An Bord Pleanála,
64 Marlborough St,
Dublin 1,
D01 V902

Our ref: 220245
Your ref: N/A

Date: 19th November 2024

Re: First Party Appeal Against Refusal of Permission – Clare County Council Pl. Ref. 24/60411

Dear Sir/Madam,

MKO of Tuam Road, Galway, H91 VW84 have been instructed on behalf of our client, **EDF Renewables Ireland Limited of 3 Dublin Landings, North Wall Quay, Dublin**, to prepare and lodge this First Party Appeal against the decision by Clare County Council made on the 23rd of October 2024 to refuse permission on Pl. Ref. 24/60411. Under this application, permission was sought for a 7 no. turbine wind farm and associated works in County Clare.

Please find enclosed the completed Planning Appeal Form, along with the First Party Appeal Report, which sets out the Applicant's Grounds of Appeal against each of the reasons for refusal given by Clare County Council in their decision to refuse permission.

The description of the development in question, as set out on the public notices is as follows:

'We, EDF Renewables Ireland Limited, intend to apply for a ten-year planning permission for development at this site in the townlands of Kilbane, Killeagy (Ryan), Shannaknock, Killeagy (Stritch), Killeagy (Goonan), Ballymoloney, Magherareagh and Lackareagh Beg, Co. Clare.

The development will consist of:

i. *The construction of 7 no. wind turbines with the following parameters:*
   a. *Total tip height range of 179.5m – 180m,*
   b. *Rotor diameter range of 149m – 155m,*
   c. *Hub height range of 102.5m to 105m,*
ii. *Construction of associated foundations, hardstand and assembly areas;*
iii. *All associated wind farm underground electrical and communications cabling connecting the turbines and mast to the proposed electrical substation;*
iv. *Construction of 1 no. permanent 38kV electrical substation including a single-story control building with welfare facilities, all associated electrical plant and equipment, security fencing, entrance on to new access road, all associated internal underground cabling, drainage infrastructure, wastewater holding tank, retention separator tank, and all ancillary works, in the townland of Killeagy (Goonan), Co. Clare;*

v. *A Battery Energy Storage System within the 38kV electrical substation compound;*
vi. *1 no. permanent meteorological mast of c. 36.5m in height, associated foundation and hard-standing area in the townland of Shannaknock;*
vii. *The permanent upgrade of 1 no. existing site entrance off the L7080 ('The Gap Road') for the provision of construction and operational access;*
viii. *Provision of 3 no. new permanent site entrances off the L7080 for the provision of construction and operational access;*
ix. *Provision of 3 no. new temporary site entrances off the L7080 for the provision of construction access;*
x. *Upgrade of existing tracks/ roads, including the L7080, and the provision of new site access roads, 4 no. watercourse crossings, junctions and hardstand areas;*
xi. *1 no. temporary constructioncompound with temporary offices and staff facilities in the townland of Killeagy (Goonan);*
xii. *1 no. temporary storage area in the townland of Killeagy (Goonan);*
xiii. *1 no. borrow pit in the townland of Killeagy (Goonan);*
xiv. *Peat and Spoil Management;*
xv. *Tree Felling to accommodate the construction and operation of the proposed development;*
xvi. *Operational stage site and amenity signage; and*
xvii. *All ancillary apparatus and site development works above and below ground, including soft and hard landscaping and drainage infrastructure.*

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.

A design flexibility opinion issued by Clare County Council on 22nd April 2024 accompanies this application. The details unconfirmed in this application are the turbine tip height, rotor diameter and hub height. The range of parameters under which the turbine dimensions will fall are specified on this notice and in the design flexibility opinion that accompanies this application.'

The First Party Appeal Report is enclosed which also includes the fo llowingappendices:

- **Appendix 1** – Clare County Council Notification of Decision to Refuse Permission
- **Appendix 2** – Hydro-Environmental Services Appeal Response
- **Appendix 3** – Clare County Development Plan 22023-2029 – Compliance Summary Table

The sum of €3,000 (the application included an EIAR and NIS) will be paid by card upon submission of this appeal.

Yours faithfully,

John Willoughby

John Willoughby, BA, MSc, MIPI
Project Planner
MKO

Enclosed

- Completed Appeal Form
- First Party Appeal Report

An Bord Pleanála

Planning Appeal Form

Your details

1. Appellant's details (person making the appeal)

Your full details:

(a)	Name	EDF Renewables Ireland Limited
(b)	Address	3 Dublin Landings, North Wall Quay, Dublin, Ireland, D01C4E0

Agent's details

2. Agent's details (if applicable)

If an agent is acting for you, please **also** provide their details below. If you are not using an agent, please write "Not applicable" below.

(a)	Agent's name	John Willoughby
(b)	Agent's address	MKO, Tuam Road, Galway, H91 VW84

Postal address for letters

3. During the appeal we will post information and items to you **or** to your agent. For this appeal, who should we write to? (Please tick ✓ one box only.)

You (the appellant) at the address in Part 1	☐	**The agent at the address in Part 2**	✓

Details about the proposed development

4. Please provide details about the planning authority decision you wish to appeal. If you want, you can include a copy of the planning authority's decision as the appeal details.

(a) Planning authority

(for example: Ballytown City Council)

Clare County Council

(b) Planning authority register reference number

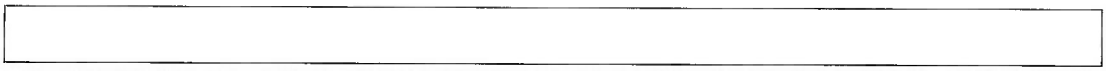
(for example: 18/0123)

24/60411

(c) Location of proposed development

(for example: 1 Main Street, Baile Fearainn, Co Ballytown)

A c. 52.4ha site in the townlands of Kilbane, Killeagy (Ryan), Shannaknock, Killeagy (Stritch), Killeagy (Goonan) Ballymoloney, Magherareagh, and Lackareagh Beg, Co. Clare.



Appeal details

5. Please describe the grounds of your appeal (planning reasons and arguments). You can type or write them in the space below or you can attach them separately.

Please refer to the First Party Appeal Report enclosed which sets out the Grounds of Appeal

Supporting material

6. If you wish you can include supporting materials with your appeal. Supporting materials include:

   - photographs,
   - plans,
   - surveys,
   - drawings,
   - digital videos or DVDs,
   - technical guidance, or
   - other supporting materials.

Acknowledgement from planning authority (third party appeals)

7. If you are making a third party appeal, you **must** include the acknowledgment document that the planning authority gave to you to confirm you made a submission to it.

Fee

8. You **must** make sure that the correct fee is included with your appeal. You can find out the correct fee to include in our Fees and Charges Guide on our website.

Oral hearing request

9. If you wish to request the Board to hold an oral hearing on your appeal, please tick the "yes, I wish to request an oral hearing" box below.

Please note you will have to pay an **additional non-refundable fee** of €50. You can find information on how to make this request on our website or by contacting us.

If you do not wish to request an oral hearing, please tick the "No, I do not wish to request an oral hearing" box.

Yes, I wish to request an oral hearing ☐

No, I do not wish to request an oral hearing ✓

NALA has awarded this document its Plain English Mark

Last updated :April 2019.

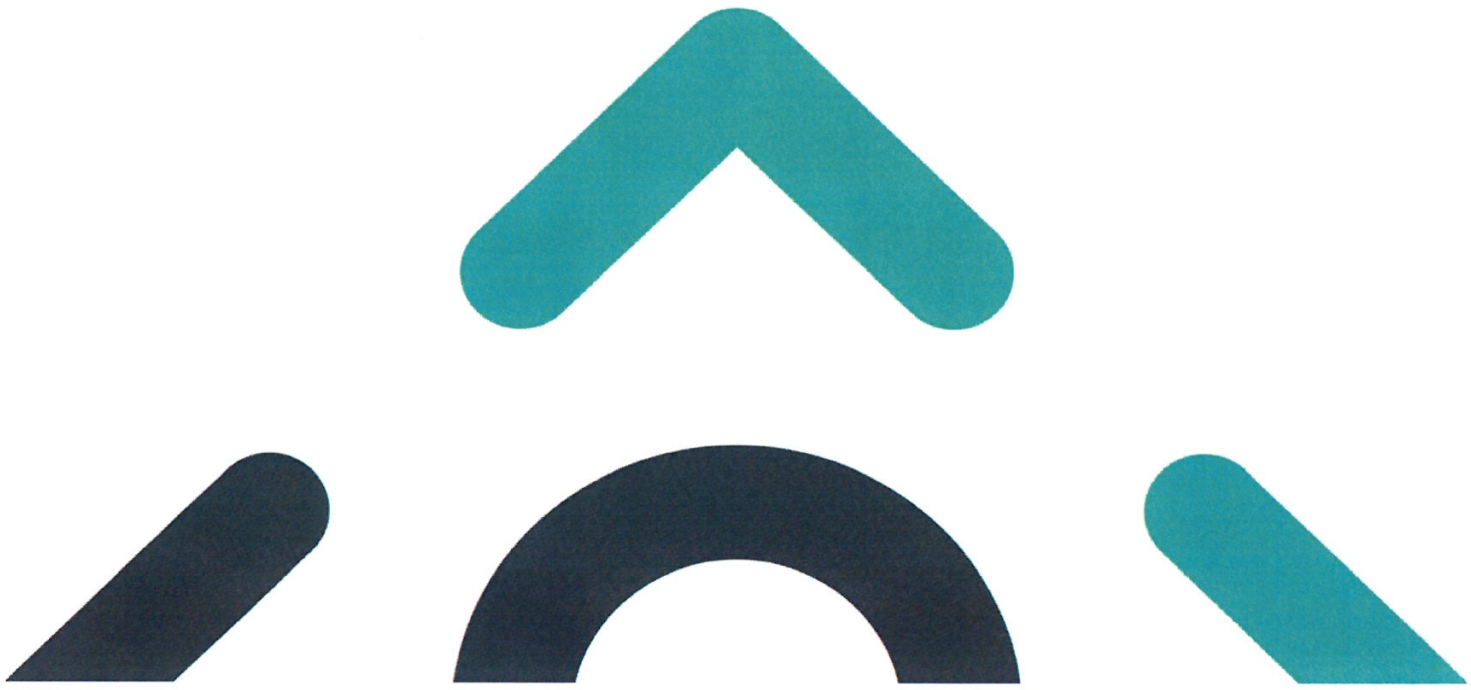
Plain English Approved by NALA

MKO Planning and Environmental Consultants

First Party Appeal

Lackareagh Wind Farm, Co. Clare

Clare County Council Pl. Ref: 24/60411



DOCUMENT DETAILS

Client:	**EDF Renewables Ireland Limited**
Project Title:	**Lackareagh Wind Farm, Co. Clare**
Project Number:	**220245**
Document Title:	**First Party Appeal**
Document File Name:	**220245 - Lackareagh WF First Party GOA Report F - 2024.11.19**
Prepared By:	**MKO** **Tuam Road** **Galway** **Ireland** **H91 VW84**

Planning and Environmental Consultants

Rev	Status	Date	Author(s)	Approved By
01,	Draft	05/11/2024	EC, RD, PC, SM, ND, RS, JW	EC, SC, JW, SM, MG, JS, PC
02	Draft	13/11/2024	EC, RD, PC, SM, ND, RS, JW	EC, SC, JW, SM, MG, JS, PC
03	Final	19/11/2024	EC, RD, PC, SM, ND, RS, JW	EC, SC, JW, SM, MG, JS, PC

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1. INTRODUCTION

1.1 Background

MKO have been appointed by EDF Renewables Ireland Limited ('the Applicant') of 3 Dublin Landings, North Wall Quay, Dublin, to prepare and lodge this First-Party appeal against the decision by Clare County Council (the Planning Authority) to refuse permission for a 7 no. turbine wind energy development and associated works (the Proposed Development) at Killeagy (Goonan) and surrounding townlands, immediately east of the village of Kilbane, Co. Clare. Clare County Council refused permission on the 23rd of October 2024. The deadline for the submission of this appeal to An Bord Pleanála is the 19th November 2024.

The planning application was lodged with Clare County Council on the 29th of August 2024 and was assigned the planning reference Pl. Ref. 24/60411. The planning application was accompanied by an Environmental Impact Assessment Report (EIAR), Natura Impact Statement (NIS) along with all required statutory planning application documentation.

This First Party Appeal document sets out the background to the project, the planning policy context relevant to the Proposed Development, each reason for refusal issued by Clare County Council and subsequently sets out the Applicant's Grounds of Appeal (GOA). The GOA provides a response and rebuttal to each reason for refusal, demonstrating that the Proposed Development is appropriate in terms of proper planning and sustainable development, and therefore Clare County Council's decision should be overturned, and planning permission granted by An Bord Pleanála. The refusal issued by the Planning Authority is attached to this Grounds of Appeal in **Appendix 1** for reference.

1.2 Proposed Development

The Proposed Development remains that as set out in the public notices as follows:

We, EDF Renewables Ireland Limited, intend to apply for a ten-year planning permission for development at this site in the townlands of Kilbane, Killeagy (Ryan), Shannaknock, Killeagy (Stritch), Killeagy (Goonan), Ballymoloney, Magherareagh and Lackareagh Beg, Co. Clare.

The development will consist of:

i. *The construction of 7 no. wind turbines with the following parameters:*
   a. *Total tip height range of 179.5m – 180m,*
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ix. *Provision of 3 no. new temporary site entrances off the L7080 for the provision of construction access;*

x. *Upgrade of existing tracks/ roads, including the L7080, and the provision of new site access roads, 4 no. watercourse crossings, junctions and hardstand areas;*

xi. *1 no. temporary construction compound with temporary offices and staff facilities in the townland of Killeagy (Goonan);*

xii. *1 no. temporary storage area in the townland of Killeagy (Goonan);*

xiii. *1 no. borrow pit in the townland of Killeagy (Goonan);*

xiv. *Peat and Spoil Management;*

xv. *Tree Felling to accommodate the construction and operation of the proposed development;*

xvi. *Operational stage site and amenity signage; and*

xvii. *All ancillary apparatus and site development works above and below ground, including soft and hard landscaping and drainage infrastructure.*

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.

A design flexibility opinion issued by Clare County Council on 22nd April 2024 accompanies this application. The details unconfirmed in this application are the turbine tip height, rotor diameter and hub height. The range of parameters under which the turbine dimensions will fall are specified on this notice and in the design flexibility opinion that accompanies this application.

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Policy Overview

The following section provides a summary of the planning, renewable energy and climate policy context relevant to the Proposed Development. It is clear from the policies outlined below that the Proposed Development is strongly supported in principle by policy at all levels, with the Proposed Development located in an area zoned as 'Open to Consideration' for wind energy development. The following section contains a synopsis of the current policies in place and their relevance to the Proposed Development. Further detailed discussions on these policies are included in the GOA (section 4) and in this regard the planning rationale report submitted as part of the planning application is also relevant.

The Proposed Development sits within a policy framework characterised by several recent crises, which have significantly influenced policy changes in recent years. These crises have heightened the imperative to transition towards a renewable energy-focused electricity grid and have emphasised the necessity for diversifying our energy sources.

Figure 1-1: Main climate and renewable energy policy drivers

Paris Agreement

On an international level, Ireland is a signatory of the Paris Agreement, a global initiative adopted in 2015 that aims to address climate change by limiting global warming to well below 2 degrees Celsius above pre-industrial levels, with efforts to limit the increase to 1.5 degrees Celsius. Under the Paris Agreement, countries submit Nationally Determined Contributions (NDCs), outlining their individual climate action plans and commitments. Ireland's contribution comes under the European Union's (EU) NDCs targets and is based on the European Union's 2030 emissions reductions targets.

Sustainable Development Goals

Also in 2015, Ireland became a signatory to the United Nations Sustainable Development Goals (SDGs), which frame national agendas and policies to 2030. The SDGs inform the strategic outcomes of Irish policy documents, such as Project Ireland 2040: National Planning Framework. SDG 7 seeks to achieve *'Affordable and Clean Energy'*.

