No significant displacement/barrier effect or collision risk was anticipated for birds on migration.

2.6.4.4.8 **Wetland Birds**

A submission dated queried the inclusion of the BirdWatch Ireland sensitivity mapping tool in the assessment.

Response

The bird sensitivity mapping tool was included in the assessment desk study in the EIAR Chapter 7 Section 7.3.3.

2.6.4.4.9 **Farmland Birds**

A submission highlighted the Farmland Bird Hotspot Mapping Report produced by BirdWatch Ireland, which was not included in the desk study for this EIAR. A submission also queried the impact on corncrake conservation efforts.

Response

This report analysed 28 species of farmland bird from a number of different data sources and developed a bird hotspot map in for Ireland. Of the 28 species analysed, 26 were considered ‘target’ species during field surveys for the Proposed Wind Farm (all species listed under Annex I, on the Birds of Conservation Concern in Ireland Red List, and/or a species of raptor, waterbird, groundbird) and detailed information was collected for these species if they were encountered during surveys. In addition, the presence of all other species (including the remaining 2 species of farmland bird in the report, skylark and tree sparrow) was recorded if they were encountered during Vantage Point Surveys, Breeding Walkover Surveys and Winter Walkover Surveys. As such, the baseline conditions for farmland birds was described using the field data collected over multiple breeding seasons of survey. The impact assessment then considered species of conservation interest for which significant effects of habitat loss, disturbance/displacement and collision risk may occur.

Corncrake declines in Ireland are mainly associated with the mechanisation of mowing and the switch from hay to silage making. A corncrake reintroduction programme is not underway at the Proposed Wind Farm site.

2.7 **Land, Soils, Geology**

This section of the response has been prepared by Gavin & Doherty Geosolutions (GDG) who prepared the Peat and Spoil Management Plan (Appendix 4-2), Peat Stability Risk Assessment (Appendix 8-1) and Karst Risk Assessment (Appendix 8-2) of the EIAR.

A number of third-party submissions raise concern in relation to peat stability and the karst risk assessment of the Proposed Wind Farm site. Responses to these third-party observations has been prepared and is included in Appendix 1 ‘GDG Response’ of this response document.

The following observations are addressed by GDG in detail in Appendix 1:

- > Peat Stability
- > Karst Risk Assessment

2.8 Hydrology and Hydrogeology

This section of the response document has been prepared by Hydro-Environmental Services (HES) who prepared Chapter 8 Land Soils and Geology and Chapter 9 Hydrology and Hydrogeology of the EIAR.

A number of third-party submissions raise concern in relation relating to the water, land, soils and geological environment. Responses to these third-party observations has been prepared and is included in Appendix 2 'HES Response' of this response document.

- Effects on local group water scheme supplies;
- Surface water and groundwater quality affects;
- Potential effects on local private wells;
- Potential impacts on Lough Corrib SAC; and,
- Potential Increased flood risk

2.9 Noise

This section of the response document has been prepared by TNEI Ireland Ltd. who prepared Chapter 12 Noise and Vibration of the EIAR.

A number of third-party submissions raise concern in relation to noise effects due to the construction and operation of the Proposed Project. Responses to noise related observations has been prepared and is included in Appendix 3 'TNEI Response' of this response document.

The following third-party observations are addressed in full in Appendix 3:

- Noise assessment standards, guidelines and legislation
- Health impacts from noise pollution
- Low Frequency Noise (LFN) and infrasound
- Amplitude Modulation (AM)
- Potential impacts on animals (livestock)
- BESS noise
- Construction noise
- Vibration

2.10 Climate

A number of third-party submissions raised concerns centred on the climatic impacts of the Proposed Project in relation to:

- Drainage and excavation of peatlands
- Deforestation
- Carbon calculations

Response

Drainage and excavation of peatlands

The construction of the Proposed Project will involve the drainage and excavation of peatlands. As outlined in Table 8-16 in Section 8.5.2.1 in Chapter 8 of the EIAR, there is 42 hectares (ha) of 'Cutover Bog' within the lands of the Proposed Project – of which, 2.12ha or 5% will be lost. The drainage and excavation of peat soils will give rise to emissions due to the loss of 'carbon fixing potential from plants

on peat land’ as stated in Section 11.4.2 in Chapter 11 of the EIAR. Section 11.4.2 describes the methodology used for calculating the losses of carbon associated with the Proposed Project. The assessment has used the Macauley Institute carbon calculator for the purposes of this assessment, and the results have been included in Appendix 11-2 of the EIAR, ‘Carbon Calculations’.

The carbon balance of proposed wind farm developments in peatland habitats has attracted significant attention in recent years. When developments such as wind farms are proposed for peatland areas, there will be direct impacts and loss of peat in the area of the development footprint. There may also be indirect impacts where it is necessary to install drainage in certain areas to facilitate construction. The works can either directly or indirectly allow the peat to dry out, locally, which permits the full decomposition of the stored organic material with the associated release of the stored carbon as CO₂. It is essential therefore that any wind farm development in a peatland area saves more CO₂ than is released. The Proposed Project is situated in predominantly cutover bog, coniferous forestry and agricultural land. For this reason, the carbon balance between the use of renewable energy and the loss of carbon stored in the peat are assessed in Section 11.4.3.1 of the EIAR.

As outlined in Section 11.4.3.1 in Chapter 11 of the EIAR, The figure of 17,555 tonnes of CO₂ arising from ground activities associated with the Proposed Project is calculated based on the entire Proposed Project development footprint being in “Acid Bog”, as this is one of only two choices the model allows (the other being Fen). The habitat that will be impacted by the development footprint comprises a mix of peatland, coniferous forestry, native woodland, and pastoral agriculture land rather than acid bog, as assumed by the model. The value of 17,555 tonnes of CO₂ arising from ground activities in ‘Acid Bog’ is under a precautionary scenario, and therefore the actual CO₂ losses are expected to be lower than this value.

Deforestation

The construction of the Proposed Project will result in the deforestation of conifer plantations, broadleaved woodland, scrub habitat and hedgerows. As outlined in Table 6-19 in Chapter 6 of the EIAR, the extent of habitat loss to the Proposed Project is listed as well as the percentage of the total area of that habitat on Site. With regard to the loss of trees, scrub and hedgerows, the following figures are given within Table 6-19:

- Scrub (WS1) - 0.06ha Lost to the Proposed Project
- Conifer Plantation (WD4) - 11.25ha Lost to the Proposed Project
- Broadleaved Woodland (WD1) - 0.17ha Lost to the Proposed Project
- Hedgerow (WL1) and associated stone walls (BL1) - 3.21km Lost to the Proposed Project
- Treeline (WL2) - 0.53km Lost to the Proposed Project

A Biodiversity Enhancement Management Plan (BEMP), included in Appendix 6-4 of the EIAR, states the mitigation measures that will be implemented in the event of the Proposed Project being granted and constructed. The same measures are also described in relation to Broadleaved Woodland (WD1) and Hedgerows, Treelines and Stone walls. Outlined in Section 3 of the BEMP, the proposed biodiversity measures will include protection of existing high value habitats and the creation and maintenance of newly created habitats on-site. Stated in Section 3.2.1 of the BEMP, approximately 1.2km of riparian fencing and planting of native tree species, such as willow and alder, will occur to protect waterbodies and strengthen riverbank stability. In Section 3.2.4 of the BEMP, it is proposed that a number of uncut raised bog (PB1) and regenerating cutover bog (PB4) habitats, which have started to recolonise with scrub, will be allowed to regenerate into what is expected will become bog woodland habitat. In Section 3.3.1 of BEMP, it is stated that approximately 3.74km of linear features will be lost due to the Proposed Project. It is proposed that 4.7km of hedgerows will be planted within the Proposed Wind Farm – resulting in a net gain of 960m in linear habitats. The addition of 960m of new linear features equates to a 26% increase of such habitats across the Site. The proposed sections of hedgerow planting have been designed in order to strategically link up existing areas that have known bat activity thus increasing the connectivity of the Site.

Stated in Section 3.3.2 of the BEMP, it is proposed that an area of 11.25ha of conifer woodland will be lost across the Site. It is also proposed that 11.5ha of native broadleaved woodland will be planted across the Site with a maintenance schedule implemented to ensure the establishment of the planting scheme is a success.

The proposed measures in relation to afforestation and planting, once established, will increase the carbon storage capacity of the Proposed Project.

Carbon Calculations

Chapter 11: Climate of the EIAR identifies, describes, and assesses the potential direct and indirect effects on climate arising from the construction, operation and decommissioning of the Proposed Project and has been completed in accordance with the EIA guidance and legislation set out in Chapter 1: Introduction. The objective of this assessment is to assess the potential effects that the Proposed Project may have on Climate and sets out proposed mitigation measures to avoid, reduce or offset any potential significant effects that are identified.

As mentioned above, the carbon balance of wind farm developments in peatland habitats has attracted significant attention in recent years. When developments such as wind farms are proposed for peatland areas, there will be direct impacts and loss of peat in the area of the development footprint. There may also be indirect impacts where it is necessary to install drainage in certain areas to facilitate construction, or from the reinstatement of extracted peat. The works can either directly or indirectly allow the peat to dry out, locally, which permits the full decomposition of the stored organic material with the associated release of the stored carbon as CO₂. It is essential therefore that any wind farm development in a peatland area saves more CO₂ than is released. To assess the carbon losses and carbon savings, Section 11.4.3 of Chapter 11 states the Scottish Government's online carbon calculator was used for the purposes of this assessment. The potential for losses and savings takes into account peat removal and reinstatement, drainage, habitat improvement, felling and site restoration. In relation to embodied carbon and associated transport movements of all other ancillary elements of the Proposed Project, the TII Carbon Tool has been utilised to assess the impacts of the Proposed Project in terms of potential carbon losses in regard to construction phase transport emissions and embodied carbon. The worksheet models and online tools calculate that the Proposed Project will give rise to 145,705 tonnes of CO₂ equivalent losses over its 35-year life. Of this total figure, the Proposed Wind Farm site turbines directly account for 54,656 tonnes, or 38%. Losses due to backup account for 40,949 tonnes, or 28%. Losses from reduced carbon fixing potential accounts for 1.1% or 1,656 tonnes. Losses from soil organic matter, i.e., CO₂ loss from disturbed soil and subsoils, will equate to 17,555 tonnes, or 12%. Losses due to tree felling account for 4,981 tonnes or 3.4%. Losses due to embodied carbon accounts for 25,603 tonnes or 17.6% and losses due to construction phase transport emissions accounts for 0.2% or 304 tonnes.

Section 11.4.3.2 of Chapter 11 in the EIAR, outlines the projected reduction in carbon dioxide emissions as a result of the Proposed Wind Farm generating electricity and offsetting the fossil fuels sources that would've been required to generate electricity in the absence of the Proposed Wind Farm. Based on the calculation with project specific information included such as the rated capacity of the entire development, 39,462 tonnes of carbon dioxide will be displaced per annum from largely carbon-based traditional energy mix by the Proposed Wind Farm site. Over the proposed 35- year lifetime of the development, therefore 1,381,176 tonnes of carbon dioxide will be displaced from traditional carbon-based electricity generation.

Based on the Scottish Government carbon calculator as presented above in Section 11.4.3.1 in Chapter 11 of the EIAR, approximately 145,705 tonnes of CO₂ will be lost to the atmosphere due to changes in the soil and ground conditions and due to the construction and operation of the Proposed Project. This represents 11% of the total amount of carbon dioxide emissions that will be offset by the Proposed Project. The 72,211 tonnes of CO₂ that will be lost to the atmosphere due to changes in soil and ground conditions and due to the construction and operation of the Proposed Project will be offset by the Proposed Wind Farm site in approximately 44 months (3.6 years) of operation. As stated in Section

11.5.3.1 of Chapter 11 in the EIAR, there will be a Long-term moderate positive effect on Climate as a result of reduced greenhouse gas emissions.

2.11 Landscape and Visual

A number of third-party observations raise concerns about the landscape and visual impact of the proposed turbines would have on the receiving environment. The submissions reference the size and scale of the proposed turbines in a rural landscape will alter the character of the wider area. Furthermore, the size and scale of the proposed turbines would result in an industrialisation of what is a rural landscape and overwhelm the character of the area. Several observations raise the cumulative impact of the Proposed Project due to a number of other proposed wind energy developments in the North and East Galway area submitted to the planning system or currently in design. One submission makes the point that aviation lighting atop of the proposed turbines would add “*skyglow and visual intrusion beyond daylight hours.*”

Response

The observations from third-parties claim that the proposed turbines are too large of a size and scale for a rural landscape of East Galway. This LVIA EIAR has followed the current industry best practice guidance, as listed in Section 1.3 of Appendix 13-1 of the EIAR LVIA. While following guidance from the WEDGs (2006) and Draft WEDGs (2019), the EIAR has also followed EPA (2022) guidance in the assessment of effects of the proposed turbines.

As outlined in 13.7.3.2.6 in Chapter 13 of the EIAR, during multiple surveys conducted in 2021, 2022, 2023 and 2024, visibility appraisals determined that most visibility of the proposed turbines will occur within 1-3km of the proposed turbines. This area is a modified working and settled landscape with residential housing organised along the local road network, as well as small settlement clusters around local crossroads and junctions. Some residential receptors located in close proximity to the Proposed Wind Farm site will likely have views of the proposed turbines and are likely to have the greatest visual effects arising as a result of the Proposed Wind Farm. The Proposed Project exceeds the recommended 500m set-back distance in the 2006 Guidelines and also the 4-times-tip-height set-back distance ($4 \times 180\text{m} = 720\text{m}$) explicitly set out for residential amenity prescribed by the draft 2019 Guidelines

Given Ireland’s renewable energy targets which have been set by the State for onshore renewable wind energy development, wind turbines will form a new component in the working landscape for the foreseeable future. The focus for visual impact assessment of wind energy developments is therefore distance, arrangement, location and potential disruption to key scenic sensitivities rather than a commonly misconceived focus on whether turbines are visible or not from a particular vantage point. The outcome of the visual impact assessment, with regards to the EPA (2022) definition of significance, is calibrated in the overall context of LVIA of wind energy developments in Ireland and what is acceptable in the context of emerging baseline trends and the acceptability of wind turbines within views as a result of national policy.