European Green Deal

On a European level, the European Green Deal, initially introduced by the European Commission in December 2019, sets out the 'blueprint' for a transformational change of the 27-country bloc from a high- to a low-carbon economy. The European Green Deal is intended to work through a framework of regulation and legislation setting clear overarching targets, e.g. a bloc-wide goal of net zero carbon emissions by 2050 and a 55% cut in emissions by 2030 (compared with 1990 levels). This is a substantial increase compared to the existing target, upwards from the previous target of at least 40% (2030 Climate & Energy Framework), and furthermore, these targets demonstrate the ambition necessary to keep the global temperature increase to well below 2°C and pursue efforts to keep it to 1.5°C as per the Paris Agreement.

The EU Fit for 55

The EU Fit for 55 package was published in late 2021 with the aim of reducing EU emissions by at least 55% by 2030 compared to 1990 levels and making the EU carbon-neutral by 2050. This EU package is a set of proposals to revise all existing EU acts on climate and energy and increase the EU target for renewables in the overall energy mix from 32% in 2030 to 40%.

Renewable Energy Directive & REPowerEU

In November 2023, a revision of the Renewable Energy Directive[1] (RED III), came into force. RED III increases the EU wide renewable energy target from 32% set under the previous revision of the directive to at 42.5%, with an ambition to reach 45% by 2030. This increase comes following the Russian invasion of Ukraine and the publication of REPowerEU plan in May 2022. REPowerEU aims to make Europe independent from Russian fossil fuels including oil and gas by rapidly transitioning to renewable energy. The plan aims to accelerate the scale up of renewables by speeding up the permitting process and placing renewable energy developments in the category of overriding public interest.

Climate Action and Low Carbon Development Act 2015 (as amended)

At a national level, the Climate Action and Low Carbon Development Act 2015 (as amended) brought into law for the first time the requirement for the State to reduce its carbon emissions by 51% by 2030 and climate neutrality by 2050. Under Section 15 of the Climate Action and Low Carbon Development Act 2015 (as amended), public bodies are required to, in so far as practical, perform its functions in a manner consistent with the Climate Action Plan 2024, the National Energy & Climate Plan 2021 – 2030 and other national climate mitigation and adaptation plans.

Climate Action Plan

Originally published in 2019 and subsequently revised in 2021, 2023, and 2024, the Climate Action Plan (CAP) underscores the growing imperative to increase the presence of renewable energy generators on the national grid. Under CAP 24, the state has committed to achieving 6 GW of onshore wind energy by 2025 and 9GW by 2030. To achieve emissions abatement targets, CAP 24 has identified that an approximate eight-times increase of renewable energy deployment to **2.3 GW** annually would be needed between **2024 and 2030.**

Project Ireland 2040

'Project Ireland 2040' comprises the National Planning Framework (NPF) and the National Development Plan (NDP) 2021 – 2030, both of which stress the urgency required to decarbonise Irish society. This is reflected in the NPF through National Strategic Outcome 8: *"Transition to a low carbon and climate resilient economy"*. The NDP emphasises the importance of addressing climate change, stating *"The next 10 years are critical if we are to address the climate crisis and ensure a safe and bright future for the planet, and all of us on it"*. The NDP sets out a Renewable Electricity Share (RES-E) target of 80% by 2030, calling for an "*unprecedented commitment to the decarbonisation of electricity supplies"*.

The first draft of the revised National Planning Framework, published in July 2024, includes national policy objectives that support the accelerated roll-out of the renewable electricity and the development of national electricity grid infrastructure. The draft revision also includes regional renewable electricity allocations, for which the southern region has an allocation of installing a further 978MW of onshore wind energy by 2030.

National Energy Security Framework

The National Energy Security Framework (NESF), adopted in 2022, and implements many of the aims and objectives of REPowerEU on a national level, reinforcing the State's requirement to urgently diversify away from imported fossil fuels and accelerate the roll out of renewables. The NESF is supported by the recently published Energy Security Package 'Energy Security in Ireland to 2030'. The

[1] *Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast)*

Energy Security Package provides further long-term energy security measures which includes the prioritisation of achieving a renewables-led energy system.

Regional and Economic Spatial Strategy for the Southern Region

On a regional level, the Regional and Economic Spatial Strategy (RSES) for the Southern Region, supports the implementation of the national plans and policies outlined above. The RSES recognises the need for and the benefits of renewable energy for the climate and for the economic development of the region. The RSES advocates for the development of wind energy at appropriate locations in the region.

Clare County Development Plan 2023 - 2029

The Clare County Development Plan 2023-2029, ("CCDP"), was adopted in 2023 and sets out Clare County Council's policies and objectives for the proper planning and sustainable development of the County.

The policies and objectives set out within the CCDP are supportive of the development of renewable energy within the county. Addressing climate change is a key underlying aim of Clare County Council. The CCDP aims to be "*A county that is resilient to climate change, plans for and adapts to climate change and flood risk, is the national leader in renewable energy generation, facilitates a low carbon future, supports energy efficiency and conservation and enables the decarbonisation of our lifestyles and economy.*"

The CCDP states that Clare County Council will promote the implementation of the Clare County Renewable Energy Strategy (RES) and will facilitate the development of a range of sustainable forms of energy creation within the County in order to ensure a secure and effective supply of energy. Through the successful delivery of the Renewable Energy Strategy, the CCDP states that Co. Clare can make significant advancements in energy security, reduced reliance on traditional fossil fuels, enabling future energy exports and meeting assigned targets.

The Clare Wind Energy Strategy (WES), which forms part of the Clare County Renewable Energy Strategy (RES), designates areas as 'Open to Consideration' for wind energy development. The proposed turbines are located within an area classified as 'Open to Consideration' where wind energy developments are to be considered on a case-by-case basis, subject to viable wind speeds, environmental resources and constraints, and cumulative impacts. It is also found that the Proposed Wind Farm is suitably sited within a Landscape Character Area identified in the WES as having a medium to low sensitivity to wind farm development and an ability to accommodate multiple wind farm developments.

A statement of consistency demonstrating the Proposed Development's compliance with the CCDP is provided in Table 6-2 of the Planning Report, submitted as part of the planning application and included below for ease of reference in Appendix 3

2. LOCAL PLANNING AUTHORITY DECISION

Clare County Council issued a Notification of Decision to Refuse permission for the Proposed Development dated 23rd October 2024, with three reasons for refusal as set out below.

Reason for Refusal 1: Landscape and Visual Effects

The proposal site is located in the Slieve Bernagh Bog Landscape Character Area (LCA), in an area where windfarm developments are 'Open to Consideration'. In accordance with Objective WES10 of the Clare Wind Energy Strategy wind energy developments in these areas can be considered on a case-by-case basis subject to viable wind speeds, environmental resources and constraints and cumulative impacts.

Having regard to the location of the site in the more sensitive and scenic area of the LCA (Lackareagh and Glenvagalliagh Mountains), the Planning Authority considers that the proposed turbine structures, by reason of their height (tip height up to 180m), scale and siting on this open, exposed and sensitive upland landscape would constitute a prominent feature on the landscape from both local and long range viewpoints, and would therefore seriously injure the visual amenities of the area. Furthermore, it is considered that the development would be highly visible from, and negatively impact upon, the R466 Regional Road which is a designated Scenic Route and would negatively alter the character of this rural landscape.

Having regard to the foregoing and noting also the significant potential for cumulative impacts arising when the proposed development is considered in-combination with permitted and proposed wind farm development in the surrounding area, it is considered that the proposed development, would contravene Objectives CDP14.2 and CDP14.7 of the Clare County Development Plan 2023-2029 and would be contrary to the proper planning and development of the area.

Reason for Refusal 2: Hydrological Impact on European Sites

The Planning Authority notes that there is hydrological connectivity between the proposed development site and both the Lower River Shannon SAC, and the River Shannon and River Fergus Estuaries SPA. The majority of the habitats and species for which both European sites are designated are water dependent habitats and species with requirements for high to pristine water quality.

Having regard to the particulars submitted with the planning application, with particular reference to the peat and spoil management proposals, surface water management plans, and the WFD Assessment contained in Appendix 9-3 of the submitted documents, the Planning Authority, as the competent authority in the appropriate assessment process, is unable to conclude, beyond reasonable scientific doubt, that the proposed development will not adversely affect the integrity of downstream European sites. The proposed development would be contrary to Objective CDP15.3 of the County Development Plan and contrary to the proper planning and sustainable development of the area.

Reason for Refusal 3: Cumulative Effects on Birds

It is an objective of Clare County Council, under Objective CDP15.12 of the Clare County Development Plan 2023-2023 to inter alia to promote the conservation of biodiversity through the protection of sites of biodiversity importance and wildlife corridors, both within and between the designated site and the wider plan area. Having regard to the importance of the area for multiple bird species, as evidenced by the survey results submitted with the development proposal, it is considered that there is significant potential for cumulative effects through the in-combination effects of other

proposed and permitted windfarm developments in the area, all of which contain significant numbers of birds of conservation concern and red-listed bird species.

In the absence of a strategic level cumulative assessment of the impact of the construction of a large number of turbines within one geographical area (66 turbine proposed or permitted), the Planning Authority cannot satisfactorily determine that the proposed development will not give rise to, or contribute to, significant or adverse effects on either the Special Conservation Interests of the Special Protection Areas in the zone of influence of the proposed development, Birds of Conservation Concern or on the Red List.

Having regard to the foregoing, the Planning Authority considers that the proposed development would significantly diminish the biodiversity value of the area, would be contrary to Objective CDP15.12 of the Clare County Development Plan 2023-2029 and would be contrary to the proper planning and sustainable development of the area.

2.2 Clare County Council's Decision

Clare County Council's (CCC) Planner's Report provides a description and assessment of the Proposed Development under the following headings: site location and description, proposed development, planning policy overview, relevant planning history, summary of pre-planning consultation, internal and prescribed body submissions, observations and submissions, representations, appropriate assessment, environmental impact assessment, planning appraisal, and conclusions and recommendation. The planning appraisal included an assessment of compliance with policy review and principle of development, an evaluation of the Environmental Impact Assessment Report (EIAR) and the Natura Impact Statement (NIS). A summary of the relevant sections of CCC's Planner's Report and a response to the concerns raised by the Planning Authority are provided below.

2.2.1 EIAR & AA Conclusions

CCC's Planner's Report and the accompanying EIA and AA, in its assessment of the EIAR and NIS submitted as part of the application, makes the following observations:

2.2.1.1 Cumulative Impact Assessment Methodology

The Council has expressed concern regarding the cumulative assessment approach in the EIAR stating '*The EIAR indicates that a study was completed to identify all existing, permitted and/or proposed wind farm developments within the cumulative hydrological study area. Section 8.1.1.3 identifies the cumulative effects with other Wind Farm Developments with 2 no. Windfarms identified based on the delineated cumulative hydrological study area. This does not appear to take into consideration noise or disturbance effects to birds which would have most likely identified further windfarms as having the potential for cumulative and in-combination effects. The identification of only 2 no. windfarms based on this delineated cumulative hydrological study area seems conservative in the context of the number of windfarm applications within the Zone of Influence of this proposal.*'

Applicant's Response

The Planning Authority appears to have misinterpreted the cumulative impact assessment approach for the EIAR, making sole reference to the hydrological cumulative buffer when considering noise cumulative effects.

The methodology for cumulative assessment of projects is detailed in Section 2.9 in Chapter 2 of the EIAR. The geographical boundaries of the various zones of sensitivity of and to the Proposed Project from which there may be potential for cumulative impacts to arise relative to each individual EIAR topic, i.e each chapter, is presented in Table 2-9 of the EIAR. Following consultation with the EIAR

team on each individual topic, the maximum geographical extent and justification for this extent was established and is presented in the EIAR.

For example, the geographical boundary for the cumulative noise assessment is the area within which noise levels from the proposed, consented and existing wind turbine(s) may exceed 35 dB LA90 at up to 10m/s wind speed (Institute of Acoustics document Good Practice Guide To The Application Of Etsu-R-97 For The Assessment and Rating of Wind Turbine Noise). Therefore, for the Proposed Wind Farm, a list of wind farms which were initially considered in cumulative assessment extended to 10 km. Due to the narrow nature of the underground electrical cabling route trench (-0.6m wide), a 200m buffer zone is an appropriate scale when considering potential cumulative noise effects.

For Biodiversity, using the precautionary approach and given the nature and scale of the Proposed Development, the geographical boundary for terrestrial ecological aspects, i.e. habitats, is 1km for cumulative assessment for the Proposed Wind Farm site and 200m from Proposed Grid Connection Route. However, consideration for the Biodiversity cumulative extent is also given to the Birds and Water Cumulative geographical boundaries.

For Birds, NatureScot guidance '*Assessing the Cumulative Impacts of onshore Wind Energy Developments'* (SNH, 2012; 2018) was consulted while undertaking the cumulative assessment. SNH (2012; 2018) emphasises that its priority is to '*maintain the conservation status of the species population at the national level.*' However, it is acknowledged that consideration should also be allowed for impacts at the regional level '*where regional impacts have national implications (for example where a specific region holds the majority of the national population*)'. Following the guidance of SNH (2012), the cumulative impact assessment has been carried out at the scale of the importance rating of the receptor. A 25km radius from the Proposed Wind Farm turbines was considered a reasonable approximation of the size of a county and a 5km radius from the Proposed Wind Farm turbines was considered a reasonable approximation for the local level.

2.2.1.2 Population and Human Health

2.2.1.2.1 *Shadow Flicker*

The Council has expressed concern regarding the findings of the shadow flicker assessment. Out of the 64 properties evaluated, 45 may experience daily shadow flicker occurrences, with properties potentially exceeding the maximum daily allowance of 30 minutes (assuming no mitigation). The Council considers that this issue poses a significant risk to the residential amenities in the area. Furthermore, the cumulative shadow flicker analysis indicates that 5 properties could be affected when considering both the permitted Fahey Beg wind farm and the proposed Lackareagh wind farm.

Applicant's Response

The shadow flicker assessment results are provided in Section 5.8.6.1 in Chapter 5 of the submitted EIAR. The Applicant has made the commitment to adopt the Department of Environment Heritage and Local Government Draft 2019 Wind Energy Development Guidelines and implement mitigation measures outlined in Section 5.10.3.10.to ensure that there will be no occurrences of shadow flicker for any property within the 1.55km Shadow Flicker Study Area, as a result of the Proposed Development.

Similarly, as identified in Section 5.8.6.3 the Cumulative Shadow Flicker assessment, the Applicant has committed to bring the Proposed Development in line with the Draft 2019 Guidelines requirement of zero shadow flicker through mitigation strategies identified in Section 5.10.3.10. Therefore, of the 5 properties identified where there is a potential for the Proposed Development and Fahy Beg Wind Farm to give rise to cumulative shadow flicker occurrences, the Applicant has committed that there will be no contributions of shadow flicker occurrences from the Proposed Development.

As identified in Section 5.10.3.10, '*the implementation of the mitigation measures identified, where necessary, will ensure that there will be no shadow flicker experienced at properties within 10 rotor diameters from the Proposed Development as delineated by the Draft DoEHLG 2019 Guidelines. Based on the above, there will be no residual effect on human health from shadow flicker.*'

2.2.1.2 Residential Amenity

The Planning Authority identifies that much of the consideration of impacts on residential amenity relate to various detailed assessments of the EIAR, namely noise, the Construction Environmental Management Plan and Biodiversity Environmental Management Plan. It is considered that many key issues in relation to tourism, recreation, local amenities and the local economy have not been adequately considered in the assessment. For clarity, the Planning Authority's identified issues relating to these elements, within the context of residential amenity, are identified below:

- **Noise & Vibration:** The Planning Authority consider that the impacts of construction phase noise are highly underestimated. It is stated that the noisiest activities are excavation and pouring of the turbine bases, the Planning Authority identifies that the noise affects arising from the extraction at the borrow pit is not considered. Similarly, the Planning Authority identify that the traffic movements associated with concrete pouring appear '*intense.*
- **Economic Impacts:** The Planning Authority consider the assessment of economic impacts associated with the development as inadequate, and the potential negative impacts of the proposed development on small scale local businesses and the local tourism economy has not been considered or assessed. The Planning Authority identify that consideration of local economic impacts is very limited, focused on statements regarding the creation of 2 to 3 operational phase jobs, and economic benefits to local businesses from the project landowners having additional local spending power.
- **Local Recreational Amenity:** The Planning Authority identify the local area is a popular walking and cycling destination. The East Clare Walk walking route bisects the proposed development. The Planning Authority consider that the EIAR does not assess the potential impact of the proposed development on recreational activity, especially during the construction phase.
- **Property Devaluation:** The Planning Authority identifies that the third party observations received frequently raised concerns that the presence of the wind farm will deter people from moving to the area and building new houses in the area. The Planning Authority identified that the EIAR considers the potential for devaluation of property, however, it does not attempt to analyse the impact of the proposed wind farm on the attractiveness of the receiving area as a place of residence.