Over time, wind turbines have, and will become, a more familiar and accepted component of the Irish landscape, particularly in working rural contexts. Accordingly, their presence may not carry the same level of perceived visual intrusion as less common or incongruous forms of development. In this context, the calibration of visual impact significance reflects both the policy-driven imperative for renewable energy development and the evolving visual baseline in parts of the Irish landscape. While the visibility of turbines remains an important consideration, it does not in itself equate to significant visual impact.

As outlined in Section 13.7.3.1.1 of Chapter 13 of the EIAR, the landscape of the Proposed Wind Farm will undergo changes by the introduction of the proposed turbines as vertical, man-made structures within the material area of the site. This will result in a ‘Substantial’ magnitude of change to the landscape in localised areas within the Site, however, as per the landscape classifications outlined in the

Galway County Development Plan 2022-2028, the proposed turbines are located within an area classified as 'Low' sensitivity.

The proposed turbines are located within a landscape of the same general type and character – that of modified working landscape comprising agricultural fields, commercial forestry and cutover bogs – which are landscape types effectively capable of absorbing wind energy development. Considering the overall “Low” landscape sensitivity rating (lowest rating in Co. Galway) of both the Proposed Wind Farm site and the entire LVIA Study Area, it is relevant that all proposed turbines are sited within similar landscape types which have been assessed and concluded as being effectively capable of absorbing the development.

The Biodiversity Management and Enhancement Plan (BMEP) included as Appendix 6-4 of the EIAR will have the dual effect of providing ecological enhancement to the landscape area of the Proposed Wind Farm site as well as potential screening of some lower lying infrastructure of the Proposed Wind Farm, thereby ultimately mitigating effects on landscape character during the operational phase.

As outlined in Section 15.2.4.4.2 of Chapter 15 of the EIAR, contained within the scoping replies from the Department of Defence (DOD) and the Irish Aviation Authority (IAA), they outline that the Applicant should be conditioned by the consenting planning authority to incorporate obstacle warning lighting scheme on the proposed turbines in the interest of aviation safety. As stated in Section 15.2.6.3.2 in Chapter 15, the Proposed Project will comply with the requests by DOD and IAA regarding aviation safety measures.

2.12 Cultural Heritage

This section of the response has been prepared by IAC Archaeology Ltd who prepared Chapter 14 Cultural Heritage of the EIAR.

A number of third-party submissions to the Commission make observations relating to archaeology and cultural heritage, namely concerns regarding direct and indirect effects on local heritage and potential unmapped or buried archaeological feature in the area.

2.12.1 Historical Sites Missed in the EIAR

The Collective in their submission draw attention to “many historical sites of interest which are located in close proximity to the Proposed Wind Farm, but which are not marked on the maps produced by the developer.” The submission lists the following sites:

- Former hedge school located at 53.5111716, -8.6734016, which is located 0.7km from turbine 7. It is not marked in the developer’s map but is marked in older ordnance survey maps.
- The burial plot of a monk, who according to local knowledge died on a day when there was heavy snow and couldn’t be transported to the graveyard so was buried at 53.5044248, -8.6700220 known as the ‘Bráthar’s Grave’ which is a mere 640m from Turbine 7.
- Children’s burial ground located in Cloondahamper, a plaque remembering the children buried there is displayed on the grounds of St. Mary’s Church Killereerin located at 53.5063568, -8.6731834, some 0.4km from Turbine 7 but is not marked in the developer’s map.
- Children’s Burial Ground known as the Killaghan which is located 53.5061189 – 8.6587611 which is 0.59km from turbine 9. This is located within a ring fort (centre point 53.5063568 – 8.6591638).
Close proximity to this structure there exists a hill fort at 53.5072892 – 8.6572725 which consists of a hill with two hawthorn bushes on top of it. A stone wall runs up through the

middle of the fort. This is 0.67km from turbine 9. Only one of these forts is marked in the developer's map.

- Remnants of a famine road exist in Cooloo bog, which is barely identifiable today, but very visible in older ordnance survey maps. It is located at 53.4988926 – 8.6496624, some 0.43 km from turbine 9. This is not marked in the developer's map.

Another submission notes the presence/evidence of an old railway line through the bog from the direction of Turbine 9.

Concerns were raised over the IAC's statement that *"previously unknown archaeological sites and features could be directly negatively effected by the construction of the proposed project"*, lacks confidence that historical remains will be protected and recorded once the construction phase commences.

Response

A building is marked on the 1837 OS map at the location of the former hedge school described in the submission. The building is removed by the time of the 1892 OS map and there are no upstanding remains visible on aerial photography. As the building is located outside of the Proposed Project and is located in private land, it was not subject to a field inspection. If the building is still standing, as suggested by the Collective, it has a medium sensitivity. The nearest turbine (T07) is located c. 0.9km to the south-southeast, which will have an indirect negative effect on the building during the operation of the proposed wind farm site. The magnitude of this effect is low, which will result in a slight significance of effect.

The submission describes the burial plot of a monk, known as 'Bráthar's Grave'. No specific information relating to this site can be found and it is not recorded on published registers. The information in the submission is contradictory when describing its location. The provided grid reference is c. 190m to the north of T07, but the submission notes that it is 640m from T07. Without further information the location cannot be determined. The site is not shown on the cartographic sources at the grid reference provided in the submission. The nature of the site is also not described, and it is unclear if there is a grave marker or associated features. Without further information it is not possible to accurately assess likely effects, although it should be noted that the effects are unlikely to be significant.

The submission describes a children's burial ground in Cloondahamper townland. A roughly circular anomaly is visible on aerial photography c. 40m to the north of the location provided in the submission. This may be the children's burial ground referred to, although it is not recorded on any of the cartographic sources or published registers of sites used in the compilation of the chapter. If this is the location of a children's burial ground, it has a high sensitivity. The nearest turbine (T07) is located c. 0.5km to the southeast of the site, which will have an indirect negative effect of medium magnitude building during the operation of the proposed wind farm site. This will result in a moderate significance of effect.

The submission describes a second children's burial ground, located in Cloonascragh townland and known as Killaguhan. This site is recorded in the chapter as AH93, which consists of the following recorded monuments: children's burial ground; ecclesiastical enclosure; bullaun stone. AH93 has a high sensitivity, and the nearest turbine (T07) is located c. 0.8km to the southwest of the site, which will have an indirect negative effect of medium magnitude building during the operation of the proposed wind farm site. This will result in a moderate significance of effect.

The submission describes a hill fort. The site described is a ringfort, recorded in the chapter as AH92. AH92 has a high sensitivity, and the nearest turbine (T07) is located c. 0.9km to the southwest of the site, which will have an indirect negative effect of medium magnitude building during the operation of the proposed wind farm site. This will result in a moderate significance of effect.

The submission describes a famine road in Cooloo Bog. An ephemeral track can be seen at this location on aerial photography, shown to be leading to an area of peat cutting and measuring c. 50m in length. As assessment of the cartographic sources used in the compilation of the chapter, including the historic Ordnance Survey maps, do not show tracks or roads at this location. As the track is not depicted on the cartographic sources its age cannot be determined. If the track seen on aerial photography is an unmarked famine road it has a medium sensitivity, and the operation of the proposed wind farm site will have an indirect negative effect of medium magnitude. This will result in a moderate significance of effect.

The submission also describes an old railway line that passes through the bog from T09. This is not shown on the cartographic sources or published registers at the location described in the submission. This location was visited during the site inspection, and no evidence of a railway line was seen.

In relation to proposed mitigation measures, It is not possible to know the extent of potential previously unrecorded sub-surface archaeological features with no surface expression, and it is possible that there are previously unrecorded features within the proposed wind farm site. This statement applies to all greenfield sites throughout the country, due to the nature of buried archaeological features. The Proposed Project does not directly affect any recorded archaeological monuments.

In chapter 14 Section 14.4.2, Several appropriate mitigation measures have been proposed to ensure that any potential sub-surface archaeological features are identified and recorded/preserved. The proposed mitigation strategy of test trenching prior to construction, as well as monitoring of ground disturbances, is appropriate for the development and the impacts identified. As noted in the chapter, further mitigation may be required, such as preservation by record or in-situ and/or archaeological monitoring. Any further mitigation will require agreement from the DHLGH (*Department of Housing, Local Government and Heritage*). These mitigation measures form part of all large-scale developments in the country, including other wind farm developments, and the developer has committed to the mitigation.

It is also noted that in the response from the Department of Housing, Local Government and Heritage (DoHLGH) and GCC that they are in agreement with the mitigation as laid out in the chapter.

As identified in Section 14.4.2 of Chapter 14 of the EIAR it is the view of MKO that the significance of effects associated with the construction of the Proposed Project remains as such

“Following the completion of the mitigation measures, there will be no significant negative residual effects on the archaeological, architectural and cultural heritage resource.”

2.13 Traffic and Road Safety

In addition to the Collective, several third-party observations are made regarding concerns over road safety and traffic impacts as a result of the Proposed Project. Observations are made under the following themes:

- > Traffic and transport assessment
- > Damage to Local Roads
- > Road safety
- > Disruption to Local Traffic
- > Road Labelling

This section of the response document was prepared by MKO in consultation with Alan Lipscombe Traffic and Transport Consultants Ltd, whom together prepared Chapter 15.1 – Traffic and Transport, of the EIAR.

2.13.1 Traffic and Transport Assessment

Several submissions including noted that the traffic and transport assessment included within the EIAR was insufficient, and raised concerns over the traffic count surveys conducted over one day during the summer months (i.e., during the school holidays) results in a defective baseline and that the EIAR understates the impact on local road users as school traffic was not accounted for within the assessment. They state that the traffic management plan (TMP) omits quantitative data such as expected abnormal load numbers, peak-phase traffic volumes, and route-specific scheduling required to evaluate construction impacts. The observations also claim the TMP fails to model cumulative or worst-case haulage scenarios, nor does it include enforceable mitigation measures for school transport, farm access or local business continuity.

Response

The traffic and transport section of the EIAR (Chapter 15.1) has been completed in accordance with the EIA guidance set out in Chapter 1 Section 1.2. The assessment uses standard terminology to describe the likely significant effects associated with the Proposed Project. Further information on the classification of effects used in this assessment is presented in Section 1.7.2 of this EIAR. With respect to the assessment of traffic effects, all relevant TII guidelines and policies have been taken into account in the preparation of the traffic and transport assessment included in Chapter 15 of the EIAR, including the following;

- PE-PDV-02045, Traffic and Transport Assessment Guidelines, Transport Infrastructure Ireland, May 2014
- PE-PAG-02017, Project Appraisal Guidelines, Unit 5.3, Travel Demand Projections, Transport Infrastructure Ireland, October 2021
- DN-GEO-03060, Geometric Design of junctions, Transport Infrastructure Ireland, May 2023.

The traffic and transport assessment of the Proposed Project is therefore considered robust and adequate in line with best practice guidance for inclusion within the EIAR.

As detailed in Section 15.1.3 in the EIAR, traffic counts were obtained from 24 hour classified turning count surveys undertaken at the N63 south of Annagh Cross, N63 east of Annagh Cross, N63 south of Brierfield and R332 approaching the Proposed Wind Farm site. The counts were undertaken on Tuesday 8th July, 2025 by Traffinomics Ltd. All base year 2025 traffic count data is included as Appendix 15-1 of the EIAR. The base year 2025 traffic volumes on the turbine delivery route (TDR), haul routes and Proposed Grid Connection were observed from the traffic surveys in July 2025. The background traffic forecasts for the construction year 2028 were determined from TII growth forecasts and are detailed in Section 15.1.3.2 of the EIAR.

The issue of traffic counts that may be suitable to use as baseline data for the traffic assessment presented in the EIAR is mentioned under the headings “2.3.1 Scoping” and “2.6 Useful Transport Data Sources” in TII’s Traffic and Transport Assessment Guidelines (PE-PDV-02045, May 2014).

The relevant points to note are that the assessment/counts;

- Should take account of the nature of the development and the likely peak periods of trip generation.
 - On this point it is noted that while traffic in urban areas may peak during school term, in rural areas trips may peak at other times due to other trip purposes (tourism, agriculture activity etc),
- May use the TII automatic traffic count sites to identify suitable survey periods (or if required apply a seasonal adjustment), and,
- May be collected using classified turning counts, as was the case for the EIAR.

Based on the above, the Proposed Wind Farm site is located in a rural area and as such is not expected to incur the same impacts of school related traffic as urban areas. As indicated as a valid data source in the guidelines a TII Automatic Count Site located near the Proposed Wind Farm site (N63 at Derreen between Roscommon and Claregalway) was used to assess the seasonal variation in traffic volumes adjacent to the site. An assessment of the TII data on the N63 indicates that traffic volumes observed during July were the 4th highest month of the year, and that they were higher than many of the peak school months, and also higher than the average month. On this basis it was considered that the base year traffic data collected in July was valid and that no seasonal adjustment was required.

Estimates of the additional traffic volumes that will be generated by the Proposed Project are set out in Section 15.1.4.1 of the EIAR for the construction and operational phase, inclusive of total truck loads for all Proposed Project elements and abnormal load deliveries associated with proposed turbines. An assessment of the impacts on link capacity on the TDR and construction materials transport routes is set out for the construction phase in Sections 15.1.6.1 to 15.1.6.3, with a detailed junction capacity assessment of the impacts of the Proposed Project on the junction that will be most affected by the Proposed Project, the N63/R332 junction, included in Section 15.1.6.3. The same information for the operational phase is provided in Sections 15.1.6.4 with respect to the impacts on link flows.

Traffic impacts and diversion routes identified for the Proposed Grid Connection works are included in Section 15.1.7 of the EIAR. Sections along the Proposed Grid Connection where there will be road and pedestrian footpath closures and traffic diversions are identified. An inspection of the route would indicate that the significant majority of the route will require a road closure at the point of construction during the construction of the underground cable route. A precautionary scenario where a road closure will be required for the entire route is assumed for the purpose of the assessment. For the diversion routes shown identified in Section 15.1.7 of the EIAR, the temporary additional trip length incurred by drivers during the construction of the Proposed Grid Connection will range from a minimum of 0.9km to a maximum of 13.7km. It should also be noted that the length of the diversion routes shown for the various sections of the Proposed Grid Connection are the longest that may be incurred, measured from either end of the section being constructed, and that in practice, many drivers undertaking longer trips will divert onto other parallel routes further afield to avoid the closure, incurring shorter actual diversions.

An assessment of cumulative effects on traffic is outlined in Chapter 15 Section 15.1.12.7 of the EIAR following the TII Traffic and Transport Assessment Guidelines, PE-PDV-02045, May 2014 to determine which of the developments will have a cumulative impact with the Proposed Project, which is a function of the level of increase on traffic volumes that may be experienced on a common road network. Of the 4 no. other permitted and proposed wind farm developments within a 25 km buffer zone around the Proposed Project considered to have potential traffic related cumulative impacts as set out in Table 15-28, one development (permitted Cloonlusk Wind Farm) has high potential for cumulative impacts with the Proposed Project, due to the high level of overlap of the turbine delivery and general construction routes. It is therefore proposed that the construction phase of the Proposed Project will be scheduled, where possible, to avoid the construction phases of this development. This will ensure that the potential for cumulative effects is minimised. In the event that the construction phase of the Proposed Project overlaps with that of the Cloonlusk Wind Farm it is estimated that the cumulative impacts will be negative, short term and will be slight, which is not significant.

The purpose of the TMP is to set out traffic management measures that the Applicant will commit to provide during the construction stage of the Proposed Project. The successful completion of the Proposed Project will require significant coordination and planning and a comprehensive set of mitigation measures will be put in place before, and during the construction stage, in order to minimise the effects of the additional traffic generated on the surrounding road network. Quantitative data including abnormal load numbers and peak-phase traffic volumes are outlined in Chapter 15 Section 15.1.6 of the EIAR, which has formed the basis of the identified traffic management measures within the TMP.

A detailed TMP will be finalised and confirmatory detailed provisions in respect of traffic management agreed with the Roads Authorities and An Garda Síochána prior to construction works commencing on site. The implementation of the mitigation measures included in the proposed TMP will ensure a controlled and efficient operation during the construction phase, and minimise the impacts on local road users.

2.13.2 Damage to Local Roads

Several third-party observations raised concerns with the damage to local roads due to abnormal loads associated with construction of the Proposed Project and claim that there is no robust plan for road strengthening, maintenance or reinstatement despite the vulnerability of the narrow rural road network near Barnaderg and Cooloo which lack the capacity for large turbine transport without pre-works strengthening or verge reinforcement.

Response

The turbine delivery vehicles for the construction phase of the Proposed Project have been modelled in the swept path assessments for the Site, as detailed in Chapter 15 of the EIAR. It should also be noted that while there will be abnormally sized vehicles associated with the Proposed Project, all axle loads will be within weight accepted limits.

As outlined in Table 15-1a of Chapter 15 of the EIAR, roads condition surveys pre-construction surveys will be completed in accordance with TII recommendations and requirements of GCC Roads Department. A pre-condition survey of roads associated with the Proposed Project will be carried out prior to construction commencement to record the condition of the roads. A post construction survey will be carried out after works are completed. Where required the extent and timing of these surveys will be agreed with the local authority, as set out in the Traffic Management Measures, included set out in Section 15.1.12.5 of Chapter 15 of the EIAR. All road surfaces and boundaries will be re-instated to pre-development condition, as agreed with the local authority engineers. All works will be done in accordance with the Guidelines for the Opening, Backfilling and Reinstatement of Openings in Public Roads, DTToS, September 2015.

It is noted that a financial security to secure the reinstatement of public roads which may be damaged by the transport of materials to the site is typically conditioned should the Commission decide to grant permission. The Applicant welcomes any such condition should permission be granted.

2.13.3 Road Safety

2.13.3.1 Abnormal Loads

A number of third-party observations contained concerns about the movement of abnormal loads and construction machinery on rural road network, and claim no clear evidence has been provided to demonstrate that the local road network is physically capable of safely accommodating the delivery of abnormal turbine components, nor that alternative haul routes were properly considered or discounted.

Response

With regard to the geometric assessment of the road network, a detailed swept path analysis, using specialist software, was undertaken for the blade and tower transport vehicles at all potential pinch points on the TDR, from the port of arrival in Galway to the construction phase site entrance. The locations included in the assessment are shown in Figure 15-1b of the EIAR, with the results of the assessment for the 16 locations on the route included in Figures 15-7 to 15-16 and discussed in Section 15.1.9 of the EIAR. An assessment of the locations in Galway City are also included as Appendix 15-3 of the EIAR.

The assessment establishes the locations where the abnormally sized loads will be accommodated with no impacts, the locations where oversail of the blade tip or overhang of the blade body are required, and the locations where temporary over-runs are required.

Alternative transport routes are detailed within Chapter 3 Section 3.5.5 of the EIAR. An assessment of the options was carried out, taking account of criteria such as third-party land requirements, existing road upgrades, new road construction requirements and associated environmental effects. The chosen TDR was selected as it was the shortest delivery route to the Proposed Wind Farm site and reduced number of required accommodation areas at identified pinch points.

Construction materials will be delivered to the Site via selected haul routes that will be determined based on the source from local, appropriately authorised quarries. For the purposes of assessment within the EIAR, 4 no. quarries within a 20km range of the Proposed Wind Farm site that could potentially provide stone and concrete have been assessed, with the locations of these quarries and potential delivery routes to the Proposed Project, shown in Figure 15-2a. It is noted that these additional routes converge on the M17 junction 19 with the N63, so from this location to the Proposed Wind Farm site access on the R332 is the section of the delivery route that will be under most pressure and is the focus of the traffic impact assessment as discussed in Section 15.1.9 of the EIAR.

In conclusion, it is considered that the issue of road capacity is adequately and robustly addressed in the EIAR. It has been adequately demonstrated through detailed swept path analysis that the public road network has the capacity, width and alignment to safely provide for the additional traffic that will be generated by the Proposed Project. Alternative have been considered in selecting the optimum transport route to the Proposed Wind Farm site, and haul routes from several potential quarries are assessed in the context of road capacity and traffic safety.

2.13.3.2 Abnormal Loads and Site Access

A number of third-party observations raise safety concerns regarding site access and abnormal load delivery for the Proposed Project, including restricted forward sighting distance and visibility splays at the proposed site entrance along the R332 regional road, inadequate visibility splays at the L6505 local road crossing and restricted access along the R332/N63 junction accommodation area.

One third-party submission queries whether landowner consent has been sought to trim bushes/shrubs on the south side of the R332 Regional Road in order to maximise forward visibility and states that a 3m setback for heavy goods vehicles (HGVs) is not adequate and it should be increased to 4.5m.

Response

The R332 construction phase site entrance will be subject to traffic management measures for the duration of the construction phase and is not intended for use during the operational phase except in the unlikely event of an abnormally sized load being delivered for maintenance purposes. The proposed construction site entrance for the Proposed Project was subject to geometric assessment to identify the turning area required and to ensure the safe egress of traffic in accordance with TII DN-GEO-03060, as described in Section 15.1.10 of Chapter 15 of the EIAR.

As a result, a detailed TMP incorporating all the mitigation measures is included as Appendix 15-2 of this EIAR, which will be finalised and confirmatory detailed provisions in respect of traffic management agreed with the Road Section of GCC prior to construction and contact will be maintained with the Road and Traffic Section throughout the construction phase. Mitigation measures outlined in Appendix 15-2 include the following:

- The bush / shrubs on the south side of the R332 are trimmed in order to maximise forward visibility. It is estimated that a forward visibility of approximately 140m may be achieved by trimming the roadside bushes alone.

- An application to Galway County Council for a temporary reduction of the speed limit on this section of the [R332]* to 60 km/h during the 18 month construction phase of the Proposed Project,
- The introduction of Traffic signs in accordance with the “*Traffic Signs Manual, Section 8 – Temporary Traffic Measures and Signs for Road Works*” (DoT now DoTT&S) and “*Guidance for the Control and Management of Traffic at Roadworks*” (DoTT&S). The proposed traffic management measures will be submitted to Galway County Council’s Roads section for agreement prior to the construction phase.
- The provision of a flagman at all times that the proposed access junction is in use during the construction phase.
- The closure of the site access by means of temporary fencing and gates during periods when the access is not in use, including evenings during the construction phase.
- The permanent closure of the site access junction on completion of the construction phase. This junction will only be opened for the purpose of the replacement of large component parts.

*It is acknowledged that an incorrect reference was made to the R328 in the mitigation measures outlined in Chapter 15 Section 15.1.10 of the EIAR and Section 4 of the TMP included as Appendix 15-2. See Section 2.13.5 of this response document below. The text above has been amended to correctly reference the R332.

As the proposed site entrance off the R332 will be managed in accordance with the above and will only be in use during the construction phase, letters of consent from adjoining landowners and relevant third parties and revised site layout plans depicting permanent sightlines are not considered to be required. The delivery of abnormal loads will also be carried out at night and under Garda escort and therefore the visibility splay and forward visibility requirements do not apply.

As detailed in Chapter 4 Section 4.5.2.11 a temporary track is required in a field west of the N63/R332 junction, in the townland of Slievegorm, in order to facilitate the movement of wind turbine vehicles through this junction. It is noted that the standard road markings and visibility splays are not required at the access off the N63, or the exit onto the R332, as the temporary access road will only be used for the transportation of abnormally sized loads, which will be delivered with a Garda escort and transient traffic management vehicles operated by the haulage company. This road will not be available for any other traffic and will be closed off and opened only for the delivery of the abnormally sized loads.

Upon the completion of the construction phase, the temporary road will be covered with a layer of topsoil and reseeded and will only be used again in the unlikely event that an oversized delivery was required for wind turbine maintenance purposes. Traffic effects on the junction during construction are outlined in Chapter 15 Section 15.1.10. During the PM peak hour it is forecast that the left turn from the N63 onto the R332 towards the Proposed Wind Farm site the ratio of flow to capacity (RFC) will be 11.7% for the no development scenario, increasing to 12.0% with the inclusion of the Proposed Wind Farm construction traffic.

The results of the junction capacity tests are set out in Table 15-25 and show that the additional traffic movements passing through the junction will be accommodated and have a minor effect on the operation of the junction. The assessment shows that the junction is forecast to operate well within the acceptable limit of 85% in accordance with TII guidelines.

Following the implementation of all mitigation measures outlined above and in Chapter 15.1.12, will ensure a controlled and efficient operation during this stage, and minimise the impacts on local road users by safeguarding the carrying capacity and safety of the regional and local road network.

2.13.4 Disruption to Local Traffic

Several third-party observations raise concerns over disruptions to local road and access track users, notably for farmers and residents utilising roads within the Proposed Wind Farm Site and road users along the Proposed Grid Connection during both the construction and operation of the Proposed Project. It is claimed that heavy machinery, road closures, noise, vibration, and restricted access will seriously interfere with livestock management and daily farming operation as well as local road network users including school children.

Observations regarding noise and vibration considerations are addressed above in Section 2.11 and Appendix 3 of this response document.

Response

As detailed in Chapter 15 Section 15.1.12.2 of the EIAR, during the 9 days when the concrete foundations are poured, On the delivery route it is forecast that the increase in traffic volumes on these days will range from between +6.5% and +11.8% on the N63 (Links 1 to 3). On the R332 leading to the Proposed Wind Farm site (Link 4) where background traffic flows are lower, it is forecast that traffic flows will increase by 30.4%. Prior to mitigation, on these busiest 9 days it is estimated that the disruptions to local traffic will have a temporary, negative and slight effect on the N63 and R332 which is not significant.

During the remaining 341 days when the construction of the Proposed Wind Farm continues, including the site preparation and groundworks and construction of the onsite 110kV substation and BESS, the increase in traffic volumes on these days will be between +3.6% and 6.7% on the N63 (Links 1 to 3). On the R332 leading to the Proposed Wind Farm site (Link 4) it is forecast that traffic flows will increase by 17%. Prior to mitigation, on these days it is estimated that this will have a temporary, negative and slight effect on the N63 and R332 leading to the Proposed Wind Farm site which is not significant.

As detailed in Chapter 15 Section 15.1.12.6, during the 18 month construction stage of the Proposed Project, it is forecast that the additional traffic that will travel on the public road network serving the Site will have a short-term slight negative effect on existing road users on the delivery route. While the severity of the traffic effects relates to the additional volumes of traffic movements generated during the construction of the Proposed Project, the implementation of the mitigation measures included in the TMP (Appendix 15-2) will ensure a controlled and efficient operation during this stage, and minimise the impacts on local road users.

For the diversion routes shown in Chapter 15 Figure 15-6b of the EIAR, the temporary additional trip length incurred by drivers during the construction of the Proposed Grid Connection will range from a minimum of 0.9km to a maximum of 13.7km. It should be noted that the length of the diversion routes shown for the various sections of the Proposed Grid Connection are the longest that may be incurred, measured from either end of the section being constructed, and that in practice, many drivers undertaking longer trips will divert onto other parallel routes further afield to avoid the closure, incurring shorter actual diversions.

As detailed in Chapter 4 Section 4.5.1 of the EIAR, the Proposed Wind Farm site will only be accessible during the operational phase at 3 no. locations which are shown in Figure 4-21. Once operational it is estimated that there will be 3 staff members employed on site with a similar number of vehicle trips, that is 3 car/lgv trips to and from the site per day. The new operational access east of the L6506 local road and the upgraded existing access track operational access points will also be used by EirGrid for maintenance access to the 110kV substation as part of the Proposed Grid Connection. It is considered that the traffic impact during the operation phase will be negligible. Additionally, it is noted that site roadways will be used during the operational phase by farm machinery and existing access will be retained where requested by involved landowners to facilitate these activities. This will result in no significant disruption to farming activities within the Proposed Wind Farm site during operation.