Applicant's Response:

The concerns expressed by the Planning Authority in relation to Noise and Vibration are comprehensively considered in Section 2.2.1.9 below, and concerns regarding Traffic & Transport are comprehensively considered in Section 2.2.1.12.1 below.

Local Recreational Amenity, Economic Impacts and Property Devaluation

It is considered that key issues in relation to tourism, recreation, local amenities and the local economy have been adequately considered in the EIAR submitted.

The impact of the Proposed Development on Residential Amenity is detailed in Section 5.9, and further in Section 5.10.2.12 and Section 5.10.3.11 in Chapter 5 of the EIAR: Population & Human Health. The impact on residential amenity is derived from an overall judgement of the combination of impacts due to shadow flicker, changes to land-use and visual amenity, noise, traffic, dust, and general disturbance. All mitigation as outlined where relevant to residential amenity in the EIAR will be implemented in order to reduce insofar as possible, impacts on residential amenity at properties located in the vicinity of Proposed Development. Following the implementation of these measures, the residual

effect on residential amenity arising from the construction phase is short-term negative and imperceptible, and during the operational phase it is considered that there will be no residual effect.

The impact of wind farms on tourism is detailed in Section 5.4 in Chapter 5 of the EIAR, and further detailed in Sections 5.10.2.9 and 5.10.3.8. It is not considered that the Proposed Development will have a significant effect on tourism infrastructure in the vicinity. Renewable energy developments are an existing feature in the surrounding landscape, which will assist in the assimilation of the Proposed Development into this environment. During the construction phase of the Proposed Development, with regard to tourist attractions and amenity use surrounding the Proposed Project site, traffic management safety measures will be in place, where required.

Given that the East Clare Way is an identified tourist attraction pertaining specifically to the site of the Proposed Development itself, there is potential for long-term imperceptible negative impact associated with the operational phase of the development. As part of the Proposed Development design, an informational lookout point area will be included to promote walking activities and to supply views of Killaloe and Glennagalliagh Mountain. Information signs will also be installed within the viewing point. These dedicated areas will provide a safer visitor experience, enhance the landscape immediately south of the Proposed Project, and encourage locals, tourists, trail runners etc. Along with this, and as detailed further in Section 2.2.1.12.1 below, a comprehensive set of traffic management measures, including signage and the presence of "Flagmen" will be put in place on the Gap Road during the construction phase of the Proposed Development. This is to ensure that whilst access to the East Clare Way is retained for pedestrians during the construction phase, it is done so in a safe manner.

The economic impact of the Proposed Project is detailed in Sections 5.7, 5.10.2.2, 5.10.2.8, 10.3.2 and 5.10.3.7 in Chapter 5 of the EIAR. With regards to property values, the conclusions from available international literature indicate that during the construction and operational phases of the Proposed Development, there is a potential for slight negative impact on property values. However, with the implementation of detailed mitigation measures pertaining to noise, shadow flicker, landscape and visual, traffic etc. the residual effects are imperceptible. To note, details are provided on the proposed community benefit scheme for the Proposed Development which would, under the current proposal, '*attract a community contribution in the region of approximately €240,000/year, assuming the current terms of the RESS, for the local community over the 15-year RESS term. The annual value of this fund will be determined by the installed capacity and the energy produced at the site and will support and facilitate projects and initiatives including youth, sport and community facilities, schools, educational and training initiatives, and wider amenity, heritage, and environmental projects.*'

With regard to the statement made in the Planner's Report '*While the EIAR considers the potential for devaluation of property, it does not attempt to analyze the impact of the proposed wind farm on the attractiveness of the receiving area as a place of residence*', it should be noted that the area in which the Proposed Wind Farm is located is not zoned for residential development nor as a 'rural area under strong urban influence' as defined in the CCDP. As identified in Section 4.2.2 'Compact Growth' of the CCDP, Clare County Council's urban and rural strategy relative to housing references its accordance with the National Strategic Outcome of Compact Growth, requiring 50% of all new housing in Limerick City suburbs (in Clare) and 30% of all new homes are to be provided within the existing built-up footprints of settlements across the rest of the County. The statement that the Proposed Development will impact the attractiveness of the area for new residential housing is unwarranted and is also at odds with the CCDP which categorises the area in which the Proposed Wind Farm is located as 'Countryside' in the Settlement Hierarchy. The nearest settlement to the Proposed Development is Kilbane, classified as a 'small village' under the settlement hierarchy. The general objectives for the village are to promote small-scale, compact, sequential development on land within the existing boundary of the village. The CCDP does not envisage residential development to any significant extent on the upland areas, east of Kilbane village, on which the Proposed Wind Farm is located.

22.1.3 Biodiversity

The Council raised the following points in relation to Biodiversity (excluding birds). The points relate to bats specifically and are identified below:

- **Linear Features:** None of the submitted documents provide a comparison of where bat species were recorded through the transect surveys, the hedgerows proposed for removal and the proposed replanting as outlined in the Biodiversity Management and Enhancement Plan. Linear features are critical to these species with a key requirement to retain connectivity across the landscape. A lesser horseshoe roost was identified in a derelict house approximately 710m west of T6. No other roosts were identified during the surveys carried out in 2022.While only 3-5 Lesser horseshoe bats were recorded emerging from this dwelling and noting the dilapidated nature of it, I would agree there is no potential for direct impacts given it is located outside the direct footprint of the proposed windfarm. However, there is a potential for in-direct impacts through the loss of linear foraging features as discussed above. This impact has not been addressed as part of the EIA.
- **Bat Curtailment Strategy:** The proposed Curtailment Strategy (Appendix 6-2) will reduce the potential for collision risk, but does not exclude the risk, particularly given the high local importance of the development site for various bat species, as noted in the results of the static survey.
- **Cumulative Effects on Bats:** Given the foraging range of bats can be several kilometres from roosts there is a high probability that bat species forage, commute or use roosting resting spots across multiples of these permitted and/or proposed windfarms within 10km of the current proposed application. There is no assessment of the crossover in foraging ranges or impacts associated with the construction of so many windfarms within this area.

Applicant's Response:

Linear Features:

The concerns expressed by the Planning Authority in relation to the potential loss of linear foraging features and the potential loss of connectivity to the wider landscape are comprehensively considered in EIAR Appendix 6-2 (Bat Report) and summarised in Section 6.5.2.2.3 of Chapter 6 of the EIAR Report.

More than 2km of linear features are being lost as part of the proposed development, prior to mitigation and enhancement measures are in place. This accounts for approximately 10% of treelines and hedgerows measured within the site, however considered in the wider context of the site, it is a limited percentage of available commuting and foraging habitat, which includes all existing woodland, scrub, rivers and forestry edges.

The hedgerows forming the agricultural field boundaries within the site proposed for removal to allow for the proposed road widening works were assessed as having Low suitability for commuting and foraging bats during the bat habitat appraisal (Section 4.3 of Appendix 6-2). Most of these hedgerows consist of low, gappy features and are located in relatively exposed areas. The transect surveys carried out, which focused on potential areas to be lost, including the main track to proposed T1 and T2 which accounts for the majority of lost features, confirmed this initial assessment, with limited activity recorded during transect surveys (Section 4.4.2 of Appendix 6-2 of the EIAR). The rest of the lost features consist of sections on the existing regional road. The loss of these features is not anticipated to fragment connectivity across the site and beyond it. The assessment concluded that given the extensive area of habitat that will remain undisturbed throughout the site, the avoidance of the most significant areas of faunal habitat (i.e. natural hedgerows, treelines and scrub), and the limited quality and spread of the features lost, no significant effects on bat species (including lesser horseshoe bats) have been identified.

More suitable habitats such as the scrub along the Kilbane Stream and the treeline lining the north-western boundary of the site will be retained by design. Another suitable area located by static detector

D07 and surveyed during transects was flagged as having high bat activity and was subsequently dropped at design stage (Section 4.4.2 of Appendix 6-2). The treeline nearest to proposed turbine T1, to the west of the site, recorded relatively high levels of foraging and commuting activity during the surveys carried out in Summer and Autumn 2023 (Sections 4.4.1 and 4.4.2 of Appendix 6-2). The scrub in proximity of the Kilbane Stream was not surveyed during transects due to limited accessibility, however it is considered one of the most suitable features present on site due to its north-south connectivity and the foraging potential of the scrub and riverine habitats. As such, enhancement efforts have concentrated in this area, as detailed in the Biodiversity Management and Enhancement Plan (EIAR Appendix 6-4).

The proposed site includes a large network of Low suitability hedgerows and Moderate suitability forestry edges which will remain in place to maintain habitat connectivity to the wider landscape. In addition, the Biodiversity Management and Enhancement Plan submitted with the planning application is proposing to bolster suitable hedgerows to improve their quality and significance to bats, adding approx. 2,673m of planting comprising native broadleaved trees, shrubs and hedgerow habitat within the Proposed Wind Farm site. This habitat creation will provide an establishment of approx. 890m of new native broadleaved treelines, approx. 1,240m of new native hedgerow and enhancement of approx. 550m of treelines and 530m of hedgerows via supplementary planting. Additionally, broadleaved tree planting will be undertaken along the Kilbane Stream to produce a linear woodland of approx. 1.4 ha to enhance the watercourse for the local fauna, including bats.

Bat Curtailment Strategy:

Four species considered at high-risk of collision were recorded on the Proposed Lackareagh Wind Farm site (Leisler's bat, common pipistrelle, soprano pipistrelle and Nathusius' pipistrelle). A bat mitigation and monitoring plan is presented in Section 6.2 of the Bat Report (EIAR Appendix 6-2). The plan includes for curtailment to be undertaken at two turbines (Table 6-1 of the Bat Report) on a precautionary basis given that High activity levels of one or more high risk species were recorded at these locations during the surveys undertaken to inform the EIAR.

The curtailment strategy is proposed alongside a suite of additional mitigation measures to be implemented within the site for the protection of bats species. These include avoidance of the areas of most suitable bat habitat within the site by appropriate design, lighting restrictions (Appendix 6-2, Section 6.1.2), buffering (Appendix 6-2, 6.1.3), blade feathering (Appendix 6-2, 6.1.4) and habitat replanting (Appendix 6-2, 6.1.5) in line with NatureScot (2021) guidelines.

Finally, an adaptive monitoring plan, also designed in line with NatureScot (2021), is proposed for the site to ensure that the above mitigation measures are effective at limiting potential impacts on bats, greatly reducing the risk of collision and other impacts. Post construction monitoring will be utilised to assesses the effectiveness of the proposed curtailment strategy and identify whether any additional mitigation measures or changes to the strategy are required. The curtailment strategy needs to be considered in this wider context.

The impact assessment in Section 6.5 of the EIAR concluded that no significant effect, at any geographic level, on bats is anticipated following the implementation of the mitigation measures prescribed including the adaptive monitoring and mitigation strategy plan which will be updated if required based on site specific data collected during the operational monitoring of the development.

Cumulative Effects on Bats:

It is likely that the foraging ranges of bats recorded within the proposed Lackareagh Wind Farm site overlap with nearby wind farms.

Following the detailed bat surveys undertaken and impact assessment provided in Sections 6.5.2.2.3 and 6.5.3.2.1 of the EIAR, taking into account the mitigation measures prescribed in Section 6 of EIAR Appendix 6-2, it is concluded that there will be no significant residual impacts on bats associated with

the Proposed Project and therefore the Project cannot contribute to any significant cumulative effect when considered in-combination with other plans and projects.

The residual construction, operational and decommissioning impacts of the Proposed Project are considered cumulatively with other plans and projects as described in Sections 6.6.1, and 6.6.2 of the EIAR submitted with the planning application for the Proposed Project. Particular focus has been placed on those plans and projects that are in closest proximity to the Proposed Project and those that could potentially result in cumulative impacts on designated sites, surface water, protected habitats and protected species. A detailed cumulative impact assessment, specific to the potential for impacts on bats, is provided in Appendix 6-2 of the EIAR. The reported residual impacts from other plans and projects in the area were considered and the potential impacts as a result of the current proposal were taken into consideration. The wind-farm projects in proximity to the proposed Wind Farm are small to medium in scale and have reported minimal residual effects on bats following the implementation of mitigations. Therefore, no significant residual cumulative impacts have been identified regarding bats.

2.2.1.4 Birds

The concerns expressed by the Planning Authority in relation to Birds are comprehensively considered as part of Reason Refusal Reason 3, in Section 4.4 below.

2.2.1.5 Land, Soils &Geology

The Planning Authority's assessment of Chapter 8 'Land, Soils & Geology' expresses the concerns below in relation to this chapter.

- The Peat and Spoil Management Plan (Appendix 4-2) indicates that runoff from the borrow pit will be managed by pumping to settlement ponds as required. The location of the proposed settlement pond is not identified, and no design specification has been provided. Having regard to the local topography and geology, it is difficult to see how or where a settlement pond could be located. This is particularly important after the initial emplacement given the change from rock to peat and spoil in such high quantities and given the location which is restricted by the presence of the gap road. This is a considerable risk in the context of major accidents and emergencies should a type of "bog burst" occur after a period of excessive rainfall for example. In these quantities it could cause irreparable damage to the water quality downstream.

Applicant's Response:

Detailed drainage design drawings were submitted as part of the application for the Proposed Development, which include for drainage design for the borrow pit, including siting of settlement ponds, and design detail on settlement ponds. These are included as Appendix 4-8 of the EIAR and as part of the Planning Application Drawings Pack.

2.2.1.6 Water

The concerns expressed by the Planning Authority in relation to Water are comprehensively considered as part of Reason Refusal Reason 2, in Section 4.3 below.

2.2.1.7 Air Quality

Chapter 10 'Air Quality' presents the potential impact of the Proposed Development on air quality. The Chapter was reviewed by the Council's Environment Section who expressed no concerns with the contents of the assessment and did not request any further amendments.

2.2.1.8 Climate

Chapter 11 'Climate' presents the potential impact of the Proposed Development on climate. The Chapter was reviewed by the Council's Environment Section who identifies the assessment of Climate issues in the EIAR as generally acceptable. The Planning Authority's assessment of Chapter 11 'Climate' expresses the concerns below in relation to this chapter.

- It is noted that the use and potential impacts of SF6 Insulation Gas in the turbine and potential impacts of any leakage of same, has not been referenced or considered in the submitted documents.
- In the decommissioning phase, the applicants intend to leave in-situ of the turbine foundations. An assessment of the carbon footprint and embodied carbon should have been undertaken.

Applicant's Response:

The assessment of the release of hydrocarbons has been adequately addressed in the EIAR, with particular reference to Chapter 6: Biodiversity, Chapter 8: Land, Soils & Geology and Chapter 9: Water. The calculation of the turbine life cycle emissions is considered as part of the MacCauley Institute carbon calculator, the results of which are presented in Appendix 11-1 of the EIAR: Carbon Calculations.

As identified in Section 11.5.2 in Chapter 11 of the EIAR: Climate, *'...where possible, carbon emissions or losses associated with embodied carbon of materials used in the construction, operational and decommissioning phase of the Proposed Project have been identified... The full life cycle and embodied carbon of the Proposed Wind Farm turbines have been taken account of in the Macauley Institute model. The emissions associated with the embodied carbon, along with the construction phase transport movements, of the remaining features of the site are considered using the Transport Infrastructure Ireland (TII) Carbon Tool (TII 2022)'.* The embodied carbon of reinforced concrete turbine foundations has been quantified using the TII Carbon tool, and are presented in Appendix 11-1 of the EIAR.

As identified in Chapter 11 and quantified as part of the Proposed Development's embodied carbon emissions, the proposed turbine foundations will be primarily comprised of reinforced concrete. With respect to the decommissioning phase assessment, the Decommissioning Plan included as Appendix 4-7 of the EIAR, has been prepared in line with the Scottish Natural Heritage (SNH, now known as NatureScot) 2013 commissioned report '*Research and guidance on restoration and decommissioning of onshore wind farms'* (hereafter referred to as the 2013 SNH Guidance). The 2013 SNH Guidance identifies how "*Reinforced concrete can under normal circumstances remain in situ as a relatively inert material*". From a carbon perspective, the existing turbine foundations are a relatively inert material, and so, the embodied carbon associated with the turbine foundations have been comprehensively quantified as part of the Proposed Development carbon calculations.

2.2.1.9 Noise and Vibration

The Planning Authority, in their assessment of the Chapter 12 'Noise and Vibration', were not satisfied that the noise-related impacts of the construction or operational phase or the development have adequately assessed or mitigated and have concerns on the construction phase noise impacts on residential amenity. The Planning Authority concurred with the National Environmental Health Service (NEHS) submission that further assessment would be required.

The concerns raised by the NEHS and the Planning Authority can be summarised in the following points:

- The suitability of the WED2006 guidelines in setting appropriate noise limits for cumulative wind turbine noise, as opposed to those found in BS 4142:2014+A1:2019 [2] or the WHO's 2018 Environmental Noise Guidelines for the European Region[3].
- Issues with the methodology and presentation of the construction noise assessment, with the implicit implication that assessing against BS 5228:2009+A1:2014[4] was not appropriate due to the adoption of a daytime noise threshold of 65 dB(A) $L_{Aeq, T}$.
- Issue with the fact that detailed vibration predictions for the construction and operational phase of the Proposed Development were not presented.
- Concerns over the enforceability of noise conditions in respect to Other Amplitude Modulation (OAM), including the provision of a community liaison officer, should instances of noise complaints arise.

Applicant's Response:

This response was prepared by TNEI Services Limited (TNEI) whom, together with MKO, prepared Chapter 12 – Noise & Vibration, of the EIAR. The EIAR chapter is supported by three Technical Appendices (which are referred to collectively as 'the noise assessment'):

- Appendix 12-1: Construction Noise Report;
- Appendix 12-2: Wind Turbine Operational Noise Report; and,
- Appendix 12-3: BESS Operational Noise Report.

The following response has been prepared by Alex Dell and Jim Singleton, both of TNEI, an energy consultancy specialising in the planning and development of energy generation and energy infrastructure projects. Alex Dell is a Senior Consultant at TNEI, an Associate Member of the Institute of Acoustics and holds a PhD in Mechanical Engineering with three years of experience undertaking wind farm and industrial noise assessments. Jim Singleton, Specialist Consultant at TNEI, holds the Diploma in Acoustics and Noise Control and is a full Member of the Institute of Acoustics with over 17 years of experience in undertaking a wide variety of noise assessments.

22.19.2 Windturbine noise limits and assessment methodology

For clarity and for the purposes of comparison, the following paragraphs comprehensively describe the methodology for the operational noise assessment for the Proposed Development, and a detailed description of the BS 4142:2014+A1:2019 and WHO's 2018 Environmental Noise Guidelines for the European Region.

Operational Noise Assessment for the Proposed Development

As part of the response from the NEHS and the Planning Authority, concerns over the suitability of using the WEDG2006 guidance to conduct the operational wind turbine noise assessment were raised. The operational noise assessment (presented in EIAR Appendix 12-2) considered cumulative wind turbine noise impacts in detail. The assessment presented the results of a background noise survey and set out suitable noise limits that need to be met by the combined operation of all wind turbines in the area (referred to hereafter as 'the Total WEDG Noise Limits'). The assessment concluded that, subject to the adoption of suitable mitigation measures[5], predicted cumulative noise levels would comply with the proposed noise limits that were set in accordance with the relevant guidance ('*Wind Energy Development Guidelines, 2006* '(WEDG 2006, also referred as DoEHLG 2006)).

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[2] *British Standards Institute, Methods for Rating and Assessing Industrial and Commercial Sound, UK: BSI, 2014.*
[3] *WHO, "Environmental noise guidelines for the European Region," 2018.*
[4] *British Standards Institute, Code of practice for noise and vibration control on construction and open sites. Noise, UK: BSI, 2014.*
[5] *This involves operating turbines in low noise modes, i.e. restricting the rotor speed with a corresponding reduction in noise emissions and electrical power generation.*

As set out in Appendix 12-2, the WEDG 2006 are the current guidelines for setting noise limits for wind energy developments. The information relating to noise in the WEDG 2006 is limited, though it is widely agreed that the limits proposed in the WEDG 2006 were drafted to broadly align with the UK guidance ETSU-R-97 '*The Assessment and Rating of Noise from Wind Farms*'[6]. In 2013, the UK guidance was supplemented by a document produced by the Institute of Acoustics '*A good practice guide to the application of ETSU-R-97 for the assessment and rating of wind turbine noise*'[7] (IOA GPG). Throughout the operational noise assessment, reference was made to guidance contained in both ETSU-R-97 and the IOA GPG, to supplement the WEDG 2006.

The use of the WEDG 2006 to set noise limits and assess proposed wind energy developments is consistent with the approach adopted in recent appeals including the Fahy Beg Wind Farm (ABP 317227 23), which was granted permission in a Board Direction dated 20-02-2024, and Strategic Infrastructure Development (SID) applications including the Sheskin Wind Farm (ABP 316025 23), which was granted permission in a Board Direction dated 06-03-2024, and Borrisbeg Wind Farm (318704-23) which was granted permission in a Board Direction dated 05-09-2024. It is noted that Fahy Beg Wind Farm also resides within Clare County and is situated to the south of the Proposed Project.

Within the operational noise assessment, the Total WEDG Noise Limits are set 5 dB above the existing background noise levels but are subject to fixed minimum limits when background noise levels are low. The concept of fixed minimum limits is discussed in ETSU-R-97, which states on page 60, that: *'Applying the margin above background approach to some of the very quiet areas in the UK would imply setting noise limits down to say 25-30dB(A) based upon background levels perhaps as low as 20-25dB(A). Limits of this level would prove very restrictive on the development of wind energy. As demonstrated below, it is not necessary to restrict wind turbine noise below certain lower fixed limits in order to provide a reasonable degree of protection to the amenity.'*

ETSU-R-97 then goes on to consider what fixed minimum limits might be appropriate for the night time period and concludes: *'The Noise Working Group recommends that an appropriate fixed limit for the night-time is 43dB(A).'* The approach set out in ETSU-R-97 to setting night-time fixed minimum limits was also adopted in the WEDG 2006, which states:

'Separate noise limits should apply for day-time and for nighttime. During the night the protection of external amenity becomes less important and the emphasis should be on preventing sleep disturbance. A fixed limit of 43dB(A) will protect sleep inside properties during the night.'

Neither the WEDG 2006 nor ETSU-R-97 include a maximum allowable difference between background noise and predicted turbine noise and instead rely on the use of fixed minimum limits when background noise levels are low. Accordingly, the appropriate test to be applied when considering operational noise from the Proposed Development is whether noise meets the proposed noise limits, which incorporate the appropriate fixed minimum limits.

Impact assessment using WHO Noise Guidelines for the European Region, 2018

The NEHS state that they consider it appropriate for the Planning Authority to use the existing noise data to carry out an assessment against the WHO 2018 Guidance noise criteria. The WHO Guidelines provide a useful overview of the information available (at the time the document was authored) relating to health effects of noise from wind turbines, however, the Guidelines make recommendations in relation to each of the noise sources considered (road, rail, aircraft, wind turbines and leisure noise) and each recommendation is rated as either 'strong' or 'conditional,' which are defined as follows:

[6] *ETSU for the DTI (Department of Trade and Industry, "The Working Group on Noise from Wind Turbines ETSU-R-97 The Assessment and Rating of Noise from Wind Farms'," 1996.*
[7] *Institute of Acoustics, "Good Practice Guidance on the application of ETSU-R-97 for wind turbine noise assessment," 2013.*

"A strong recommendation can be adopted as policy in most situations. The guideline is based on the confidence that the desirable effects of adherence to the recommendation outweigh the undesirable consequences. The quality of evidence for a net benefit – combined with information about the values, preferences and resources – inform this recommendation, which should be implemented in most circumstances. A conditional recommendation requires a policy-making process with substantial debate and involvement of various stakeholders. There is less certainty of its efficacy owing to lower quality of evidence of a net benefit, opposing values and preferences of individuals and populations affected or the high resource implications of the recommendation, meaning there may be circumstances or settings in which it will not apply."

The strength of recommendation was determined following a two-step procedure. Initially the strength of the recommendation was set as strong or conditional based on a qualitative assessment of the quality of the evidence, this was then either adopted or confirmed having due consideration to contextual parameters that might have a contributory role. There were seven additional contextual parameters, which were assessed qualitatively. The Guidelines provided three strong recommendations for each of the transportation noise sources (road traffic, railway and aircraft), one strong and two conditional recommendations for leisure noise and two conditional recommendations for wind turbine noise. Accordingly, the recommendations for Wind Turbine Noise should not be given the same weight as other recommendations detailed within the document.

The recommendations included for wind turbine noise (presented on page xvii of the Guidelines) are reproduced here as Table 2-1. It should be noted that the metrics used for quantifying noise levels throughout the Guidelines are L_{den} and L_{night}, which are different from those used in WDG 2006 and ETSU-R-97.

Table 2-1 WHO Environmental Noise Guideline Recommendations for Wind Turbine Noise

Recommendation	Strength
For average noise exposure, the GDG conditionally recommends reducing noise levels produced by wind turbines below 45 dBLden, as wind turbine noise above this level is associated with adverse health effects.	Conditional
No recommendation is made for average night noise exposure Lnight of wind turbines. The quality of evidence of night-time exposure to wind turbine noise is too low to allow a recommendation.	n/a
To reduce health effects, the GDG conditionally recommends that policymakers implement suitable measures to reduce noise exposure from wind turbines in the population exposed to levels above the guideline values for average noise exposure. No evidence is available, however, to facilitate the recommendation of one particular type of intervention over another.	Conditional

The Lden metric is an annual (day-evening-night) weighted sound pressure level. The metric, which considers annual exposure to noise, effectively gives additional weight to noise occurring during the evening and further weight to noise occurring at night. The Lden metric is commonly used for assessment of transportation noise and in strategic mapping exercises but there is no guidance in Ireland (or indeed in the Guidelines) to outline how a wind farm noise Lden could be predicted or measured. There are very considerable practical difficulties involved with the use of Lden for wind farm noise and accordingly, it is very rarely used for wind turbine noise assessment.

When considering the recommendations in the Guidelines it is important to consider them in the context of the entire document and there are a number of important points which are set out here.

The recommendations in the Guidelines are based on a 10% absolute risk of High Annoyance in the population. Table 36 of the Guidelines details that this is based on a review of four studies. Table 37 identified that six studies were available that considered sleep disturbance, but they did not reveal consistent results about the effects of wind turbine noise on sleep. Consequently, the Guidelines do not make a recommendation to Lnight. No other studies were identified in the Guidelines that were sufficient to allow for the consideration of any other health effects.

The recommendations are 'conditional,' and such recommendations: "*requires a policy-making process with substantial debate and involvement of various stakeholders*"

Table 42 of the Guidelines, "*provides a comprehensive summary of the different dimensions for the assessment of the strength of the wind turbine recommendations.*" Within the table it states: "*Evidence for a relevant absolute risk of annoyance at 45 dB Lden was rated low quality. No statistically significant evidence was available for sleep disturbance related to exposure from wind turbine noise at night.*"

Table 42 also sets out additional context in relation to the balance of benefits versus harms and burdens, stating: "*Further work is required to assess fully the benefits and harms of exposure to environmental noise from wind turbines and to clarify whether the potential benefits associated with reducing exposure to environmental noise for individuals living in the vicinity of wind turbines outweigh the impact on the development of renewable energy policies in the WHO European Region.*"

As noted previously, the Lden metric is not currently used in Ireland for the prediction, measurement or assessment of wind turbine noise and this is also highlighted in Table 42 of the Guidelines, which states (in relation to additional considerations or uncertainties) that: "*There are serious issues with noise exposure assessment related to wind turbines.*" This is consistent with earlier text in the Guidelines (on page 84), which notes that: "Based *on all these factors, it may be concluded that the acoustical description of wind turbine noise by means of Lden or Lnight may be a poor characterization of wind turbine noise and may limit the ability to observe associations between wind turbine noise and health outcomes.*"

Whilst the Guidelines provide a useful overview of the information available relating to health effects at the time of the WHO review, the recommendations need to considered in the context of the entire document and the Guidelines note that the quality of evidence upon which the recommendations are based is low quality. This is reflected in the fact that the recommendation is conditional, and the Guidelines note that the recommendation should be subject to a policy-making process with substantial debate and involvement of various stakeholders.

In relation to wind turbine noise assessment, no formal changes have been made to the WEDG 2006. Similarly, the UK continues to rely on ETSU-R-97 and the IOA GPG as an appropriate method of assessment.

It is also noted that the Institute of Acoustics has not made any changes to the good practice guidance set out in the IOA GPG to incorporate the 2018 WHO guidelines.

It should be noted that the operational noise assessment did consider the draft update to the WEDG (in Section 2.6 of Technical Appendix 12-2), as published for consultation in 2019, and the references in that document to World Health Organisation guidance published in 2018 in respect of wind turbine noise. The operational noise assessment concluded that it was appropriate for the assessment to continue to follow the guidance contained within WEDG 2006, supplemented by ETSU-R-97 and the IOA GPG.

With due regard to the above, assessment of operational wind turbine noise against the levels presented in the 2018 WHO Guidelines is not considered to be appropriate or necessary.

Impact assessment using BS 4142:2014+A1:2019

The NEHS define a significance of impact based on assessment guidance presented in BS 4142:2014, which is a standard that is routinely used to assess the impact of industrial and commercial noise on residential receptors.

The BS 4142 method of assessment is split out into two stages, with the first part being a quantitative assessment that compares a Rating Level against a background sound level. This provides an initial indication of the likelihood of adverse impacts, which is then taken into a second stage, qualitative assessment. The NEHS response considers the first stage only and does not complete the assessment process.

Regardless, BS 4142 is not an appropriate assessment method for evaluating wind turbine noise, and a number of pages are given over to this within ETSU-R-97, under the heading; *'Problems with interpretation and the literal application of BS 4142'.*

It is acknowledged that the ETSU document refers to an older version of BS 4142 than the version currently in use, however, with reference to the most recent release, BS 4142:2014+A1:2019, the following should be noted;

- The Standard is intended for the assessment of noise at low wind speeds, whereas turbine noise increases proportionately with wind speed ,and it is at wind speeds above the range of those considered in BS 4142 that a wind farm noise assessment should be conducted at.
- There is no method to set noise level limits in BS 4142, the standard simply provides a mechanism to determine whether there may be an adverse noise impact from noise generating developments that fit within the scope of the standard; and,
- BS 4142 itself states at 1.3; "The standard is not intended to be applied to the rating and assessment of sound from: a, b, c, ... h) other sources falling within the scopes of other standards and guidance." In this case, wind turbines fall 'within the scope of other standards and guidance', namely ETSU-R-97 The Assessment and Rating of Noise from Wind Farms.

To conclude, the NEHS have misinterpreted the guidance presented in BS 4142. Furthermore, it is not appropriate to use BS 4142 to determine the significance of impacts from wind turbine noise.