2.13.5 Road Labelling

One submission notes reference to R328 regional road within the mitigation measures outlined in Chapter 15 Section 15.1.10 of the EIAR.

Response

It is acknowledged that this should refer to the R332 regional road and that reference to the R328 was incorrectly included in mitigation measures outlined in Chapter 15 Section 15.1.10 of the EIAR and Section 4 of the TMP included as Appendix 15-2.

2.14 Telecommunications

Several third-party observations are made regarding concerns over telecommunications impacts as a result of the Proposed Project. Observations are made under the following themes:

- Three Ireland PTP and ESB Network
- TERTA Emergency Services

2.14.1 Three Ireland PTP and ESB Network

Several third-party observations raised concerns over the assessment of telecommunications impacts in the submitted EIAR. It is raised Three Ireland and ESB links traverse the Proposed Wind Farm site and that the Telecommunication Impact Assessment (TIA) does not confirm acceptable clearances to the Three Ireland link and provided mitigation measures (e.g., relays) remain subject to further consultation, providing no current protection guarantee.

Response

It is noted that the proposed turbine T07 is approx. 11.4m from the 2nd Fresnel Zone of the Three Ireland link. The TIA provides further mitigation measures following consultation with Three Ireland, including redirecting the link via an existing telecoms mast in Creevagh. Prior to construction, the Applicant will seek an agreement with Three Ireland to ensure the Proposed Wind Farm will not interfere with the existing Three Ireland radio link.

Following the implementation of the measures outlined in the TIA, the Proposed Wind Farm will not have a significant effect on the existing ESB and Three Ireland telecoms network.

In order to address the potential impact on the Three Ireland link, the following mitigation measures are proposed:

- Relay the Three Ireland radio link between Cloonriddia and Moylough via an existing Telecoms Mast (i.e. Creevagh). This would involve the installation of two microwave radio links:
 - PTP radio between Cloonriddia and Creevagh
 - PTP radio between Creevagh and Moylough
- Once-off installation of two microwave radio links to be covered by the wind farm developer are estimated to be in the order of €10,000 - €15,000
- The proposed mitigation measure would involve supply and provisioning of the
 - 2 no microwave radio links including radio antennas, cables connectors, etc.
 - Rigging and Installation Services
 - Design & Commissioning Services

Should the Proposed Project receive a grant of permission, the Applicant will continue consultation and seek an agreement with Three Ireland in advance of the construction and operation of the Proposed Project. A protocol agreement will be signed between 2rn and the Applicant. The Protocol Document ensures that in the event of any interference occurring to television or radio reception due to operation of the Proposed Wind Farm, the required measures, as set out in the Protocol Document, will be carried out by the Applicant to rectify this. The Protocol Document ensures that the appropriate mitigation is carried out in the event of unanticipated broadcast interference arising to television or radio reception as a result of the Proposed Wind Farm.

The exclusion zone identified by ESB was also considered in the context of the TIA. Further to their assessment conclusions, a letter of reliance from Ai Bridges is included as part of the TIA included in Appendix 15-4 which concludes the most technically viable Mitigation Measure Solutions available to offset any potential impact due to the proposed turbines are considered for the Proposed Project and will result in no residual adverse effects on the existing network infrastructure.

2.14.2 TETRA Emergency Services

Several third-party observations raised concerns that the EIAR fails to adequately assess the potential telecommunications impacts of the Proposed Wind Farm on critical emergency-services communications, including TETRA.

Response

As detailed in Chapter 15 Section 15.2.4.3 of the EIAR, consultation was carried out with ComReg in February 2024 in order to identify any other additional licenced operators in the vicinity of the Proposed Wind Farm site to be contacted, who may not have been on the list of main operators previously contacted in April 2023. TETRA was contacted in both consultation periods and responded in April 2023 noting that they do not anticipate impacts from the Proposed Project. No response was received in the February 2024 consultation period. Copies of the scoping responses are included in Appendix 2-1 of the EIAR.

2.15 Major Accidents and Natural Disasters

Several third-party observations were made in relation to the risk of Major Accidents and Natural Disasters from the Proposed Project. The areas which were raised within the observations include:

- > Peat Stability
- > Risk of Fire
- > Flooding and Storm Events

Response

Peat Stability

A Peat Stability Risk Assessment (PRSA), included as Appendix 8-1 of the EIAR, outlines a quantitative peat stability risk assessment rating in line with the Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments (PLHRAG, Scottish Government, 2017) for the proposed permanent development footprint. A desk study, site walkovers, ground investigation campaigns, stability analyses and a risk assessment were carried out to assess the risks posed by peat failures within the Proposed Wind Farm site. The risks were assessed following the principles in Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments (Scottish Executive, 2017). The stability analysis aims to determine the Factor of Safety (FoS) of the peat slopes. The FoS provides a direct measure of the degree of stability of a peat

slope. A FoS of less than 1.0 indicates that a slope is unstable; a target FoS for slopes is 1.3 or greater. A risk assessment was carried out considering the FoS value calculated in the stability analysis and other factors that could influence peat stability, considering how damaging a peat slide would be to this site's environment. The PSRA has been performed for all Proposed Wind Farm infrastructure elements (including turbines, hardstands, access tracks, temporary construction compound and meteorological mast) as well as the substation/BESS compound, with the resulting peat stability risk identified as negligible at all locations. Mitigation measures have been proposed in Section 6 of the PRSA.

In Section 4.5 of the PRSA the interpretation and assessment of the FoS results are provided. In all the modelled FoS scenarios, areas of FoS <1.3 are rare, and are generally localised to peat cut faces of banks or linear features such as ditches or land drains. The Proposed Wind Farm layout avoids all areas of FoS <1.3 in all scenarios, with the exception of one localised section of the access track between T5 and T6 (AL5b). This access track interacts with a very small area of $1 < \text{FoS} < 1.3$ at a minor water crossing. This location is discussed in further detail in Table 4-3 of the PRSA. Localised areas of the Proposed Wind Farm site contain flat-lying, deep peat with active peat cutting. Steep peat cuttings of <1m generate low factors of safety but are generally considered low landslide risk. Raised bog environments like this site may be susceptible to bog burst type failures, which can occur at very low slope angles and may not be fully quantified by the FoS calculation, as they are driven by hydrological factors rather than slope-driven. For this reason, the locations were assessed on-site and 'ground-truthed' to identify true hazards. GDG site walkovers identified no evidence of significant bog burst features. The lack of evidence for historical bog bursts does not preclude the possibility that these may occur. Further inspection will be required during the detailed design and construction stage to inspect for peat instabilities, including bog burst features. This will be carried out by the detailed Designer and the Contractor's team. The design team shall develop their own inspection and testing criteria to satisfy and de-risk the possibility of peat landslides at these locations.

As stated in Section 6 of the PRSA, based on the available data, the fieldwork, and GDG's professional judgement, it is concluded that significant peat slides are unlikely on the Proposed Wind Farm site with diligent peat management and careful consideration of the peat conditions at the Proposed Wind Farm site at the design and construction stage. A deterministic FoS was calculated across the proposed element locations, and from this, a robust peat stability risk assessment (PSRA) was performed. The findings of the peat assessment showed that the Proposed Wind Farm site has an acceptable margin of safety and is suitable for the Proposed Wind Farm, provided appropriate mitigation measures, as outlined in Section 6, are implemented. The peat stability risk for the proposed infrastructure is negligible in all locations. The results of the FoS deterministic calculation and the site walkover allowed for the identification of SBZs outlined in Section 4.6 and shown in Appendix M 'Safety Buffer Zones and Peat Stockpile Restriction Areas' of the PRSA. These must be adhered to in future stages of the Proposed Project. To minimise the risk of construction activity causing potential peat instability the Construction Method Statements (CMSs) for the project will implement in full, but not be limited to, the recommendations above. Construction works shall follow the recommendations of the Peat and Spoil Management Plan which is included as Appendix 4-2 of the EIAR. During construction, it is strongly recommended to carry out frequent monitoring works, especially after heavy rainfall events or prolonged rainfall.

Risk of Fire

The likelihood of fire or explosion occurring at the Proposed Project is anticipated to be low. The likelihood of fire or explosion occurring will be further lowered by the implementation of good site management practices during the construction, operational and decommissioning phases. As outlined in Section 16.2.1 above, the scope of this assessment has been based on the understanding that the Proposed Project will be designed, built and operated in line with current best practice. Further, in accordance with Chapter 19 of the Safety, Health and Welfare at Work Acts 2005 to 2014, the Proposed Project shall be subject to a fire safety risk assessment which will assist in the identification of any major risks of fire on Proposed Project, and mitigation of the same during operation.

Flooding and Storm Events

As part of the Local Area Climate Action Plan for County Galway (Galway LACAP) a climate change risk assessment was carried out for County Galway. A profile of historical climate hazards in County Galway and assessment on future climate hazards is provided in the Galway LACAP. Severe storm events were identified as the most significant climate hazard over the period 1973-2022, with river and pluvial flooding, heatwaves and drought, coastal erosion and flooding also affecting the County on a number of occasions. Cold spells, heavy snowfall and groundwater flooding, have also impacted County Galway, but less frequently. Future projections of climate change indicate that Above Average Precipitation, Prolonged Cold Periods and Heavy Snowfall will remain consistent with existing conditions. However, risk is predicted to increase for all other identified climate hazards (i.e., Severe Windstorm, Extreme Precipitation, Pluvial Flooding, Heatwave, Drought, and Above Average Surface Temperature), with River Flooding remaining the perceived highest risk to County Galway.

The climate change risk assessments included in the Galway LACAP detail the major risks posed from climate change being river flooding, severe windstorms, extreme precipitation, and drought. The changes in frequency in intensity of weather patterns as a result of climate change will continue to influence the wide range of functions carried out by Local Authorities. The identification of future risks is critical to enable the progression of adaptation and mitigation measures in the development and execution of plans and policies. Potential impacts that may occur on the identified road networks could be caused by an accident during the delivery of the turbines, collisions onsite and offsite with vehicles involved in construction and operation of Proposed Project, and damage to critical transport infrastructure caused by extreme weather i.e., periods of heavy rainfall, taking into account climate change and strong winds.

A Flood Risk Assessment (FRA) has been prepared as part of the submitted EIAR and has been included as Appendix 9-1. FRA is carried out in accordance with 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DoEHLG, 2009). The assessment methodology involves researching and collating flood related information from the following data sources:

- OPW Flood Studies Update (FSU) Web Portal;
- Geological Survey of Ireland (GSI) maps on superficial deposits;
- EPA/WFD hydrology maps;
- OPW National Indicative Fluvial Mapping (NIFM) and CFRAM mapping;
- Galway County Development Plan 2022 – 2028 (including Strategic Flood Risk Assessment);
- Lidar data for the project site; and;
- Site walkovers and surveys conducted by HES on 15th August and 24th October 2022, 23rd and 28th March 2023, 20th and 21st August 2024, 22nd May and 8th July 2025.

As outlined in Section 6 of the FRA, the report concludes that the Proposed Project is appropriate from a flood risk perspective and the FRA fulfils the requirements for a site-specific flood risk assessment and is consistent with the recommendations made in the Galway County Development Plan 2022-2028. The findings of the FRA includes:

- No instances of historical flooding were identified in historic OS maps within the Proposed Wind Farm site;
- No instances of recurring flooding were identified on OPW maps within the Proposed Wind Farm site;
- The GSI Winter 2015/2016 Surface Water Flooding and Groundwater flood Mapping provides no evidence of historical flooding at the Proposed Wind Farm site;
- No CFRAM or NIFM fluvial flood zones are mapped within the Proposed Wind Farm site;

- Sections of the Proposed Grid Connection pass through NIFM flood zones but this has no consequence or risk for the Proposed Project due to the underground nature of the infrastructure.
- The onsite 110kV substation element of the Proposed Grid Connection is located in Flood Zone C at the Proposed Wind Farm site.

As stated in Section 16.4.2 of Chapter 16 in the EIAR, it is proposed that the Proposed Project will be designed and built in line with current best practice and, as such, mitigation against the risk of major accidents and/or disasters will be embedded through the design. In accordance with the provision of the European Commission ‘Guidance on the preparation of Environmental Impact Assessment Reports’, a Risk Management Plan will be prepared and implemented at the Proposed Project to ensure an effective response to disasters or the risk of accidents. The plan will include sufficient preparedness and emergency planning measures. Furthermore, a CEMP has been prepared for the Proposed Project and is included in Appendix 4-5 of the EIAR. Upon a grant of planning permission for the Proposed Project, the CEMP will be updated to reflect the conditions stipulated in the consent prior to the commencement of the development. The CEMP will be a live document maintained by the contractor that will work to ensure that potential risks of major accident and/or disaster are identified, avoided and mitigated, as necessary.

2.16 Decommissioning

Several third-party observations are made regarding the decommissioning stage of the Proposed Project. Observations are made under the following themes:

- Financial Security
- In-situ infrastructure

Observations regarding the permanent infrastructure associated with the Proposed Grid Connection to remain in place after decommissioning of the Proposed Wind Farm are addressed in Section 2.4.2 of this response document.

2.16.1 Financial Security

A number of third-party observations that pointed out that there is no estimated cost provided for decommissioning. There is no financial bond or guarantee mechanism described. There is no timeline for financial security review and update. There is also no contingency plan for developer insolvency.

Response

It is noted that financial security regarding the decommissioning of the Proposed Project is typically addressed via a condition should the Commission decide to grant permission, which the Applicant accepts.

2.16.2 In-situ Infrastructure

A number of third-party observations raised concern that as a result large concrete turbine foundations would remain in place after decommissioning, this would result in unacceptable and permanent damage to the landscape. Claims are made that the proposed turbines have a relatively short service lifetime and decommissioning will cause as much or if not more pollution to the area than the construction phase.

Response

A Decommissioning Plan is included as Appendix 4-6 of the EIAR. The Decommissioning Plan will be updated prior to the end of the operational period in line with decommissioning methodologies that may exist at the time and will agree with the competent authority at that time. The potential for effects during the decommissioning phase of the Proposed Wind Farm has been fully assessed in the EIAR.

As construction will be completed, elements of the Proposed Project that will be developed as a temporary facilitator will either be removed, restored to its original condition, or will naturally revegetate. All access roads and hardstanding areas forming part of a site roadway network will be required by the ongoing farming operations and therefore will be left in situ for future use. On the dismantling of turbines and met mast, it is not intended to remove the concrete foundation from the ground. It is considered that its removal will be the least preferred options in terms of potential effects on the environment. Therefore, the foundations of the 9 no. turbine and met mast will be covered with soil material.

Given the nature of the Proposed Wind Farm elements to be decommissioned, the EIAR considers the any effect and consequential effect that occurs during the decommissioning phase will be similar to that which occurs during the construction phase, however to a lesser extent, and the mitigation measures outlined during the construction phase will be implemented during the decommissioning phase also.

3. RESPONSE TO PRESCRIBED BODIES

The following section provides responses to each of the Prescribed Bodies observations made on the Proposed Project.

There were 6 no. statutory bodies who made a submission on the planning application as follows:

- Department of Defence.
- Department of Housing, Local Government and Heritage.
- Irish Aviation Authority (IAA).
- Inland Fisheries Ireland.
- National Office for Environmental Health Services (HSE).
- Office of Public Works.
- Transport Infrastructure Ireland.
- Uisce Éireann.

3.1 Department of Defence

The Department of Defence (DoD) made a submission on the planning application for the Proposed Project and identify that the Air Corps were consulted to input into their submission.

Technical specifications on Obstacle lighting were provided. Following DoD consultations with Air Corps (IAC) at Casement Aerodrome, the Department of Defence made the following observations.

- All turbines should be illuminated by Type C, Medium intensity, Fixed Red obstacle lighting with a minimum output of 2,000 candela to be visible in all directions of azimuth and to be operational H24/7 days a week,
- Obstacle lighting may be incandescent. If LED or other lighting types are used should be a type visible to Night Vision equipment,
- Obstacle lighting must emit light at the near Infra-Red (IR) range of the electromagnetic spectrum, specifically at or near 850 nanometres (nm) of wavelength. Light intensity to be of similar value to that emitted in the visible spectrum of light,
- In the event of negative impacts on future military radar systems, the owner will engage with the Department of Defence and will provide suitable mitigations as soon as practical.

Response

The potential effects of the Proposed Project on aviation were assessed in Chapter 15 Material Assets, Section 15.2 of the submitted EIAR. In Section 15.2.4.4.2 Aviation, the scoping response from the DoD received on the 5th of May 2023 provided guidance for mitigation measures to be observed by the developer. The observations provided were as follows:

- All turbines should be illuminated by Type C, Medium intensity, Fixed Red obstacle lighting with a minimum output of 2,000 candela to be visible in all directions of azimuth and to be operational H24/7 days a week.
- Obstacle lighting should be incandescent. If LED or other lighting types are used, should be a type visible to Night Vision equipment. Obstacle lighting must emit light at the near Infra-Red (IR) range of the electromagnetic spectrum, specifically at or near 850 nanometres (nm) of wavelength.
- Light intensity to be of similar value to that emitted in the visible spectrum of light.
- Any Irish Air Corps (IAC) requirements are separate to Irish Aviation Authority (IAA) requirements.

In line with those observations made by the DoD the EIAR states.

“In response to the lighting requirements requested by the DoD, the proposed turbines will be included on mapping, fitted with obstruction lighting and entered into aircraft navigation databases to ensure they will be avoided during flight.”

Furthermore, in Section 15.2.6.3.2 the EIAR states under “Likely Significant Effects and Associated Mitigation Measures” the following,

‘Residual Effect

With the implementation of the above, the Proposed Project will have a long-term imperceptible neutral residual effect on aviation assets which is Not Significant.”

Continued,

“Significance of Effects

There will be no significant effects on aviation operations as a result the Proposed Project.”

As such in accordance with the above it was confirmed in Chapter 15 (various sections) of the EIAR that these requirements were considered and would be adhered to.

3.2 Irish Aviation Authority (IAA)

The Irish Aviation Authority (IAA) made a submission on the planning application for the Proposed Project. The IAA raised no objections to the Proposed Project and requested that the following conditions are adhered to.

In the event of planning consent being granted, the Applicant should be conditioned to contacting the IAA to:

- agree an aeronautical obstacle warning lighting scheme for the wind farm development,
- provide as-constructed coordinates in WGS-84 format together with ground and blade tip height elevations at each wind turbine location and;
- notify the Authority of intention to commence crane operations with at least 30 days prior notification of their erection in accordance with S.1.215 of 2005 Irish Aviation Authority (Obstacles to Aircraft in Flight) Order.

Response

The potential effects of the Proposed Project on aviation were assessed in Chapter 15 Material Assets, Section 15.2 of the submitted EIAR. In Section 15.2.4.4.2 Aviation, the scoping response from the IAA received on the 13th of June 2023 provided guidance for mitigation measures to be observed by the developer. The observations provided were as follows:

“In the event of planning consent being granted, the Applicant should be conditioned to contact the Irish Aviation Authority to:

- agree an aeronautical obstacle warning light scheme for the wind turbine development,
- provide as-constructed coordinates in WGS84 format together with ground and tip height elevations at each wind turbine location and

- notify the Authority of intention to commence crane operations with at least 30 days prior notification of their erection.”

Section 15.2.6.3.2 the EIAR states under “Likely Significant Effects and Associated Mitigation Measures” the following,

“Residual Effect

With the implementation of the above, the Proposed Project will have a long-term imperceptible neutral residual effect on aviation assets which is Not Significant.”

Continued,

“Significance of Effects

There will be no significant effects on aviation operations as a result the Proposed Project.”

As such in accordance with the above it was confirmed in Chapter 15 (various sections) of the EIAR that these requirements were considered and would be adhered to.

The Applicant confirms its agreement to these conditions should the Commission decide to grant planning permission for the Proposed Project.

3.3 Department of Housing, Local Government and Heritage

The Department of Housing, Local Government and Heritage (Department) made a submission on the application which has been categorised under the following themes:

- Nature conservation
- Archaeology

The observations made by the Department are discussed and have been responded in the following sections and under the same headings as listed above.

3.3.1 Nature Conservation

3.3.1.1 European Sites

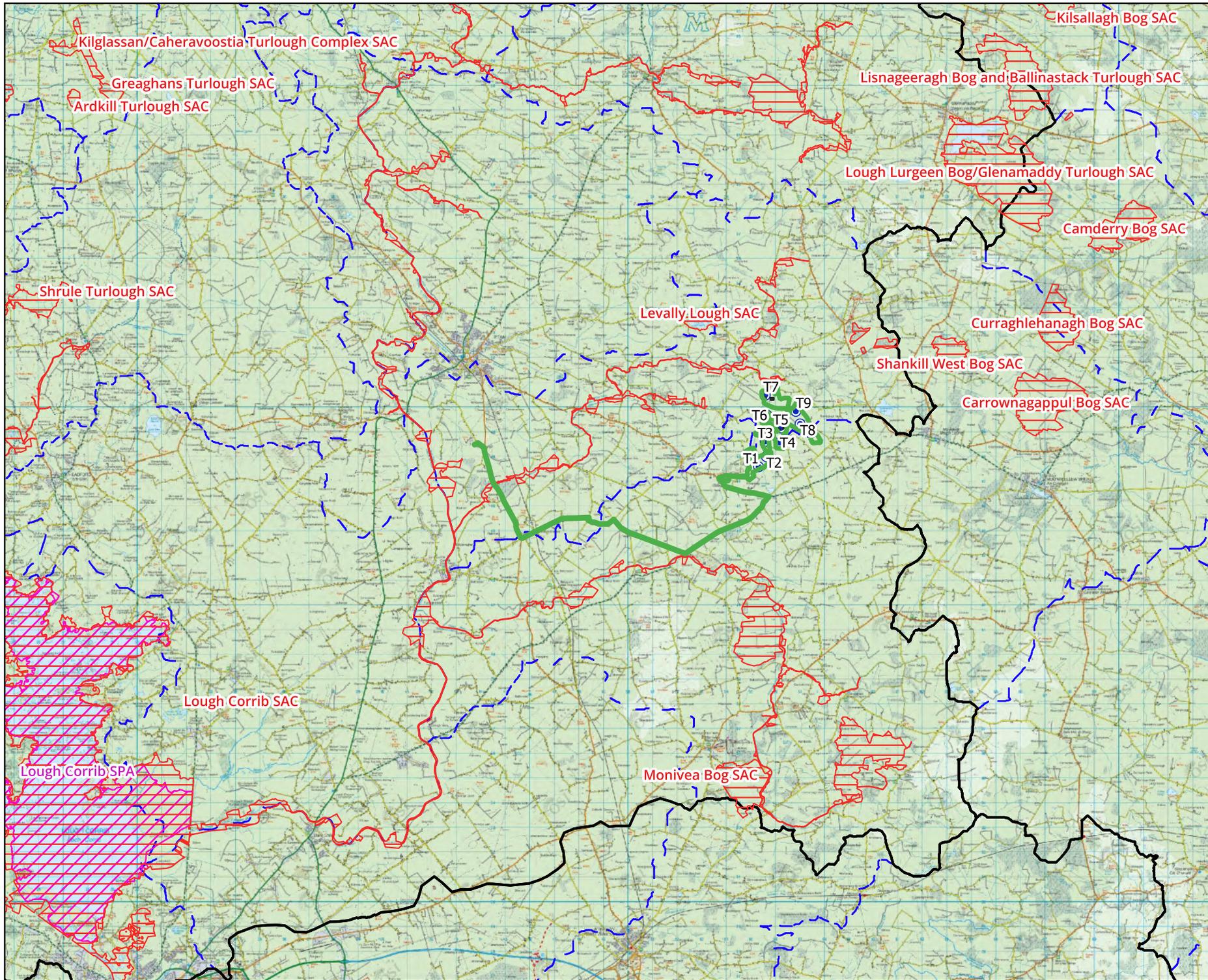
The Department makes observations on in relation to identifying potential impacts on European sites, other nature conservation sites, and biodiversity and environmental protection in general. The Department notes the north of the Site (Proposed Grid Connection) is adjacent to the Lough Corrib SAC, with one river crossing on the Grange River falling within the SAC.

Response

The Natura Impact Statement (NIS) produced for the Proposed Wind Farm has addressed the potential for indirect effects on the Lough Corrib SAC and Lough Corrib SPA. None of the Proposed Wind Farm is located within the SAC boundaries, however the proposed grid connection crosses the SAC at the Grange River (Ballinderry Bridge), an existing watercourse crossing in one location, as detailed in Figure 4-1 of the NIS. Mitigation has been provided for construction phase hydrological impacts in Section 6.2.3, which provides a suite of mitigation to prevent any adverse effects on the SAC and SPA, located downstream of the Proposed Wind Farm. Mitigation has also been provided for the potential effects from the removal of vegetation cover and progressive replacement of natural surface with low permeability surfaces during the operation phase, in Section 6.2.3.1.1 of the NIS.

Figure 6-1 and Figure 6-2 of Chapter 6 of the submitted EIAR is shown below and shows the European designated and nationally designated sites in proximity to the Site. It is noted that these figures are not included in the digital copy of Chapter 6 but are included in in the hard copy of the EIAR, which is publicly available at the offices of both the Commission and GCC. The figures are a visual representation of the information included in Chapter 6, Section 6.3.1.2, of the submitted EIAR and does not present any new or additional information.

Following the implementation of the mitigation measures provided within Section 6 of the NIS, it is concluded in view of best scientific knowledge, on the basis of objective information that the Proposed Project will not adversely affect the Qualifying Interests/Special Conservation Interests associated with any European Site.



- Map Legend**
-  EIAR Site Boundary
 -  Proposed Turbine Layout
 -  WFD Hydrological Subcatchments
 -  WFD Hydrological Catchments
 -  Special Area of Conservation (SAC)
 -  Special Protection Area (SPA)