Summary

TNEI confirm the suitability of the operational wind turbine noise methodology utilised for the assessment of the Proposed Development. As identified above, the WEDG 2006 guidelines when supplemented by ETSU-R-97 and the IOA GPG are considered appropriate and have identified the reasons why alternative assessment criteria, such as that presented in BS 4142 or by the WHO, are considered inappropriate.

22.1.9.3 Construction noise limits and assessment methodology

The Planning Authority indicate concerns with the methodology and presentation of the construction noise assessment, with the implicit implication that assessing against noise thresholds presented within BS 5228 was not suitable.

The construction noise assessment has been undertaken in accordance with BS 5228:2009+A1:2014. There is no published statutory Irish guidance that contains suggested noise limits for construction activities, other than a 2014 document published by the National Roads Authority (NRA), which relates to noise from road developments only. The Association of Acoustic Consultants of Ireland, however, have published Environmental Noise Guidance for Local Authority Planning & Enforcement

Departments[8], which states; "*The chief guidance document applied in the assessment of construction phase noise impacts is British Standard BS 5228:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites Part 1: Noise (2014).*" BS 5228 is therefore widely considered to be the most appropriate guidance to be using for assessing construction noise impacts.

To consider the variation in noise levels that would occur throughout the construction period, the assessed construction scenarios (through which the noise impacts of individual and concurrent construction activities are assessed) were informed by the construction activities and plant requirements presented in Chapter 4 of the EIAR.

A summary of the modelled construction scenarios was presented within Table 5.1 of Appendix 12-1, with a detailed description presented in Annex 2 of the same Appendix. For all modelled construction scenarios Annex 2 presents the location of, number of, type, and sound power level of all assessed plant and activities. Rock breaking within the borrow pit has been assessed as part of the construction noise assessment and Annex 2 clearly indicates the inclusion of an Excavator mounted rock breaker and a tracked semi-mobile crusher, alongside other construction plant. Rock breaking at the turbine hardstands has not been assessed as no explicit requirement for this is identified. Rather, rock breaking would be undertaken at the borrow pit location, as assessed in Scenarios 02 to 04.

Annex E, part E.3.2 of BS 5228 provides example criteria for assessing the significance of construction noise effects. The BS 5228 Category A thresholds, which are presented in Table 4.1 of Appendix 12-1, have been selected as they are the most stringent of the available categories.

The Category A daytime threshold is 65 dB(A) LAeq,T, where T indicates a time interval of 12 hours for weekdays and 6 hours for Saturdays. The noise immission predictions presented within Table 5.2 are worst case predictions assuming that all plant is operating at 100% for the full time period. In actuality, the predicted noise immission levels would be lower when considering the intermittency of operation of the plant across the full time interval.

The Planning Authority compares the predicted construction noise levels, which are LAeq values, with background noise levels, which are LA90 values. This is not appropriate comparison and the BS 5228 assessment method (and the method by with the threshold levels are defined) considers the existing ambient sound levels in the area, not the background sound levels.

2.2.1.9.4 Vibration Assessment

The Planning Authority raised concerns over the lack of a vibration assessment. Vibration associated with the operation of the Proposed Development was discussed in Section 12.6.2 of Chapter 12 of the EIAR, identifies '*Due to the separation distances between the construction activity areas on the Proposed Wind Farm site and the nearest receptors, no significant effects are anticipated. Where construction activities on the Proposed Grid Connection Route are close to residential receptors, some local vibration effects may be present, however, levels are expected to be low and of limited duration. Also, similarly to construction noise, good practice during construction will be implemented and will reduce vibration levels from these short-term works to minimum levels. Accordingly, the impact is deemed not significant for construction vibration.*'

With regards to vibration associated with the construction phase, BS 5228-2 notes that the various formulae that have been developed empirically and presented in BS 5228 to predict vibration levels at a receiving point do not take into account variability of ground strata, the source/ soil interaction process, coupling between the ground and the foundations, etc. Predictions can, therefore, only provide a first assessment of whether or not vibrations emanating from a site are likely to constitute a problem once the influence of these factors have been assessed. However, vibration levels from typical construction

[8] *Association of Acoustic Consultants of Ireland, "Environmental Noise Guidance for Local Authority Planning & Enforcement Departments," AACI, 2021*

activities would only ever be noticeable if the activity was occurring very close to a property e.g. within a few meters. Therefore, a detailed vibration assessment was deemed unnecessary.

22.1.95 Complaints due to Other Amplitude Modulation (OAM)

The Planning Authority raised concerns over the enforceability of OAM noise conditions, and the effectiveness of the proposed community liaison officer for the event of a noise complaint. As discussed in Section 3.3 of Appendix 12-2, there is no method available to predict OAM and as a result it is not possible to predict what impact the inclusion of an AM condition would have on the operation of the wind farm.

The recommendation to impose a planning condition and the associated penalty scheme is at odds with the advice from the IOA GPG, which currently states (paragraph 7.2.10):

"The evidence in relation to "Excess" or "Other" Amplitude Modulation (AM) is still developing. At the time of writing, current practice is not to assign a planning condition to deal with AM."

OAM can be mitigated, however, mitigation requirements for OAM is always site specific and cannot be pre-empted.

The recent decision of the Irish High Court on the 8th March 2024[9] found, in a nuisance action against an operational wind farm, that frequent and sustained periods of OAM arising from the operational Ballyduff Wind Farm was an unreasonable interference with a neighbour's use and enjoyment of their property. The court directed all parties to engage in mediation with a view to devising *'appropriate mitigation measures and if possible, to resolve all outstanding issues between them'*. This is a demonstration of how nuisance can be used to control persistent and sustained OAM without the requirement for a planning condition.

In his recent judgment in *Nagle View Turbine Aware Group v. An Bord Pleanála*[10], Mr Justice Humphreys endorsed the Board's treatment of OAM and its decision that it was not appropriate to impose a condition addressing OAM given there is currently no method available to predict OAM and consequently no objective basis to impose a condition:

> *...if... the operation of the project may or may not involve a civil wrong, and if the answer to that is not at all clear on the material and would involve a detailed consideration of the technicalities of tort law, or a fortiori would involve an examination of what the impacts eventually turn out to be, then the board can't be expected to make civil law adjudications or engage in forensic clairvoyance. It can only make an assessment of the acceptability of the likely impacts, but if the actual impacts turn out to be actionable, then that is a matter for separate proceedings. This case is an instance of the latter situation and if it turns out ultimately that there is some actionable nuisance that is a matter for the civil courts and not something that the board erred in not predicting.*[11] (emphasis added)

Notwithstanding a lack of a defined threshold detailing what level of OAM is acceptable, there are measures available which have been shown to mitigate OAM should it occur. These measures are detailed in Section 12.7.2 of the EIAR '*If frequent and sustained OAM is found, then appropriate mitigation would be designed and implemented and the complainant informed by the community liaison officer. Mitigation measures considered would include: changes to the operation of the relevant wind turbine(s) by changing software parameters such as blade pitch for specific wind conditions and time periods, addition of blade furniture (such as vortex generators) to alter the flow of air over the wind turbine blades; and, in extreme cases, targeted wind turbine shutdowns in specific conditions.*

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[9] *Webster and Rollo v. Meenacloghspar (Wind) Limited* [2024] IEHC 136
[10] [2024] IEHC 603
[11] *ibid.* at para. 101

Where mitigation is required, it needs to be designed on a site-specific basis, therefore, the employment of a community liaison officer is proposed such that the design and deployment of mitigation measures, where appropriate, can be expedited for instances of noise complaints. If a neighbour ultimately considers that the mitigation measures are inadequate, it is not without a remedy with the appropriate forum for addressing same this being court proceedings[12].

Conclusions

Although not a reason for refusal, the Planning Authority and NEHS have raised some specific concerns regarding noise and vibration impacts. These concerns have been addressed by TNEI and are as follows;

- Confirmation of the suitability of the WEDG 2006 guidelines when supplemented by ETSU-R-97 and the IOA GPG and reasons why alternative assessment criteria, such as that presented in BS 4142 or by the WHO are inappropriate:
- Confirmation of the suitability of using BS 5228 and the noise thresholds contained within, with specific reference to documentation produced by The Association of Acoustic Consultants of Ireland.
- Confirmation of consideration the potential for vibration effects during construction, and detail on why the inclusion of detailed vibration predictions were not necessary; and,
- Further detail on OAM, specifically in regards to why it cannot be conditioned (in terms of applying penalties or assessment criteria) and a justification for the use of a Community Liaison Officer as a method by which OAM can be controlled, where necessary.

2.2.1.10 Landscape & Visual

The concerns expressed by the Planning Authority in relation to Landscape & Visual are comprehensively considered as part of Reason Refusal Reason 1, in Section 4.2 below.

2.2.1.11 Cultural Heritage

Chapter 14 'Cultural Heritage' presents the potential impact of the Proposed Development on Archaeology, Architectural and Cultural Heritage. The Chapter was reviewed by the Council's Environment Section who expressed no concerns with the contents of the assessment and did not request any further amendments. The Planning Authority has also noted the submission received from the Development Applications Units of the Department of Housing, Local Government and Heritage which concurs with the findings set out in the EIAR and recommends that conditions in relation to archaeological test excavation and archaeological monitoring be included in any grant of permission that may issue.

2.2.1.12 Material Assets

The Planning Authority's assessment of Chapter 15 'Material Assets' expresses the concerns below in relation to Traffic & Transport. The Telecommunications and Aviation, and Other Material Assets sections of this Chapter were reviewed by the Council's Environment Section who expressed no concerns with the contents of the assessment and did not request any further amendments.

2.2.1.12.1 *Traffic and Transport*

The Planning Authority's assessment of Chapter 15 'Material Assets' expresses the concerns below in relation to Traffic & Transport assessment:

[12] *ibid.* at para. 101

- **Deliveries of Stone and Ready -Mix Concrete from Quarries:** The Planning Authority raises concerns over the uncertainty in relation to the route that will be used to transport stone to the site, and that the movement of large volumes of HGVs through Broadford village has not been assessed. The Planning Authority considers the concrete requirements for turbine foundations underestimated, and simultaneously that the traffic movements associated with concrete pouring appear '*intense*'.
- **Road Safety:** The Planning Authority raises concerns for pedestrian and cycling safety during the construction phase of the development, and does consider this adequately addressed in the submitted reports.
- **Cumulative Effects on Traffic:** The Planning Authority does not consider the cumulative construction phase effects on road users has not been adequately addressed. The Planning Authority identifies that '*there are a significant number of windfarm developments proposed or at the planning stage in this area and the co-ordination of traffic movements for deliveries, de-forestation, roadworks and junction improvements (and potential duplication of same) is a serious concern for the Planning Authority.* Similarly, the Planning Authority states that timing of work needs to take account of ecological constraints and agricultural activities which form the backbone of the local economy.
- **Pre-Commencement Road Improvement Works:** The Planning Authority notes the report received from the Area Engineer, Killaloe MD in relation to road upgrade works and junction improvements in the vicinity of the development site that must be completed before any development (including tree felling) can commence.
- **Traffic Management Plan:** The Planning Authority states that the Traffic Management Plan set out in Appendix 15-2 does not add any significant additional information to the main EIAR assessment.

Applicants Response

Deliveries of Stone and Ready -Mix Concrete from Quarries

As identified in Section 4.5.2 in Chapter 4 of the EIAR: Description of Proposed Project, all stone material needed to construct the Proposed Development will be sourced onsite, as the proposed onsite borrow pit and the cut exercise have capacity to supply all of the project's stone and hardcore requirement. Under a precautionary scenario, subject to the borrow pit being developed, minor quantities of specific stone or hardcore types may be required to be transported to the site, in order to facilitate the construction of the Proposed Development. It is identified that these materials, along with ready-mix concrete, will be sourced from nearby appropriately licenced quarries as appropriate.

For the purposes of assessment within the EIAR, an existing, authorised quarry Stone Direct[13], located approximately 5km to the west of the Proposed Wind Farm site was identified and the proposed route for HGVs originates near Broadford, Co. Clare. However, in the case of the traffic and transport assessment, it is emphasised that the assessment of traffic generation on link flows during the delivery of the stone and general materials presented is a precautionary approach for assessment purposes, in that it assumes all deliveries come from one of 2 no. directions , that is via either the TDR, or in the case of general construction materials and concrete, via the R466 from the west in the direction of Broadford. The assessment is therefore based on a precautionary scenario, where all traffic generated by the Proposed Development travels to/from the Proposed Wind Farm site on the same route with the maximum increase in traffic volumes assessed on each link.

As identified in Section 15.1.4.2, for the purpose of the traffic impact assessment, projections based on trip generation data collected from other wind farm construction projects regarding the numbers of trips per quantum of material, the number of turbine component parts based on 7 turbines, the length of the

[13] *Stonedirect.ie are located in Ardskeagh, Broadford Co. Clare. Company registration number is identified as 704518 as per their website* https://stonedirect.ie/about-us/

construction phase and work periods etc. were made to inform the assessment. In regard to the query raised by the Planning Authority on the low values identified for concrete pouring for turbine foundations (80 concrete loads in total), it is identified in the assessment that that a total of 7 days will be used to pour the 7 concrete wind turbine foundations. Foundations will likely be poured one per day, with circa 80 concrete loads required for each turbine delivered to the Proposed Wind Farm site over a 12-hour period, resulting in 7 HGV trips to and from the Proposed Wind Farm site per hour. The Planning Authority has misinterpreted the information provided.

Furthermore, with regard to the statement made by the Planning Authority that the traffic movements associated with concrete pouring '*seem intense*', as identified in Section 15.1.12.2.1, during the 7 days when the concrete foundations are poured, the effect on the surrounding road network will have a temporary negative effect on the delivery route with the impact forecast to be slight.

Based on the above and the information presented in Chapter 15.1 of the EIAR it is considered that a comprehensive assessment of the construction phase traffic impacts for the Proposed Development is presented in the EIAR.

Road Safety

As identified in Section 15.1.10, a Stage 1 Road Safety Audit was undertaken by Traffic Road Safety Engineering Consultants Ltd, and is included in Appendix 15-4 of the EIAR. Road safety relative to users of the East Clare Way walking trail have been adequately addressed in the EIAR as identified below:

Problem 2.1 – Turbine delivery route traversing walking trail, turbine delivery route along local road L-7080 – The Audit Team state: 'The turbine delivery route follows the (narrow) L7080 which coincides with a posted walking trail. This could increase the risk of walkers (and other local traffic) coming into conflict with construction vehicles.'

The Audit Team recommends that appropriate (rigorous) temporary traffic management measures should be set in place to minimise risk of conflicts between construction vehicles and other local traffic (especially walkers) along the turbine delivery route.

The Design Team Response is as follows: 'It is confirmed that a comprehensive set of traffic management measures, including signage and the presence of "Flagmen" will be put in place on the L-7080 during the construction of the Proposed Wind Farm.'

The Design Team response in accepted by the Audit Team in the RSA Feedback form.

Cumulative Effects on Traffic and Traffic Management Plan

As identified in Section 15.1.12.5.2 in Chapter 15 of the EIAR: Material Assets, significant coordination and planning and a comprehensive set of mitigation measures will be put in place before and during the construction stage of the Proposed Development, in order to minimise the effects of the additional traffic generated by the Proposed Development. A detailed Traffic Management Plan, included as Appendix 15-2 of this EIAR, will be finalised and confirmatory detailed provisions in respect of traffic management agreed with the road's authority and An Garda Síochána prior to construction works commencing. As identified in the TMP, there will be active engagement and consultation with the local community to keep them informed of any upcoming traffic related matters e.g. delivery of turbine components at night, via letter drops and posters in public places. Information will include the contact details of the Contract Project Co-ordinator, who will be the main point of contact for all queries from the public or local authority during normal working hours. An "out of hours" emergency number will also be provided.

The potential for cumulative impacts with the permitted and proposed wind farms is assessed in Section 15.1.12.7 of the EIAR. While it is acknowledged that the Applicant does not have control of the

scheduling of the construction of these developments, it will clearly benefit all developments if agreement is reached by the various developers to phase the constructions of the development in order to minimise the impacts on the common sections of the delivery routes. The Applicant will endeavour to collaborate with other developers regarding timing of works in order to minimise impacts in transport routes that overlap. The traffic management plan will incorporate details of the road network to be used by construction traffic, and identify in consultation with the Local Authority, a construction schedule that is cognisant of any other construction work and traffic management plans that is before or to be agreed by the Local Authority at that time. In the event that the construction phase for the Proposed Development overlaps with either of the permitted development or proposed development, the cumulative impacts of this scenario are set out in Section 15.1.12.7 of the EIAR, and are established to be negative, short-term and slight to moderate, based on the potential overlap of TDRs and associated traffic generation.

For the purpose of traffic related cumulative impacts, it was considered that the 10 developments listed in Table 15-28 be considered in the cumulative assessment, based on the location and scale of these developments. These developments include for a permitted quarry extension and infilling, along with projects such as student apartments and a solar array etc. It is considered that the potential risk of cumulative impacts between the Proposed Project and these developments is low to medium with the resulting cumulative impacts being negative, short term and slight for all cases.

Based on the above and the information presented in Chapter 15.1 of the EIAR it is considered that a comprehensive assessment of the cumulative traffic and transport impacts for the Proposed Development is presented in the EIAR.

Pre-Commencement Road Improvement Works:

A commitment is also made by the Applicant to repair any damage to roads or other structures as a result of the Proposed Development and to undertake a post construction survey when the work is complete to ensure full reinstatement of roads/structures to their original condition. The timing and format of these surveys will be agreed with the local authority prior to commencement of construction. The Applicant can also commit to put in place a road reinstatement bond with the local authority prior to commencement, if additional security is required.

22.1.13. Major Accidents and Natural Disasters

In the Planning Authority's assessment of the Chapter 16 'Major Accidents and Natural Disasters', the Planning Authority states they are generally satisfied with the level of risk assessment presented in the EIAR. However, the key issues raised such as potential for landslides, traffic safety issues and the storage of hazardous materials, are primarily considered in their respective chapters of the EIAR. The concerns raised by the Planning Authority relative to Land, Soils & Geology, Traffic and Transport, Water and Biodiversity are addressed above.

2.2.1.14 Interactions

The interactions between the various environmental factors presented in the EIAR are considered to be adequately addressed in Chapter 17 'Interactions'.

3. # AN BORD PLEANÁLA'S LEGAL OBLIGATIONS

An Bord Pleanála will be aware of certain legal obligations in respect of the processing of certain planning applications and appeals for renewable wind energy developments, in particular:

1. Certain obligations under the Climate Action and Low Carbon Development Act 2015 (as amended) (the "Climate Act") imposed on An Bord Pleanála (the "Board") when exercising its decision-making functions in relation to planning applications for renewable wind energy developments;
2. Certain discretionary powers under the Planning and Development Act 2000 (as amended) (the "Planning Act") which must be exercised subject to the mandatory obligations set out in the Climate Act when the Board is exercising its decision-making functions in relation to planning applications for renewable wind energy developments;
3. The specific circumstances in which the Board has a discretion to grant permission for a wind farm development which materially contravenes a development plan, which discretion must be exercised subject to the mandatory obligations set out in the Climate Act.

The Government's Climate Action Plan 2024 requires an increase in the proportion of renewable electricity in Ireland to 80% by 2030. For onshore wind energy, a target of 6GW – from the current installed capacity of 4.5 GW – has been set for 2025, and a target of 9GW for 2030. More broadly, Ireland's Long-term Strategy on Greenhouse Gas Emissions Reductions emphasises the importance of decarbonising the electricity sector by taking advantage of Ireland's significant renewable energy resources while ensuring affordability and security in the national energy supply. Significant numbers of onshore wind farm developments such as the Proposed Development, are required to meet these targets and objectives.

Legal obligations as an EU Member State should also be considered in the assessment of renewable energy developments. The prioritisation of renewable energy projects within European law is gradually being recognised and enforced by the Irish judicial system. In a recent high court judgement ([2024] IEHC 549) regarding a wind farm application, the judge stated that Article 16(f) of directive 2018/2001 as amended by directive 2023/2413[14] (presumption that renewable energy projects are of overriding public interest) provides "*a form of answer for the hitherto problematic clash between arguments regarding the need to address the climate emergency versus the need to give effect to previously established European environmental law regardless of the nature of the project.*" Further, the judge stated that "*such developments must adjust the public interest calculus .... in relation to renewable energy projects.*"

Obligations under the Climate Act and the Planning Act

When exercising its decision-making powers under the Planning Act, An Bord Pleanála is obliged to perform its decision-making function (in so far as practicable) in a manner consistent with:

- the most recent approved climate action plan,
- the most recent approved national long term climate action strategy,

[14] *Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652* – the 'Renewable Energy Directive'; Article 16(f) was to be transposed by 1st July 2024. Furthermore, *Council Regulation (EU) 2022/2577 of 22 December 2022 laying down a framework to accelerate the deployment of renewable energy [https://eur-lex.europa.eu/eli/reg/2022/2577/oj]* is directly effective, applies to the present application and imposes equivalent presumption.

- the most recent approved national adaptation framework and approved sectoral adaptation plans,
- the furtherance of the national climate objective, and
- the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.

Specifically, Section 15(1) of the Climate Act provides that:

> *"A relevant body shall, in so far as practicable, perform its functions in a manner consistent with—*
> *a) the most recent approved climate action plan,*
> *b) the most recent approved national long term climate action strategy,*
> *c) the most recent approved national adaptation framework and approved sectoral adaptation plans,*
> *d) the furtherance of the national climate objective, and*
> *e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State." (the "National Climate Policies and Objectives")*

The above requirement is a mandatory obligation.

The National Climate Policies and Objectives all support the development, and by implication the consenting, subject to proper planning, of wind farm developments.

The mandatory obligation of An Bord Pleanála to exercise its decision-making functions *"in a manner consistent with"* National Climate Policies and Objectives takes precedence over the lessor obligation to merely *"have regard to"* the policies and objectives set out under Section 143(1) of the Planning Act.

Section 143(1) of the Planning Act provides that:

> *"The Board shall, in the performance of its functions (other than functions conferred by Chapter III of Part XXI), have regard to—*
>
> *(a) the policies and objectives for the time being of the Government, a State authority, the Minister, planning authorities and any other body which is a public authority whose functions have, or may have, a bearing on the proper planning and sustainable development of cities, towns or other areas, whether urban or rural,*
>
> *(b) the national interest and any effect the performance of the Board's functions may have on issues of strategic economic or social importance to the State, and*
>
> *(c) the National Planning Framework and any regional spatial and economic strategy for the time being in force."*

Further, the mandatory obligation on An Bord Pleanála under the Climate Act to exercise its decision-making functions *"in a manner consistent with"* the National Climate Policies and Objectives is more stringent that the obligation in the Planning Act to *"have regard to"* inter alia the *"policies and objectives for the time being of planning authorities"*[15]. These policies and objectives are set out in their development plans. In effect, this means that the Climate Act requires the National Climate Policies and Objectives set out therein to take precedence over the policies and objectives of planning authorities set out in development plans.

In practical terms, this means that where An Bord Pleanála is determining whether or not to grant consent to a wind farm development, it is obliged to make its decision in a way in which is consistent

[15] *Section 143(1)(a) of the Planning Acts.*

with the National Climate Policies and Objectives where a wind farm development complies with these policies but contravenes a development plan.

This is in a context where a development plan is mandated by the Planning Act to be consistent with such national plans, policies or strategies as the Minister determines relate to proper planning and sustainable development (insofar as is practicable)[16] and where local authorities have an obligation under the Climate Act to exercise their development-plan making functions *"in a manner consistent with"* the National Climate Policies and Objectives (as far as practicable).

More broadly, An Bord Pleanála is obliged to have regard to the national interest and any effect the performance of its decision-making functions may have on issues of strategic economic or social importance to the State[17]. The accelerated deployment of renewable energy developments is precisely such an issue of strategic economic and social importance to the State.

Material Contraventions on Appeal

Where an appeal is before An Bord Pleanála, it has the discretion to grant permission for a project that materially contravenes a development plan in certain specific circumstances. It is noted that Clare County Council did not identify any ***material*** contraventions with the policy and objectives of the Clare County Development Plan in their assessment and reasons for refusing the planning application. Nevertheless, the provisions of Section 37(2) of the Planning Act are outlined below for reference, should the Board, in their decision on this appeal case, consider that the proposed development materially contravenes the County Development Plan. In this regard, Section 37(2)(a) of the Planning Act provides that: *"... the Board may in determining an appeal under this section decide to grant a permission even if the proposed development contravenes materially the development plan relating to the area of the planning authority to whose decision the appeal relates."*

Section 37(2)(b) of the Planning Act sets out specific limited scenarios where the Board can grant permission for a proposed development where the planning authority refused permission on the grounds that it materially contravenes the development plan. As such, the Proposed Development meets all of the criteria of Section 37(2)(b) of the Planning Act, and so these are set out below for completeness.

The specific circumstances where permission may be granted by the Board notwithstanding a refusal by a Planning Authority due to a material contravention of the development plan, are set out in section 37(2)(b) of the Planning Act, which provides that:

> *"Where a planning authority has decided to refuse permission on the grounds that a proposed development materially contravenes the development plan, the Board may only grant permission in accordance with paragraph (a) where it considers that–*
>
> > *(i) the proposed development is of strategic or national importance,*
> >
> > *(ii) there are conflicting objectives in the development plan or the objectives are not clearly stated, insofar as the proposed development is concerned, or*
> >
> > *(iii) permission for the proposed development should be granted having regard to regional spatial and economic strategy for the area, guidelines under section 28, policy directives under section 29, the statutory obligations of any local authority in the area, and any relevant policy of the Government, the Minister or any Minister of the Government, or*

[16] *Section 9(6) of the Planning Acts.*
[17] *Section 143(1)(b) of the Planning Acts.*

(iv) permission for the proposed development should be granted having regard to the pattern of development, and permissions granted, in the area since the making of the development plan."

When An Bord Pleanála is deciding whether or not it considers that notwithstanding a material contravention it should grant permission, it is under a mandatory obligation to make its decision in a manner consistent with the National Climate Policies and Objectives.

Unlike other types of development, renewable wind farm developments as a matter of principle are supported by, and support, all of the National Climate Policies and Objectives.

Therefore, in light of the following:

a) The mandatory obligation imposed on the Board to exercise its decision-making functions in a manner consistent with National Climate Policies and Objectives under Section 15 of the Climate Act;

b) The mandatory obligation on the Board to have regard to the national interest and any effect the performance of its decision-making functions may have on issues of strategic economic or social importance to the State, such as achievement of the State's National Climate Policies and Objectives, under section 143(1)(b) of the Planning Act;

c) The mandatory obligation on the Board to exercise its decision-making functions *"in a manner consistent with"* the National Climate Policies and Objectives taking precedence over the lessor obligation to merely *"have regard to"* inter alia the *"policies and objectives for the time being of planning authorities"*;

d) The mandatory obligation on local authorities to exercise their development-plan making functions *"in a manner consistent with"* the National Climate Policies and Objectives (as far as practicable);

e) The mandatory requirement that a development plan be consistent with such national plans, policies or strategies as the Minister determines relate to proper planning and sustainable development (insofar as is practicable); and

f) The compliance in principle of renewable wind farm developments with the National Climate Policies and Objectives;

subject to the consideration of An Bord Pleanála of what constitutes proper planning and sustainable development in light of the above, it is entitled to exercise its discretion to afford a presumption in favour of granting permission for wind energy developments such as the Proposed Development, notwithstanding any material contravention of a local development plan.

Section 37(2)(b)(i)

As set out in national policy, wind farm developments such as the Proposed Development, are of strategic importance for Ireland to meet its binding renewable energy targets.

A wind farm development need not be considered a Strategic Infrastructure Development (SID) under the thresholds established in the 7th Schedule of the Planning Act (i.e. those for wind farm developments with fewer than 25 turbines or an output less than 50MW) to fully meet the requirements under this provision. It is sufficient that the project be strategic insofar as it contributes to Ireland meeting its climate, renewable energy and energy security targets.

This is particularly the case, where land, environmental and grid constraints dictate that in certain areas onshore wind farm developments with a relatively small number of turbines are required to meet the targets.

Section 37(2)(b)(iii)

Under Section 37(2)(b)(iii) An Bord Pleanála may consider that permission should be granted notwithstanding a material contravention of a local development plan having regard to:

a) *regional spatial and economic strategy for the area,*
b) *guidelines under section 28,*
c) *policy directives under section 29,*
d) *the statutory obligations of any local authority in the area, and*
e) *any relevant policy of the Government, the Minister or any Minister of the Government.*

In relation to (d) above, it should be noted that statutory obligations of any local authority in the area are inter alia to:

a) *Exercise their development-plan making functions "in a manner consistent with" the National Climate Policies and Objectives (as far as practicable);*
b) *Make their development plans consistent with such national plans, policies or strategies as the Minister determines relate to proper planning and sustainable development (insofar as is practicable); and*

In relation to (e) above, it should be noted that wind farm developments in principle comply with National Climate Policies and Objectives.

Discretion to refuse permission

An Bord Pleanála also has the discretion to refuse permission. However, in exercising its discretion it must weigh the competing interests where a project is supported by and supports the achievement of the National Climate Policies and Objective but contravenes the policies and objectives of a local County Development Plan.

In weighing those competing interests, it must have regard to *inter alia*:

- the key findings in Ireland's Greenhouse Emissions Projections 2023 - 2050[18], inter alia, that Ireland is not on track to meet the 51% emissions reduction target by 2030, with the first two carbon budgets (2021 -2030) projected to be to be exceeded by a significant margin of between 17 and 27 per cent;
- the Renewable Energy Directive III published in the Official Journal of the EU on 31 October 2023 and recent case law such as the Carrownagowan case judgement ([2024] IEHC 549);
- the SEAI National Energy Projections Report published November 2024 identifying that Ireland is projected to miss its 2030 overall renewable energy share target under the Renewable Energy Directive (RED) in all scenarios;
- the fact that it took on average, 82 weeks for An Bord Pleanála to determine the 12 planning appeals on onshore wind farms determinations made from January 2022 to June 2024 inclusive;
- that wind farms can only enter an "enduring connection process" (ECP) to apply for a grid connection after planning permission has been granted, and since 2018, the

[18] *https://www.epa.ie/publications/monitoring-assessment/climate-change/air-emissions/irelands-greenhouse-gas-emissions-projections-2023-2050.php*

opportunity to make applications in the ECP process has only opened for a one month period each year; and

- the typical 18 – 24 months period it takes for a wind farm development to be built and energised.

Should An Bord Pleanála be minded to exercise its discretion to refuse permission, in doing so, it must in light of its obligations under the Climate Act in particular, first consider whether inviting further information and / or modified plans from the applicant would enable permission to be granted and if it considers that it would not, provide its reasons as to why it is of that opinion. In this regard, An Bord Pleanála has the discretion to require an applicant to submit further information.[19] An Bord Pleanála may make such requests *"in its absolute discretion."*[20]

Should An Bord Pleanála be minded to exercise its discretion to refuse permission having arrived at the opinion that further information and / or modified plans would not enable permission to be granted, in doing so, it must in light of its obligations under the Climate Act in particular, provide its reasons as to why it considers that a refusal would not be in breach of the National Climate Policies and Objectives, including in particular, the Climate Action Plan 2023 target of delivering 6GW of onshore renewable wind energy by 2025 and 9GW by 2030.