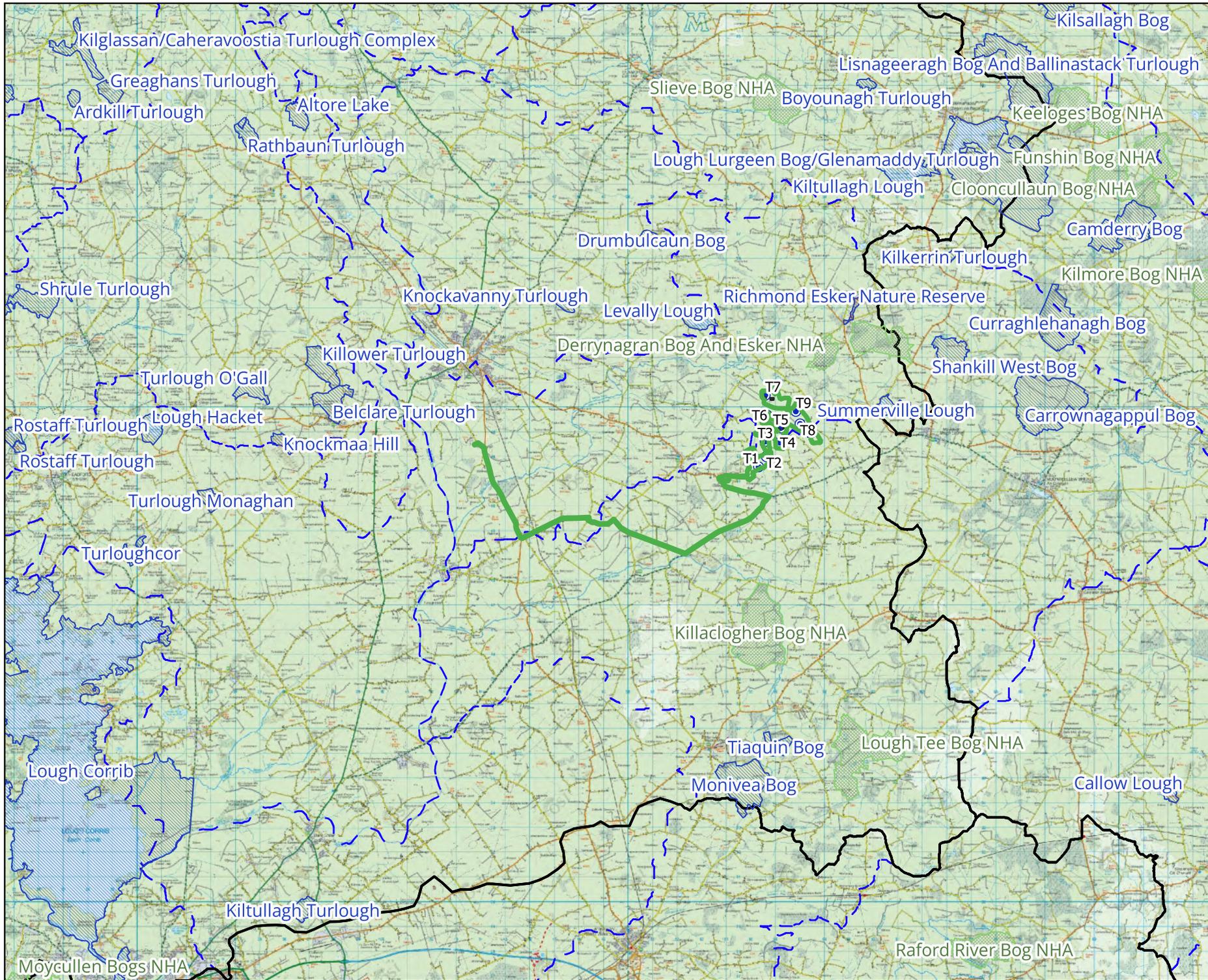


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Drawing Title	
European Designated Sites	
<small>Project Title</small>	
Cooloo Wind Farm, Co. Galway	
<small>Drawn By</small>	<small>Checked By</small>
EF	RW
<small>Project No.</small>	<small>Drawing No.</small>
190723	Figure 6-1
<small>Scale</small>	<small>Date</small>
1:200,000	18/09/2025



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Map Legend

- EIA Site Boundary
- Proposed Turbine Layout
- WFD Hydrological Subcatchments
- WFD Hydrological Catchments
- Proposed Natural Heritage Area (pNHA)
- Natural Heritage Area (NHA)

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Drawing Title
Nationally Designated Sites

Project Title
Cooloo Wind Farm, Co. Galway

Drawn By	Checked By
EF	RW
Project No. 190723	Drawing No. Figure 6-2
Scale 1:200,000	Date 18/09/2025



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3.3.1.2 Birds

Observations on a number of ornithological species are raised by the Department, with particular focus on golden plover.

Response

It is acknowledged that there has not been opportunity to test the effectiveness of tethered bird control kites in reducing collisions at wind farms. This method has been tested more extensively in deterring birds for crop protection and at reducing bird numbers/flyovers in airfields and landfill sites. However, the purpose of the kites is to deter golden plover from foraging or roosting on grassland within the turbine area, therefore such research applies in this context. To quantify the reduction in the number of collisions, the golden plover ‘random’ collision risk model was run again (Scenario V163; full details of the methodology for the original golden plover random model are presented in the EIAR Chapter 7 Appendix 7-6). The workings below (Table 3-1) show how much the numbers of collisions will potentially be reduced by the kites.

The purpose of the kites is to deter golden plover from foraging or roosting on grassland in the turbine area. If there are no landed birds or attractive foraging/roosting sites, golden plover will not engage in social information gathering flight activity in the airspace above. All golden plover foraging flights and information gathering flights in the area in which the kites are proposed were subset in the data. These flights amounted to 6,925,116 ‘bird seconds’ (i.e., birds in flight at potential collision height calculated by multiplying the number of birds observed per flight by the duration of the flight spent within potential collision height).

In the second model run, all input values and methods remained the same as the first run apart from the input number of bird seconds. The bird seconds subset above were subtracted from the bird seconds used in the first run, as shown in the table below (all were associated with VP2, as this vantage point overlooked the area in which the kites are proposed). Note that other flight behaviours, such as birds travelling over the area were retained, as the kites are not intended to influence these.

Table 3-1 Golden Plover ‘Random’ Collision Risk Model Workings

Model Run	VP1 bird seconds	VP2 bird seconds	VP3 bird seconds
First run	2,184,577	7,018,291	1,960,800
Second run	2,184,577	93,175	1,960,800

The second run of the model estimated 56.627 collisions per year (55.017 collisions associated with random flight activity and 1.610 associated with regular flight activity of birds travelling to or from Horseleap Lough). Annual mortality of adult golden plover has been calculated at 27% per annum (Sandercock, 2003). If 96.722 collisions were to occur per year, it would mean that the losses at the Proposed Wind Farm would increase the annual mortality of the county population (c.5,895) by 3.6%.

The magnitude of this predicted collision risk is ‘low’, following Percival (2003). While the 1% increase in background mortality referenced in Percival (2003) is often set as the threshold for judging significance, it is likely quite conservative. The threshold likely originates from a hunting threshold set by the European Commission and was not intended to indicate that all increases in mortality above 1% were significant. Among other reasons, the threshold was set at 1% by the European Commission because such losses are so low that they are within the margin of error from a mathematical point of view in population dynamics modelling studies.

As such, the increase in the annual mortality of the county population has reduced from 12% to 3.6%. The magnitude of the predicted collision risk has reduced from ‘medium’ to ‘low’, and no significant effects of collision risk are predicted, following mitigation.

Reporting on the effectiveness of the kites to the Planning Authority and the National Parks and Wildlife Service at the end of each prescribed monitoring year is proposed as part of the Bird Monitoring Programme (EIAR Appendix 7-8). This will include the results of kite field inspections, report on adherence to the Bird Mitigation plan actions and make any additional associated recommendations for adaptive management. Additionally, as part of the Bird Monitoring Programme, collision monitoring surveys will be conducted by a trained dog and handler at all turbine bases. If golden plover carcasses are found during collision monitoring surveys, the significance of the effect on the county population will be evaluated and any necessary recommendations or adaptations made.

For more information on Birds please see section 2.6.3 above.

3.3.1.3 Bats

“Regarding bat mitigation, the Department notes “White light sources will have a “warm” colour temperature (less than 3000K)” has been proposed and recommends using warm white lighting with a Correlated Colour Temperature (CCT) of below 2700 kelvins.

The Department takes this opportunity to remind the competent authority of their obligations under Article 6 of the Habitats Directive (92/43/EEC). Competent national authorities are to authorise activity only if they have made certain that it will not adversely affect the integrity of a European site and, consequently, not likely to give rise to deterioration or significant disturbances within the meaning of Article 6(2). Any matters raised above should also be considered in the planning policy context for the proposed development, including the protective natural heritage and biodiversity objectives and policies in the Galway County Development Plan.”

Response

The EIAR commits to the use of bat-sensitive lighting in accordance with ILP Guidance Note 08/23: Bats and Artificial Lighting at Night. Where lighting is required during construction and operation, directional lighting will be used to prevent overspill onto woodland and forestry edges and other linear features used by commuting and foraging bats. Luminaires will be designed to minimise upward and lateral light spill, with appropriate shielding and directional accessories, and lighting will be directed away from mature trees and treelines.

The Applicant also commits to the Dark Sky Ireland lighting principles, including that lighting will be justified, used only where necessary, directed where required, and of the minimum intensity appropriate for safety and operational needs. In this context, the Department of Housing, Local Government and Heritage’s recommendation to specify warm white lighting with a correlated colour temperature (CCT) of $\leq 2700\text{K}$, rather than the more general “warm white” specification ($< 3000\text{K}$) referenced in Dark Sky Ireland guidance, is welcomed and will be incorporated into the detailed lighting design where practicable and subject to safety and operational requirements.

MKO considers the proposed mitigation and monitoring plan outlined in Sections 6.1 and 6.2 of Appendix 6-2 of the EIAR to be appropriate and in line with best practice guidance to ensure no significant impacts on local bat populations occurs during the operational phase. Provided the Proposed Project is operated in line with the proposed mitigation and monitoring plan, no residual significant effects on bats is anticipated.

3.3.1.4 Marsh Fritillary

Marsh Fritillary habitat is present in the area. A larval web recorded is approximately 17m north of the hardstand/new access road associated with T5. There is potential that the proposed new access roads, hard-stands and associated infrastructure at T5 may result in changes in the hydrological regime of the

cutover bog (PB1) habitat, which may result in an alteration in habitat. This has potential to render the habitat no longer suitable for the food plant of Marsh Fritillary, thus impacting habitat availability.

Response

The potential for significant effect on Marsh Fritillary breeding habitat is assessed in Section 6.5.2.2.5 of the EIAR, with mitigation provided to prevent loss of breeding habitat and dust mitigation during the construction phases of the Proposed Development. The potential for any hydrological impacts has also been considered in Section 9.5.2.16 of Chapter 9 ‘Hydrology and Hydrogeology’ and it was determined that

“due to the already cutover nature and existing extensive drainage at these locations, no significant additional effects on remaining areas of intact bog nearby.”

Similarly, the potential for any impacts on breeding marsh fritillary during the operational phase of the Proposed Project has been considered in Section 6.5.3.2, stating:

“it is not anticipated that the operation of the Proposed Project will have any effect on marsh fritillary or habitat for the species during the operation of the Proposed Project. Implementation of the BMEP measures during the operational phase of the development will ensure that habitats are managed for marsh fritillary during the operational life of the Proposed Project having a positive impact on this species as well as other local invertebrate/pollinator species.”

The BMEP (Appendix 6-4 of the EIAR) also outlines measures for the protection of Marsh Fritillary during the construction phase of the Proposed Project, as well as measures to enhance existing, and create additional habitat for marsh fritillary.

As outlined in Section 3.1 of the BMEP, known marsh fritillary suitable habitat containing larval webs (including the larval web identified within proximity of T5) identified during 2024 surveys. The fencing will contain signage strictly prohibiting entry to these areas. This will denote the area where strictly no machinery, storage of materials or entry of construction site personnel will be permitted. The protective fencing will be inspected and signed off by the supervising Ecological Clerk of Works (ECOW) prior to commencement of the Proposed Project. Section 3.1.2. outlines a suite of measures designed to protect and maintain the existing identified marsh fritillary breeding habitat within the Proposed Project boundaries. None of these identified areas have any proposed infrastructure located within the known breeding habitat areas. Section 3.4.2 of the BMEP also proposed to create an additional 12.76ha of suitable marsh fritillary habitat within the Proposed Project site boundaries. A management regime to maintain this newly created habitat has also been provided in Section 3.4.2.1 of the BMEP.

3.3.1.5 Raised Bog

The northwest side of the Proposed Wind Farm site is mapped Annex I Active Raised Bog [7110]. A section of approximately 580m of a proposed floating road between T7-T9 will be located within the mapped Article 17 habitat. Approximately 285m of the proposed new floating access road between T7 and T9 corresponds to the Annex 1 habitat Degraded raised bogs still capable of natural regeneration (7120).

Response

As outlined in Section 6.4.1.3, all margins of the mapped Article 17 Raised Bog habitat have been cut since at least the mid-1990s as evidenced from historic aerial imagery, with turbary cutting ongoing in a large part of the mapped Article 17 habitat area, as well as drainage throughout the habitat area. The entire high bog area is surrounded by either historical or active peat extraction, with small pockets of uncut areas that have not been drained, however this area is not considered an intact raised bog habitat due to the extensive extraction and drainage that has been ongoing within this area.

The peatland habitats identified within the Proposed Project have been described in full in sections 6.4.1.3 (6.4.1.3.2 and 6.4.1.3.1). The existing drainage activities has also been detailed in Section 9.3.1 of Chapter 9 of this EIAR. Detailed releves were taken along the proposed new floating access road, which are fully detailed within Appendix 6-1 (Section 3.3) of this EIAR.

The potential for significant effects on these habitats has been assessed within Section 6.5.2.1.2 of the EIAR. Mitigation provided includes alteration of surface water hydrochemistry (mitigation by design), mitigation to prevent significant effects via air quality impacts and dust emissions. It is concluded within the EIAR that with all mitigation measures prescribed in Section 6.5.2.1.2, there will be no residual significant impacts on peatland habitats adjacent to the development footprint. However, it has been concluded that there is potential for significant residual effects peatland habitats at a County level. Additionally, there will also be a residual effect in relation to the alteration of drainage within approx. 50-100m distance of the proposed turbine T7 to T9 access road. Residual significant effects are anticipated at the County level.

There is a total area of habitat identified as raised bog (PB1) within the site boundary is approximately 32.29ha, while the identified cutover bog habitat areas are approximately 42.00ha. The proposed floating access road between T7 and T9 will result in the loss of approximately 0.18ha of raised bog (PB1), amounting to 0.54% of the total habitat area within the site. While this is still considered a significant residual effect due to the mapped Article 17 habitat within the location, the area to be lost is relatively small in comparison to the larger raise bog habitat area within the site boundaries.

3.3.2 Archaeology

The Department of Housing, Local Government and Heritage (Department) made a submission on the application in relation to archaeology. The Department advises that advance archaeological test excavation of all accessible areas should be carried out in advance of any development in order to adequately establish the baseline archaeological environment. Where previously unrecorded archaeological features / materials are shown to be present, additional mitigation measures to ensure the preservation in situ or preservation by record (i.e. full archaeological excavation) of such features / material will be necessary. The Department advises that this can be addressed by the inclusion of an appropriate archaeological condition in any grant of planning permission that may issue.