[19] *Section 132 of the Planning Act.*
[20] *Section 132 of the Planning Act.*

4. GROUNDS OF APPEAL

4.1 Introduction

The first-party grounds of appeal, which the Applicant wishes to raise in respect of the refusal by Clare County Council are set out in this section below. The Grounds of Appeal are set out against each of the reasons for refusal which can be summarised as follows:

- **Reason for Refusal 1:** Landscape and Visual Effects
- **Reason for Refusal 2:** Hydrological Impact on European Sites
- **Reason for Refusal 3:** Cumulative Effects on Birds

4.2 Reason for Refusal 1 – Landscape and Visual Effects

Clare County Council's first reason for refusal is stated as follows:

1. *The proposal site is located in the Slieve Bernagh Bog Landscape Character Area (LCA), in an area where windfarm developments are 'Open to Consideration'. In accordance with Objective WES10 of the Clare Wind Energy Strategy wind energy developments in these areas can be considered on a case-by-case basis subject to viable wind speeds, environmental resources and constraints and cumulative impacts.*

   Having regard to the location of the site in the more sensitive and scenic area of the LCA (Lackareagh and Glenvagalliagh Mountains), the Planning Authority considers that the proposed turbine structures, by reason of their height (tip height up to 180m), scale and siting on this open, exposed and sensitive upland landscape would constitute a prominent feature on the landscape from both local and long range viewpoints, and would therefore seriously injure the visual amenities of the area. Furthermore, it is considered that the development would be highly visible from, and negatively impact upon, the R466 Regional Road which is a designated Scenic Route and would negatively alter the character of this rural landscape.

   Having regard to the foregoing and noting also the significant potential for cumulative impacts arising when the proposed development is considered in-combination with permitted and proposed wind farm development in the surrounding area, it is considered that the proposed development, would contravene Objectives CDP14.2 and CDP14.7 of the Clare County Development Plan 2023-2029 and would be contrary to the proper planning and development of the area.

4.2.1 Grounds of Appeal against Refusal Reason 1

This response has been prepared by Rachel Smith, MSc., a Landscape and Visual Impact Assessment Professional who has been working with MKO since October 2023. Rachel is an Earth & Environmental Science consultant with more than 10 years of professional experience in producing and editing technical scientific reports, and collecting, analysing and reporting environmental data for regulatory compliance in both the US and Ireland, including the utilisation of QGIS mapping, organisation of field work, management of environmental databases and training of environmental science staff. Rachel's primary role at MKO is producing and reviewing the LVIA chapter of EIA reports accompanying Planning Applications for multi-scale onshore renewable energy and non-wind developments. Rachel holds an MSc. in Coastal and Marine Environments (Physical Processes, Policies & Practice) and a BSc. in Geology.

Rachel Smith was aided by Jack Workman MSc. TMLI, who reviewed this chapter. Jack is the Landscape & Visual Project Director at MKO and is a Technician Member with the British Landscape Institute. He is an LVIA Specialist with an academic background in the field of Environmental Science and Geography. Jack's primary role at MKO is conducting LVIA for EIARs. Jack holds a BSc. in Psychology, and an MSc. in Coastal and Marine Environments (Physical Processes, Policies & Practice). Since joining MKO, Jack has conducted and project managed all aspects of LVIA for a broad range of commercial infrastructure developments including wind and solar energy projects, grid infrastructure, extraction industry and Strategic Housing Developments. Jack holds a membership with the Chartered Institute of Water and Environmental Management and is also a member of the Landscape Research Group.

This section of the appeal responds to the Refusal cited above relating to the topic of Landscape and Visual Impact Assessment (LVIA), as well as to discussion cited in the 'Landscape and Visual' section (pp.51-53) and 'Assessment' section on 'Visual Amenities' (pp.61-62) of the CCC's Planner's Report issued by CCC's planning inspector.

This section of the appeal addresses the key LVIA topics raised in both the Refusal and the CCC Planner's Report, divided into the following sections:

- **Refusal Point 1 LVIA Topics**, including:
    - Sensitivity and scenic amenity of Slieve Bernagh Uplands LCA;
    - Scale and siting of turbines in upland landscape;
    - Prominence of turbines;
    - Visibility from designated Scenic Route R466/SR-26;
    - Impact on character of rural landscape;
    - Compliance with Objectives CDP14.2 and CDP14.7;
- **LVIA Topics from the CCC Planner's Report**, including:
    - Cumulative impact with Permitted Fahy Beg Wind Farm;
    - Prominence of proposed turbines T5 and T6 on ridgeline;
    - Representation of landscape changes by use of photomontage.

Chapter 13 of the submitted EIAR contains the comprehensive LVIA for the Proposed Development conducted in 2022-2024 by MKO (hereafter, 'the Project LVIA'), comprising seven documents:

- EIAR Ch.13 Landscape & Visual (main chapter);
- EIAR Volume 2: Photomontage Booklet, presenting visualisations of the proposed turbines and other existing, permitted and proposed wind energy developments from selected viewpoints;
- Appendix 13-1: LVIA Methodology;
- Appendix 13-2: LCA Assessment Tables, assessing landscape ,visual and cumulative effects of designated LCAs;
- Appendix 13-3: Photomontage Visual Impact Assessment Tables, assessing landscape, visual and cumulative effects of 15 selected viewpoints presented in the Photomontage Booklet;
- Appendix 13-4: A0 LVIA Baseline Map, showing all baseline landscape features, viewpoints, and visual receptors;
- Appendix 13-5: Photowire Visualisation Booklet, presenting supplemental 'early draft-stage' wireline visualisations known as 'photowires' from an additional 18 selected locations representing views of the proposed turbines.

As detailed in the Project LVIA, the applicant proposes that the Proposed Development is scaled and sited appropriately in a landscape suitable for effectively accommodating the proposed wind energy development, with acceptable levels of impact on scenic amenity and landscape character, contrary to the conclusions in the CCC Planner's Report. This section of the appeal addresses the above topics cited by the council in its refusal and planning report and provides a justification for the development of wind energy at the selected site in East Clare, from an LVIA perspective.

In terms of policy and guidance documents relevant to the Refusal, CCC Planner's Report and Project LVIA, this section of the appeal cites the following:

Local Authority policy:

- Clare County Development Plan 2023-2029 (CCDP);
- CCDP Section 14.2 Landscape Character Assessment of County Clare 2004 (LCACC);
- CCDP Volume 6: Clare Wind Energy Strategy (CWES);
- CWES Table 4a: *Strategic Guidance on Landscape Capacity for Wind Energy Designations* (p.36 of CWES);
- CWES Annex A: *Best Practice and General Considerations for Wind Energy Developments in County Clare* (p.47 of CWES);
- CWES Table C1.1: *LCAs in Strategic Areas* (p.52 of CWES).

Best practice guidance for LVIA in Ireland and UK:

- Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3) published by Landscape Institute & Institute of Environmental Management and Assessment (2013);
- Wind Energy Development Guidelines (WEDGs) for Planning Authorities published by Department of the Environment, Heritage, and Local Government (2006);
- Draft Revised WEDGs published by Department of Housing, Local Government and Heritage (2019).

With regard to landscape terminology and topographical features relevant to the Proposed Development site in East Clare, this section of the appeal uses the following:

- '**Slieve Bernagh Uplands**' refers to the designated Landscape Character Area (LCA) no. LCA-8 as defined by the CCDP; includes Slieve Bernagh range, Glenomra Valley and other local hills/peaks ranging from Lough Derg to the south-west of Glenomra Valley;
- '**Slieve Bernagh range**' refers to the general upland mountain landscape forming the eastern boundary of Glenomra Valley, located immediately west of Lough Derg, and includes Glenagalliagh Mt, Lackareagh Mt and other peaks;
- '**Glenomra Valley**' refers to the inverted L-shaped spatial enclosure (rural valley) where the Proposed Wind Farm is sited;
- '**Glenagalliagh Mt**' and '**Lackareagh Mt**' are the peaks on which the Proposed Wind Farm is sited with its centre-point situated in the topographical 'saddle' between them; with Glenomra Valley immediately to the west and River Ardcloony Valley immediately to the east;
- '**River Ardcloony Valley**' (called Aillemore area in the CCC Planner's Report) refers to the relatively small valley immediately east of the Proposed Wind Farm, situated outside Glenomra Valley on the eastern slopes of Glenagalliagh and Lackareagh Mts.

4.2.2 Refusal Point 1 LVIA Topics

4.2.2.1 Sensitivity and Scenic Amenity of Slieve Bernagh Uplands LCA-8

This section addresses the following text, taken from the above quote of the Refusal (p.4) and CCC Planner's Report (p.63):

> *'The proposal site is located in the Slieve Bernagh Bog Landscape Character Area (LCA), in an area where windfarm developments are 'Open to Consideration'. [...] Having regard to the*

location of the site in the more sensitive and scenic area of the LCA (Lackareagh and Glenvagalliagh Mountains), the Planning Authority considers...'

LCA Name. It is clarified here that the name of the designated LCA (as per CCDP, LCACC and CWES) where the Proposed Project is located is 'Slieve Bernagh Uplands LCA' not 'Slieve Bernagh Bog LCA'. Possibly, the name may have been confused with 'Slieve Bernagh Bog SAC' an ecological designation relating to 'Special Area of Conservation' that has limited relevance to landscape and visual impact and is fully addressed in the original EIAR Chapter 6 Biodiversity. It is noted that p.61 of the Refusal uses the correct LCA name.

Slieve Bernagh Uplands LCA-8 has Low Sensitivity. The sensitivity of Slieve Bernagh Uplands specifically with respect to capacity for wind energy development is reported by the CWES in Table 4a as **Medium to Low**, the lowest possible sensitivity afforded to any LCA by the CCDP, as reported in the Project LVIA (pp.13-29, Section 13.4.1.1.6 CWES Policy for Co. Clare LCA-8: Slieve Bernagh Uplands), thus the wording of *'more sensitive'* used by the CCC Planner's Report is not reflective of the policy.

It is noted that sensitivity ratings of LCAs reported by the CWES were informed by an extensive Strategic Environmental Assessment and Habitats Directive Assessment conducted by CCC which incorporated 'landscape' as a consideration (CWES, p.24, Section 2.6 How the SEA and HDA Informed the Wind Energy Strategy).

The CCC Planner's Report (p.61) raises an additional point relating to visual amenity and the location of the Proposed Project site with respect to the sensitivity description of Slieve Bernagh Uplands LCA as per Table 4a in the CWES; the stated point is:

'I note that the proposed development site is not within the more robust [...] northern and western areas. The proposed location is on Lackareagh and Glenvagalliagh Mountains which are identified as highly sensitive'.

On the contrary, Glenagalliagh and Lackareagh Mountains are **not identified** as highly sensitive—this appears to be a misreading of the related policy, as follows. The Project LVIA (pp.13-29 to 13-30, Section 13.4.1.1.6 CWES Policy for Co. Clare LCA-8 Slieve Bernagh Uplands) notes the two special circumstances according to the policy under which the sensitivity of LCA-8 must be considered 'highly sensitive' (as per Table 4a); these are in the cases of a development impacting on *'the mountains overlooking Lough Derg'* or *'the unenclosed bogs of Lackareagh and Glenagalliagh Mountain'*. The Project LVIA reports that the Proposed Project has no theoretical visibility from the mountains on the western edge of Lough Derg and is not located in the named unenclosed bogs; therefore, the location of the site on Glenagalliagh and Lackareagh Mts is not considered highly sensitive, as follows (p.13-30):

'The first exception of higher sensitivity is for '*the mountains overlooking Lough Derg*.' This LVIA emphasises that the proposed turbines have **no theoretical visibility from the mountains on the western edge of Lough Derg**. In addition, from certain elevated areas along the eastern shore of Lough Derg, ZTV mapping indicates low to partial theoretical visibility (ranging from 1-4 turbines); therefore, the relevant areas were carefully considered in the scoping process to ensure that all representative views were evaluated.

'The second exception of higher sensitivity is for '*the unenclosed bogs of Lackareagh and Glenagalliagh Mountain*'. This report emphasises that the Proposed Wind Farm is **not located in unenclosed bogs**, as indicated in Chapter 6: Biodiversity; further, of the 7 no. proposed turbines, T3 and T4 are situated on the south-eastern slope and over the ridgetop of Glenagalliagh Mt within coniferous forestry land that is not generally accessible to the public in that no public roads leading to these locations currently exist'.

As discussed in the Project LVIA, the sensitivity of the unenclosed bogs on Glenagalliagh and Lackareagh Mts is derived from its ecological value and not from its visual characteristics within the

landscape. In contrast, on-site appraisals confirmed that all proposed turbines are specifically sited either in commercial forestry stands or low-intensity agricultural lands, each being lands subjected to a high degree of human modification and having lower landscape sensitivity in general (see Project LVIA, pp.13-45 to 13-48, Section 13.4.3 Landscape Sensitivity of the Site: Landscape Value and Susceptibility to Change).

With respect to the site not being located in the *'robust northern and western areas'* it is emphasised that the northern and western areas cited in the policy are not actually delineated. The Proposed Wind Farm is sited in an area mapped as 'Open to Consideration' and has been optimally designed for the appropriate landscape character type according to WEDGs (2006, 2019); this is detailed in the next Section 4.2.2.2 Scale and Siting of Turbines in Open and Exposed Upland Landscape. The comprehensive site investigations undertaken as part of the EIAR and the Project LVIA determined that the land area of the Proposed Wind Farm site itself is suitable for absorbing and accommodating the infrastructure of the Proposed Development whilst also being a viable area for wind energy development in mind of all the other constraints including the multiple disciplines in the EIAR. The Proposed Wind Farm site also satisfies constraints and factors relating to the logistical feasibility of siting and constructing a wind farm, as well as being located in an LCA designated with the lowest possible sensitivity rating to wind energy development by the CCDP; refer to the Project LVIA Sections 13.4.2 to 13.4.4 (pp.13-36 to 13-52).

Impact on Designated Scenic Amenities does not Preclude Development. Whilst the Glenomra Valley within Slieve Bernagh Uplands comprises an enclosed, remote, rural valley within a mountainous landscape, it is not within an area of protected landscape designated by the CCDP (and thereby inclusively the LCACC and CWES); such areas are limited to 'Heritage Landscape', part of the CCDP's 'Living Landscapes' designations comprising Heritage, Working and Settled Landscapes that cover the entire land area of Co. Clare (refer below to Figure 4-1: Proposed Wind Farm Location within Landscape Designations of Co. Clare (extracted from CCDP Volume 1, p.365), extracted from the CCDP, p.357, Map 14A Landscape Designations).

In Figure 4-1, Heritage Landscapes are denoted in green cross-hatching and designated scenic routes are denoted by red lines—the closest designations to the Proposed Project are Lough Derg Basin Heritage Landscape and Scenic Route R466/SR-26; these are labelled in the figure.

The Project LVIA (Fig. 13-4 Landscape Policy Context Map and related discussions in Section 13.4.1.1.7 Co. Clare Living Landscapes) clearly demonstrates that the Proposed Wind Farm is not located in Heritage Landscape nor does it affect the sensitivities of Lough Derg Basin landscape or the other two identified Heritage Landscape areas within the 20km LVIA Study Area. The Project LVIA (p.13-31, Section 13.4.1.1.7) reports that the Proposed Wind Farm is sited in 'Settled Landscape', for which one of the *'envisioned usages'* of development in the CCDP is *'energy'* according to the CCDP (p.348).

Scenic amenity within the Glenomra Valley is protected in the form of views from the designated Scenic Route R466/SR-26; this was comprehensively investigated in the Project LVIA and impacts on the protected views were found to be of acceptable levels—details are explained below in Section 4.2.2.4 Visibility from Designated Scenic Route R466/SR-24.