Conditions recommended as follows:

1. All mitigation measures in relation to archaeology and cultural heritage as set out in Chapter 14 of the IAR (IAC Ltd; date 26 September 2025) shall be implemented in full, except as may otherwise be required in order to comply with the conditions of this Order,
2. The developer shall engage a suitably qualified archaeologist (licensed under the National Monuments Acts) to carry out pre-development archaeological testing in areas of proposed ground disturbance and to submit an archaeological impact assessment report for the written agreement of the planning authority, following consultation with the Department of Housing, Local Government and Heritage, in advance of any site preparation works or groundworks, including site investigation works/topsoil stripping/site clearance and/or construction works.
 - The report shall include an archaeological impact statement and mitigation strategy. Where archaeological material is shown to be present, avoidance, preservation in-situ, preservation by record (archaeological excavation) and/or monitoring maybe required
 - Any further archaeological mitigation requirements specified by the planning authority, following consultation with the Department of Housing, Local Government and Heritage, shall be complied with by the developer.

- No site preparation and/or construction works shall be carried out on site until the archaeologist's report has been submitted to and approval to proceed is agreed in writing with the planning authority.
- 3. The Construction Environment Management Plan (CEMP) shall include the location of any and all archaeological or cultural heritage constraints relevant to the Proposed Project as set out in Chapter 14 of the EIAR and by any subsequent archaeological investigations associated with the project. The CEMP shall clearly describe all identified likely archaeological impacts, both direct and indirect, and all mitigation measures to be employed to protect the archaeological or cultural heritage environment during all phases of site preparation and construction activity.
- 4. The planning authority and the Department of Housing, Local Government and Heritage shall be furnished with a final archaeological report describing the results of all archaeological monitoring and any archaeological investigative work/excavation required, following the completion of all archaeological work on site and any necessary post-excavation specialist analysis. All resulting and associated archaeological costs shall be borne by the developer.

Response

The following response has been prepared by IAC Archaeology.

The mitigation measures outlined in Chapter 14, Section 14.4.2 of the EIAR, include a commitment to pre-construction archaeological testing in order to identify sub-surface archaeological features. The specific mitigation steps, from Chapter 14, Section 14.4.2 (Construction Phase (Indirect and Direct)), of the EIAR are reproduced below for clarity.

“Prior to the commencement of construction, a programme of targeted geophysical survey will be carried out at the location of the proposed temporary construction compound to investigate CH63, a curvilinear anomaly identified from aerial photography. The geophysical survey will be carried out under licence to the National Monuments Service of the DHLGH. Dependent on the results of the geophysical survey, further mitigation may be required. Any further mitigation will require agreement from the DHLGH.

Prior to the commencement of construction, a programme of targeted archaeological test trenching will be carried out at the accessible locations of proposed infrastructure, including the proposed turbine hardstands, temporary construction compound, 110kV substation and BESS compound and along the access roads and TDR accommodation area. Archaeological test trenching will also assess the site of previously unidentified cultural heritage receptor CH58. Archaeological test trenching will be carried out under licence to the National Monuments Service of the DHLGH. Dependent on the results of the testing assessment, further mitigation may be required, such as preservation by record or in-situ and/or archaeological monitoring. Any further mitigation will require agreement from the DHLGH.

All interventions that are required along townland boundaries, as part of the construction of the Proposed Project, will be subject to archaeological monitoring, to include a full record of the sections of townland boundaries that are removed. This work will be carried out under licence to the National Monuments Service of the DHLGH.

All topsoil stripping associated with the Proposed Wind Farm, including site investigation, will be subject to archaeological monitoring. This work will be carried out under licence to the National Monuments Service of the DHLGH. If archaeological remains are identified during the course of these works further mitigation may be required, such as preservation by record or in-situ. Any further mitigation will require agreement from the DHLGH.

The excavation of the Proposed Grid Connection within the Zone of Notification of AH2 and AH3 will be monitored. This work will be carried out under licence to the National

Monuments Service of the DHLGH. If archaeological remains are identified during the course of these works further mitigation may be required, such as preservation by record or in-situ. Any further mitigation will require agreement from the DHLGH.

Upstanding elements of cultural heritage receptors subject to direct, negative (permanent) impacts (CH14, CH40, CH58) will be surveyed and a written and photographic record compiled prior to the commencement of construction.”

These mitigation measures are also addressed in Appendix 4.5 Construction and Environmental Management Plan, Section 3.3 Archaeological Management as well as “Table 4 Proposed Mitigation Measures” of same document

The above mitigation is deemed sufficient to address the recommendation from the Department and the Applicant would welcome a condition relating to the same on any grant of planning permission from the Commission.

3.4 Inland Fisheries Ireland

A response to the observations from Inland Fisheries Ireland is provided by HES in Appendix 2.

3.5 National Office for Environmental Health Services (HSE)

3.5.1 Ground and Surface Water

In their observation, the National Office for Environmental Health Services (HSE) state they concur with the conclusions that there is adequate protection of surface and ground water during construction and operation of the proposed development if all the mitigation identified is implemented in full. This would include drinking water sources identified in the EIAR.

Response

The mitigation measures proposed within the EIAR have been designed to protect surface and groundwater during all stages of the project – construction, operation and decommissioning. The Applicant is committed to these mitigation measures. As outlined in Section 4 of the CEMP (Appendix 4-5), an Environmental Clerk of Works (ECoW) will be appointed to oversee the Project Contractor’s effective implementation of the Proposed Project’s environmental requirements and obligations, as captured in the CEMP. The ECoW will be responsible for monitoring the works of the Project Contractor from an environmental perspective on behalf of the Project Developer. For the sake of expediency, the ECoW will report their ongoing audit findings, monitoring results and site observations to both the Project Developer and the Project Contractor, having been nominated by the developer to fulfil the role. The ECoW will have the power to halt the works, should the need arise and will be supported by the developer to ensure the contractor adheres to such an instruction. The ECoW will also have to call upon the Project Ecologist, Project Hydrologist, or other members of the Project Developer’s design team, as required, to oversee the contractor’s works on-site.

3.5.2 Noise

A response to the noise observations from HSE is provided by TNEI in Appendix 3.

3.6 Office of Public Works (OPW)

In the observation received from the Office of Public Works (OPW), they state that the photomontages do not include the impact from the 9-no. nationally important receptors they list in Section 3.0 of the observation. They further state that the application does not provide evidence of assessment of national monuments through ZTV mapping or baseline photos.

Response

As stated in Section 1.6.1 of Appendix 13-1 LVIA Methodology, the selection process of viewpoints to include in photomontage imagery is included. The viewpoints, or locations of photomontage imagery capture, were selected following the 2006 Guidelines and draft 2019 Guidelines, the GLVIA3 (LI & IEMA, 2013) and the SNH Guidance v.2.2. The selection of viewpoints is designed to provide a representative range of views of the proposed turbines. Viewpoints were chosen after compiling the “Visual Baseline” (Section 13.5 of Chapter 13). The main purpose of establishing the visual baseline was to identify the key visual receptors that should be considered for viewpoint selection. To this end the following seven types of receptors were searched in the LVIA Study Area:

- Designated Scenic Routes and Views
- OSi viewing Areas
- Settlements
- Recreational routes
 - Waymarked walking routes
 - Cycle routes
 - Scenic drives
 - Tourist routes
- Recreational, cultural and tourist destinations
- Transport routes
- Residential receptors

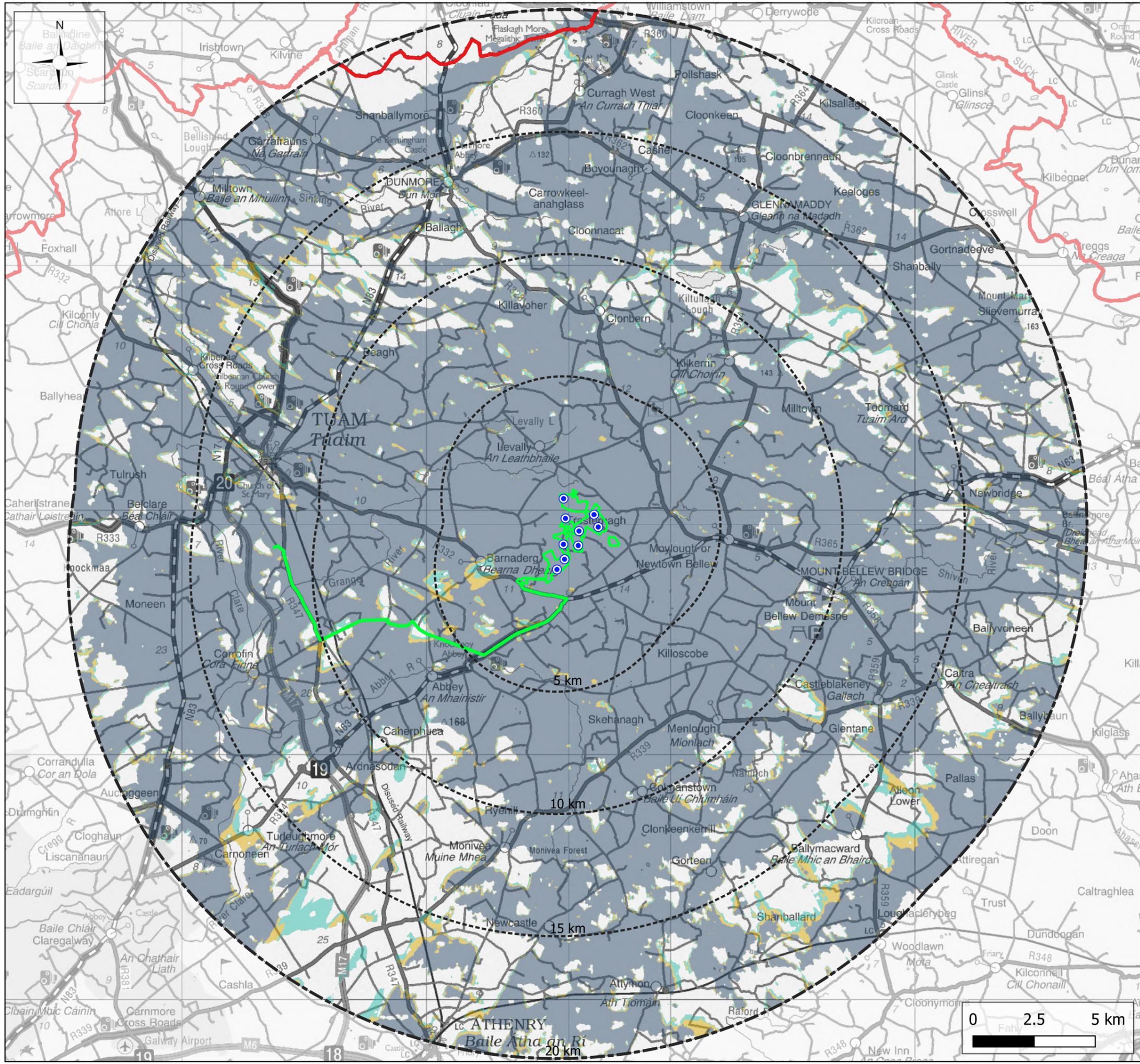
After all key visual receptors were identified, a Visual Receptor Preliminary Analysis was carried out to scope out selected visual receptors from further assessment due to the following reasons:

- Receptors which have none or very limited theoretical visibility according to ZTV mapping.
- Receptors comprising designated scenic routes or protected views, or featuring OSi Viewing Areas, that are not directed towards the Proposed Wind Farm.
- Receptors visited on-site which have towards the proposed turbines that are either entirely or substantially screened from view (by elements such as forestry and road-side hedgerows and trees, and buildings, as noted in Section 1.5.1 of Appendix 13-1), or for which the distance from the proposed turbines, in combination with screening, would mitigate any potential for “Significant” visual effects.

Views from all other key visual receptors were represented in the final selected viewpoint locations. Viewpoints were chosen having regard to the SNH Guidance v.2.2 (2017) which advises that a range of views should be shown at a range of distances, aspects and varying elevations, and that images should illustrate instances where the proposed turbines will be completely visible as well as partially visible. Consideration was also given to ensure that photomontages captured other wind farm developments in the LVIA Study Area in order to assess cumulative landscape and visual effects.

As stated in Chapter 14 Section 14.4.3 of the EIAR, the assessment assumes a long-term effect, rather than permanent, on Sites of national significance within 10km of the proposed turbine layout. Within 10km of the proposed turbines, there are Abbey, Knockmoy (NM166) and Church, Abbert Demense, Knockmoy (NM278) - both of which are included within the OPW observation. In Appendix 14-2 Assessment of Impacts on the Archaeological, Architectural and Cultural Heritage, both NM166 and NM278 are classified as having a ‘Low’ magnitude of Impact and ‘Moderate negative’ Significance of Effect.

Figures 13-1, 13-9, 13-14 and 13-16 of Chapter 13 of the submitted EIA below show the Zone of Theoretical Visibility (ZTV) (Fig. 13-1), Landscape Character Units and ZTV Map (Fig. 13-9), Visual Baseline Map with ZTV (Fig. 13-14), and the Visual Receptors, Viewpoint Locations and ZTV (Fig. 13-16) in proximity to the Site. The LVIA Baseline Map included as Appendix 13-4 of the submitted EIA is also shown below. It is noted that these figures were subject to issues with the compression of the files and as a result did not show the coloured classification areas concerning the ZTV in the digital copy of Chapter 13. The maps were available in the hard copy of the EIA, which is publicly available at the offices of both the Commission and GCC. The figures are a visual representation of the information included in Chapter 13, Sections 13.3.2, 13.4.1.1.5, 13.5, and 13.7.3.2.1 and Appendix 13-4 of the submitted EIA and does not present any new or additional information.



Map Legend

- ▭ County Borders
 - LVIA Study Area
 - EIAR Site Boundary
 - Proposed Turbines
- Zone of Theoretical Visibility**
- 1-3 Turbines Theoretically Visible
 - 4-6 Turbines Theoretically Visible
 - 7-9 Turbines Theoretically Visible

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Drawing No.

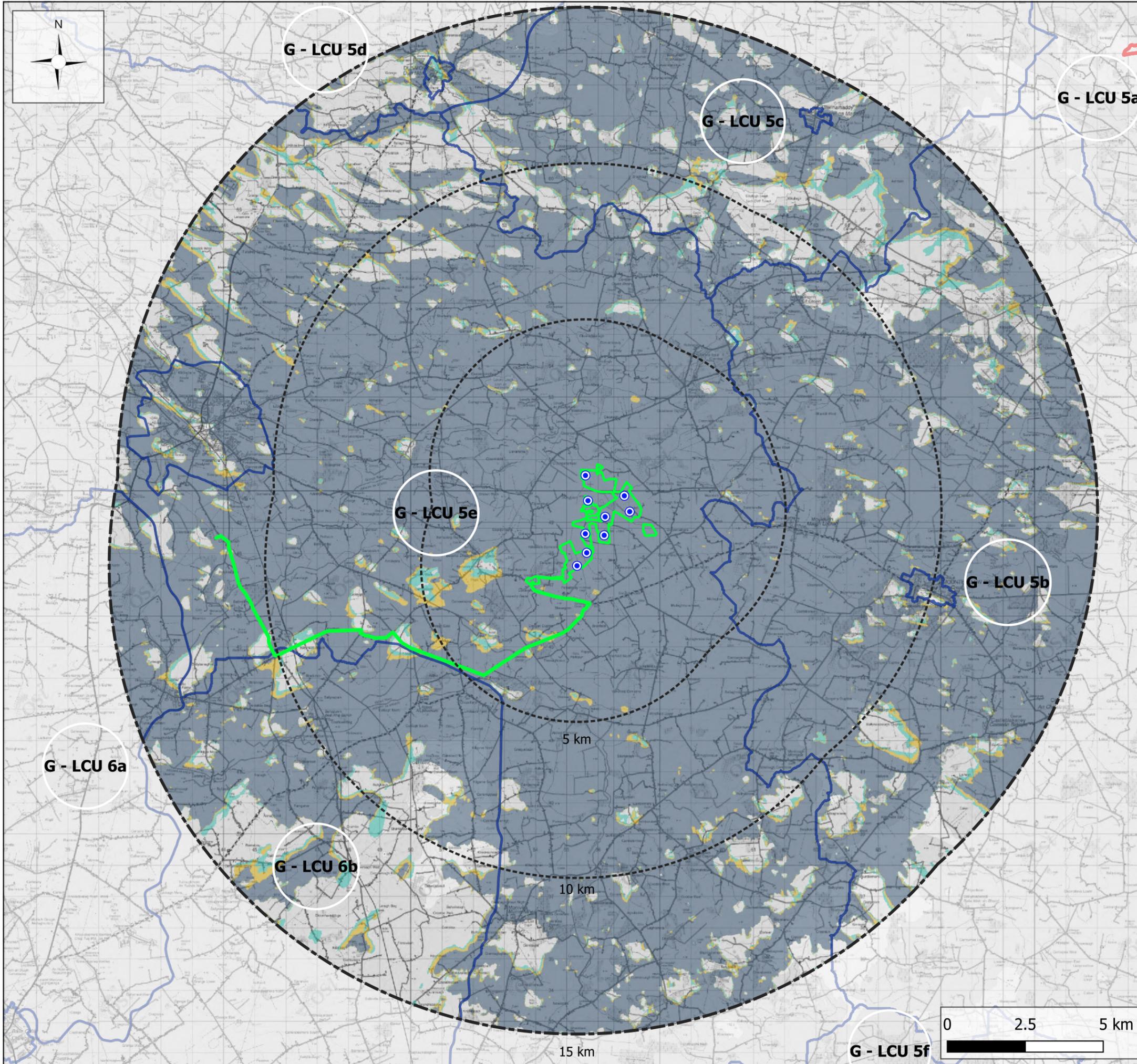
Figure 13-1

Zone of Theoretical Visibility Map

Cooloo Wind Farm, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:151,000	190723	03.09.2025	JC	RS





Map Legend

- LCA Study Area
- EIAR Site Boundary
- Proposed Turbines
- GCDP Landscape Character Units**
- G-LCU 5a - Suck Valley Unit
- G-LCU 5b - Castlegar Basin Unit
- G-LCU 5c - Springfield Basin Unit
- G-LCU 5d - Slieve Dart Unit
- G-LCU 5e - North River Clare Basin Unit
- G-LCU 5f - North Loughrea Unit
- G-LCU 6a - Black River Basin Unit
- G-LCU 6b - Southern River Clare Basin Unit
- Zone of Theoretical Visibility**
- 1-3 Turbines Theoretically Visible
- 4-6 Turbines Theoretically Visible
- 7-9 Turbines Theoretically Visible

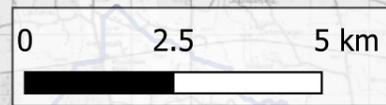
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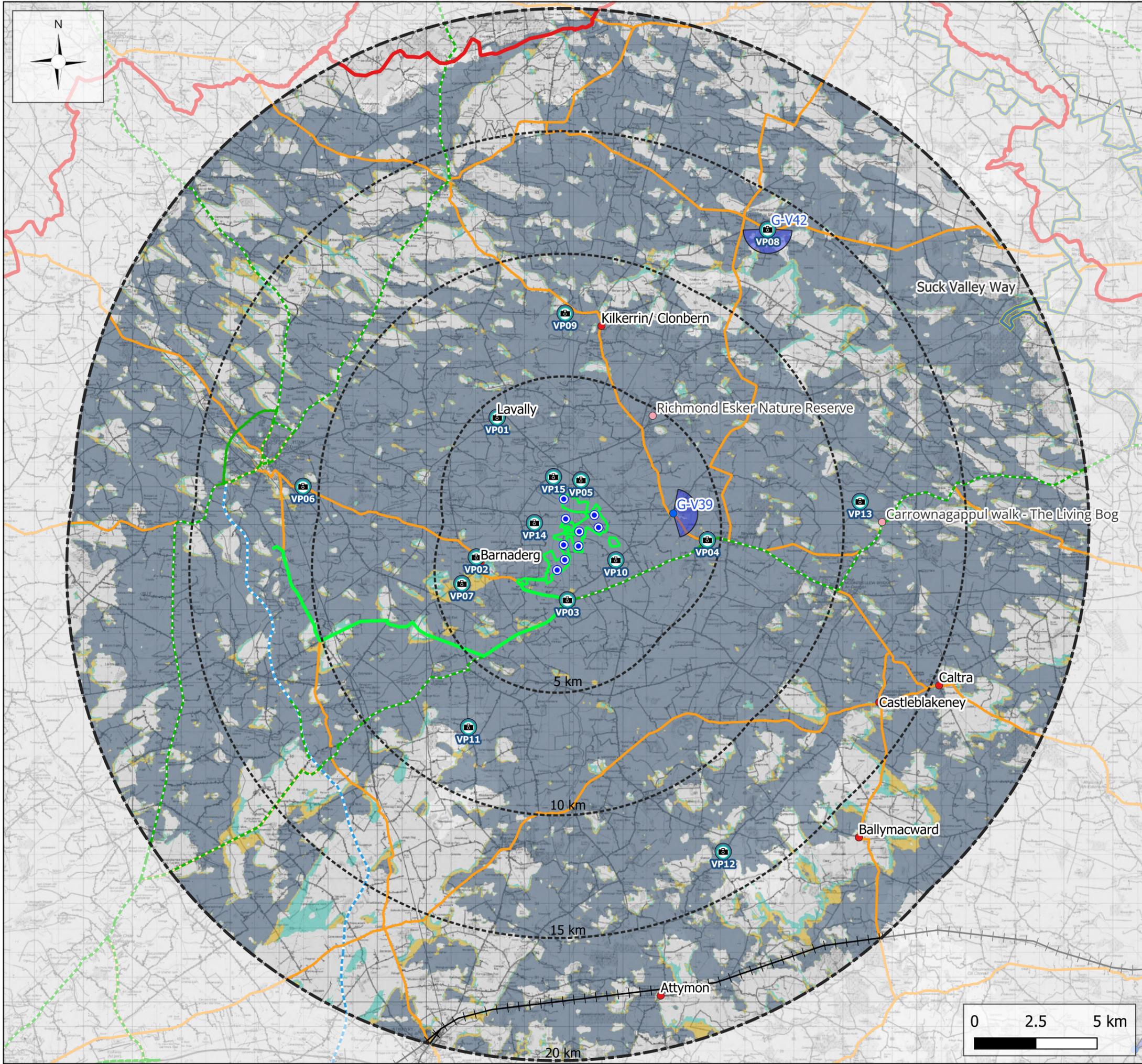
Figure 13-9

Drawing Title
Landscape Character Units and ZTV Map

Project Title
Cooloo Wind Farm, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:119,000	190723	03.09.2025	JC	JW





Map Legend

- LVIA Study Area
 - EIA Site Boundary
 - County Borders
 - Proposed Turbines
 - 📷 Photomontage Viewpoints
 - GCDP Protected Views
 - GCDP Protected Views Direction
 - Settlements
 - National Roads
 - Regional Roads
 - Irish Rail Network
 - Suck Valley Way
 - Recreational Destinations
- Zone of Theoretical Visibility**
- 1-3 Turbines Theoretically Visible
 - 4-6 Turbines Theoretically Visible
 - 7-9 Turbines Theoretically Visible

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Drawing No.

Figure 13-14

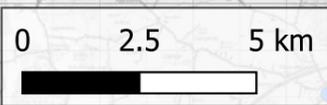
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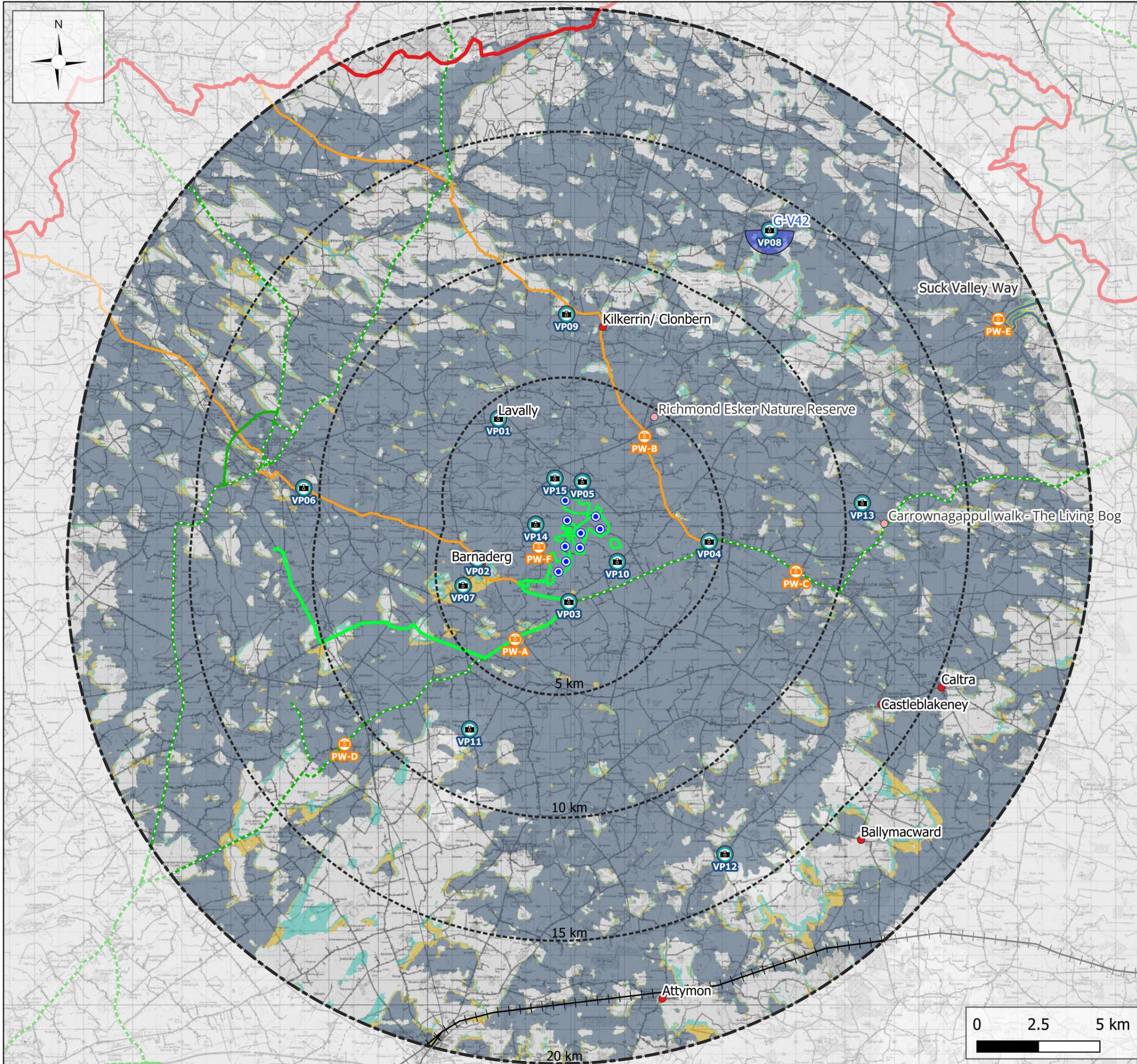
Visual Baseline Map with ZTV

Project Title

Cooloo Wind Farm, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:151,000	190723	03.09.2025	JC	RS





Map Legend

- LVIA Study Area
 - EIAR Site Boundary
 - County Borders
 - Proposed Turbines
 - 📷 Photomontage Viewpoints
 - 📷 Photowire Viewpoints
 - GCDP Protected Views
 - GCDP Protected Views Direction
 - Settlements Scoped in
 - National Roads
 - Regional Roads
 - Irish Rail Network
 - Suck Valley Way
 - Recreational Destinations
- Zone of Theoretical Visibility**
- 1-3 Turbines Theoretically Visible
 - 4-6 Turbines Theoretically Visible
 - 7-9 Turbines Theoretically Visible

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Figure 13-16

Visual Receptors, Viewpoint Locations and ZTV Map

Cooloo Wind Farm, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:151,000	190723	03.09.2025	JC	RS