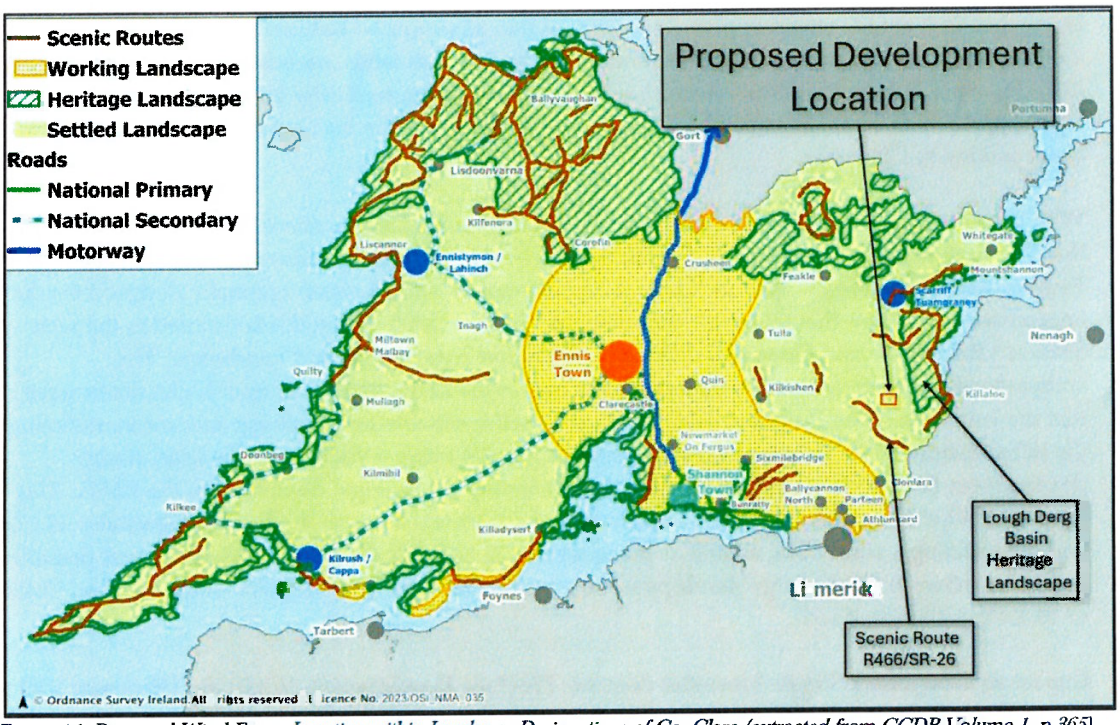


Figure 4-1: Proposed Wind Farm Location within Landscape Designations of Co. Clare (extracted from CCDP Volume 1, p.365)

In addition, the Project LVIA (p.13-27) notes relevant guidance from the WEDGs (2006, p.14, Section 3.8 Amenity Designations) regarding visibility of proposed wind farms from designated scenic routes, which is also emphasised by the CWES (p.47) within Annex A *Best Practice and General Considerations for Wind Energy Developments in County Clare*:

> *'The **visibility** of a proposed wind energy development from designated views or prospects **would not automatically preclude an area from** future **wind energy development** but the inclusion of such objectives in a development plan is a material factor that will be taken into consideration in the assessment of a planning application'.*

The Applicant is confident that the Project LVIA has comprehensively and sufficiently assessed the impact of the Proposed Development on designated scenic amenity in the Glenomra Valley and that the land area where the project is sited should not be precluded from development.

4.2.2.2 Scale and Siting of Turbines in Open and Exposed Upland Landscape

This section addresses the following text, taken from the above quote of the Refusal (p.4) and CCC Planner's Report (p.63):

> *'...the Planning Authority considers that the proposed turbine structures, by reason of their height (tip height up to 180m), scale and siting on this open, exposed and sensitive upland landscape...'*

Sensitivity of Upland Landscape. Further to the previous section, it is asserted that the sensitivity of the upland landscape where the proposed turbines are sited is given the lowest classification by the CCDP, LCACC and CWES in terms of its capacity for wind farm development (see previous section); this was also supported by comprehensive on-site appraisals conducted in the Project LVIA.

Scale and Siting of the Proposed Project in Open and Exposed Landscape is Appropriate. Two interpretations can be made regarding the assertion by the Refusal and CCC Planner's Report of the

Proposed Development site being in an 'open, exposed' landscape. While it is unclear which interpretation is meant, both are countered here.

The first interpretation is that the proposed turbines themselves are sited in a specific location that affords primarily open and exposed views of the turbines, which is untrue. The Project LVIA (pp.13-10 to 13-21, Section 13.3 Visibility of Proposed Development) utilises Zone of Theoretical Visibility (ZTV) mapping in accordance with best practice guidance (GLVIA3, 2013), clearly demonstrating the very limited visual exposure of the proposed turbines from the majority of the 20km LVIA Study Area including from the designated CCDP Heritage Landscapes and most receptors outside 5km owing to the localised topographical spatial enclosure of Glenomra Valley; this is discussed in the next Section 4.2.2.3 Prominence from Local and Long-Range Viewpoints.

The second interpretation is that the broader setting of the Slieve Bernagh Uplands is generally considered an open and exposed landscape by the inherent nature of being an upland area, which is true, yet this as a reason for refusal is contrary to the functional nature of basic windfarm design, since wind turbines must be cited in open, exposed areas (e.g. within open lowlands or higher on exposed upland ridges) in order to operate efficiently, i.e. be exposed to wind.

The height, scale and siting of the proposed turbines is functionally appropriate for good wind farm design and consequently meets all guidance outlined for the appropriate landscape type in which it is sited (Transitional Marginal Landscape) set forth by the WEDGs (2006) and Draft Revised WEDGs (2019), explained as follows. The Proposed Project design utilises a staggered layout of three turbines on either side of an upland ridge combined with four turbines at lower elevations below the ridgeline, which balances the potential for functionality combined with the avoidance of total visual prominence along the ridge. The turbine height (maximum blade-tip 180m) and siting near the upper ridges of Glenomra Valley and Glenagalliagh and Lackareagh Mts with irregular spatial extent and uneven spacing allows for appropriately scaled visual balance between the different landcover types present (commercial forestry and low-intensity agriculture); all this is reported and discussed in the Project LVIA (pp.13-48 to 13-51, Section 13.4.4 Landscape Character from WEDGs).

Further, several key attributes and factors make upland landscapes highly suitable in general for accommodating wind energy developments from an LVIA perspective, for example:

- Upland landscapes are typically of a large scale where commercial scale wind farms can be effectively absorbed;
- Marginal areas of upland landscapes (e.g. the Proposed Wind Farm site in Transitional Marginal Landscape) regularly comprise environments that are highly modified by commercial activities such as coniferous forestry, these are large unpopulated areas of relatively low landscape sensitivity (e.g. degradation from historic human intervention) proven to be very suitable for accommodating all of the physical infrastructure required for a wind energy development (compared with other upland environments such as pristine peatland);
- Upland landscapes are typically areas of low population density with open expanses of unsettled land which provide adequate space for wind farms enabling appropriate set-back distance (e.g. 4-times-tip-height in the Draft Revised DoHPLG 2019 guidelines) from residential receptors and large population centres;
- Strategic geographic siting of turbines in relation to well-defined landforms and topographical features existent within upland landscapes (i.e. the spatial enclosure of Glenomra Valley) can substantially reduce the visual exposure of a wind farm development in its wider landscape setting and therefore eliminate visual effects on larger number of receptors.

4.2.2.3 Prominence from Local and Long-Range Viewpoints

The above statement in the Refusal (p.4) and CCC Planner's Report (p.63) continues with:

'...the proposed turbine structures [...] would constitute a prominent feature on the landscape from both local and long range viewpoints, and would therefore seriously injure the visual amenities of the area'.

The CCC Planner's Report (p.52) additionally states:

'Having regard to the scale of the proposed turbines, both long range and short-range views towards same from the surrounding road network, I have concerns in relation to the impact on the proposal on the receiving landscape'.

Spatial Enclosure of Glenomra Valley Limits Long-Range Views. The assertion that the proposed turbines constitute a 'prominent feature' from 'long-range viewpoints' is not actually supported, suggesting that the investigations of the Project LVIA including ZTV analysis (as well as on-site appraisal and photomontage visualisation) was either not consulted or was dismissed. Further to the previous section, ZTV mapping reported in the Project LVIA (p.13-10, Section 13.3) demonstrates that visual exposure of the proposed turbines is extensively limited by the topographical spatial enclosure of Glenomra Valley, that is, to localised areas within 3-5km of the site; vast areas of the 20km LVIA Study Area to the north and north-east have no visibility from long- or short-range vantage points. Areas in the south, south-east and to the west shown by ZTV mapping to have theoretical long-range visibility were investigated and found to have minimal actual visibility from identified receptors. It is worth noting that the investigations which informed the Project LVIA included the production of photomontage visualisations from 33 no. viewpoints (15 no. photomontages as well as 18 no. photowires, or draft early-stage photomontages. Many receptors and locations in the LVIA Study Area were found to have either no visibility or very limited visibility of the proposed turbines as evidenced by the photowire visuals (see Appendix 13-5 of the Project LVIA).

Local Prominence of Proposed Turbines has Limited Impact. The argument that the proposed turbines should be refused on the grounds of having prominence from local viewpoints is improper and dismissive of the LVIA process. It is not a question of whether the proposed turbines appear more visually prominent to local receptors—this is naturally expected for receptors in close proximity—but whether the development as whole appears out of scale in the chosen setting. In this case, the Project LVIA determined that the design was optimised to meet WEDG (2006, 2019) guidance on all six categories of turbine location, spatial extent, spacing, layout, height and cumulative effect in the appropriate landscape type (see previous Section 4.2.2.2.2); moreover, the Project LVIA determined that the negative impacts due to local prominence of the turbines will be limited to a very low number of local receptors. Further to this point, The Project LVIA conducted Route Screening Analysis (pp.13-16 to 13-21, Section 13.3.3 ZTV versus Actual Visibility) on all localised roads within 3-5km of the site (and along roads up to 6km towards Killaloe in the east), revealing that 82.93% of roads have 'Intermittent/Partial' to 'Dense/Full' visual roadside screening, thereby eliminating or greatly reducing the frequency of actual visibility of the proposed turbines from local receptors, particularly in the River Ardcloony Valley (or Aillemore area) immediately east of the site which was a particular topic noted by CCC in the planning report and is discussed in detail below in Section 4.2.3 LVIA Topics from CCC Planners Report of this appeal. Considering all these points, the assertion of 'serious injury' to visual amenities of the area is unsupported.

4.2.2.4 Visibility from Designated Scenic Route R466/SR-26

This section addresses the following text, taken from the above quote of the Refusal (p.4) and CCC Planner's Report (p.63):

'Furthermore, [...] the development would be highly visible from, and negatively impact upon, the R466 Regional Road which is a designated Scenic Route...'

The CCC Planner's Report (p.62) additionally states:

'The development will dominant all views from the R466 Scenic Route from Broadford to Bridgetown and will fundamentally alter the scenic landscape'.

The assertion that the Proposed Project will 'dominate all views' and 'fundamentally alter' the scenic landscape is unwarranted; the inclusion of these statements in the CCC Planner's Report indicates that the comprehensive assessment of impact on the scenic route R466/SR-26 provided in the Project LVIA across eight chapter-sections, two appendices and three verified photomontages was either not consulted or entirely dismissed. This is supported by the following evidence extracted from the Project LVIA.

Greatest Visual Impact on Scenic Route Affects Only a Small Stretch. The impact of the Proposed Wind Farm on the visual amenity of the R466 Regional Road designated Scenic Route SR-26, an 8.8km route between Bridgetown and Broadford Gap, was a key focus of the Project LVIA. Views along this route were represented by three viewpoints VP04, VP07 and VP08, the first two of which constitute uncommon, worst-case scenario views from the most open portion of the route, as is considered best practice for LVIA (GLVIA3, 2013). The full visual impact on R466/SR-26 is thoroughly addressed in the following sections and appendices of the Project LVIA:

- 13.3.3 ZTV Versus Actual Visibility;
- 13.4.1.1.8 Co. Clare Designated Scenic Views and Prospects;
- 13.5.1.1 Designated Scenic Routes and Views;
- 13.5.1.6 Transport Routes;
- 13.7.3.2.1 Photomontage Viewpoint Assessment Outcomes;
- 13.7.3.2.2 Scenic Route SR-26 at Cloonyconry More & Ballyquin Beg;
- 13.7.3.2.3 SR-26 View of Proposed Substation from within Glenomra Valley;
- 13.7.3.5.2 Cumulative Visual Effects;
- *EIAR Volume 2 Photomontage Booklet*, see VP04, VP07, VP08;
- *Appendix 13-3: Photomontage Visual Impact Assessment Tables*, see VP04, VP07, VP08.

VP04 and VP07 representing open views were found to have 'Significant' and 'Moderate' visual effects, respectively (including the consideration of cumulative visual effects with other existing, proposed and permitted wind farms), with the emphasis being that these two points enclose a 2km stretch of the full designated scenic route R466/SR-26 (total length 8.8km) from which the worst-case scenario of views would be experienced; see comparative maps below in Figure 4-2. Visual effects from VP08 representing views from Bridgetown were found to be 'Not Significant'.

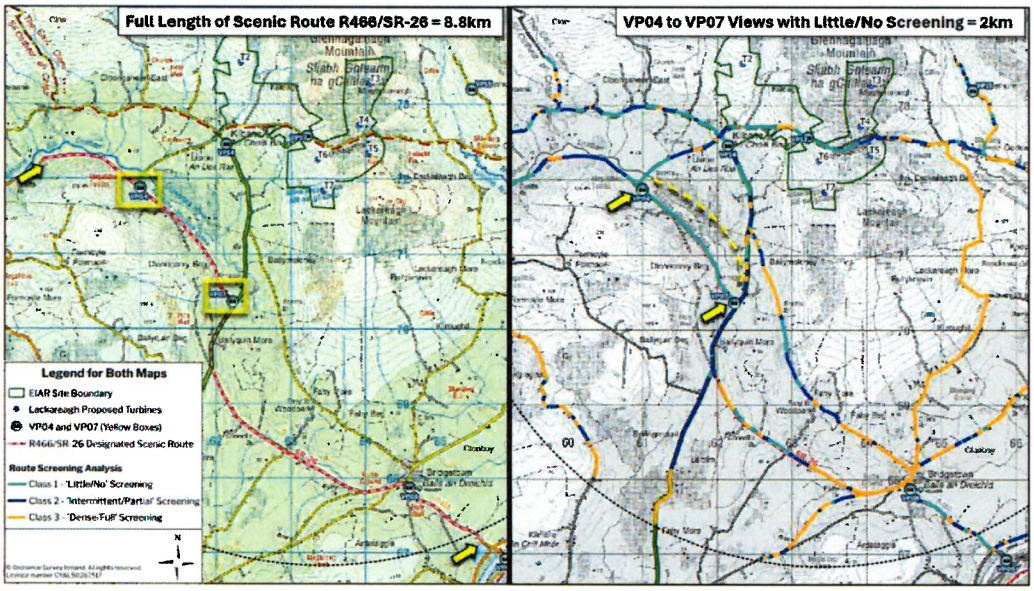


Figure 4-2: Comparative Maps of R466/SR-26 Full Length and Degree of Visibility

The above figure shows that, as reported in the Project LVIA, most of R466/SR-26 is visually screened to the degree of Intermittent/Partial to Dense/Full, thus the assertion that the proposed turbines 'dominate all views' is false, and the assertion that the proposed turbines are *'highly visible'* from the scenic route applies only to a small portion of the route and is not a representative description of most of the route. Further to this point, the Project LVIA also reports the variation in nature of visual effects along the route, where views of the turbines ranged from visually balanced to visually separated; see below Figure 4-3 and Figure 4-4 extracted from the Project LVIA.

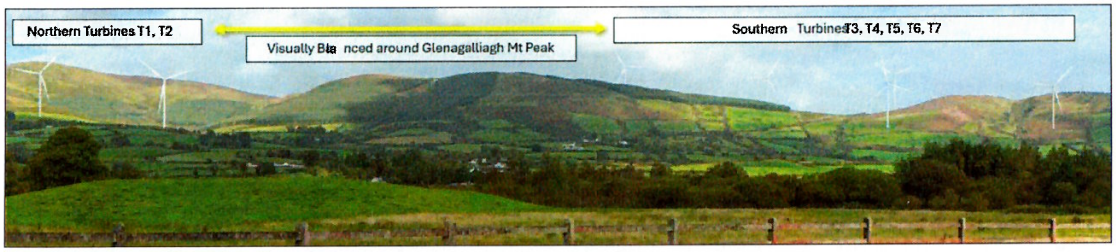


Figure 4-3: Visual Balance of Northern and Southern Turbines at VP04

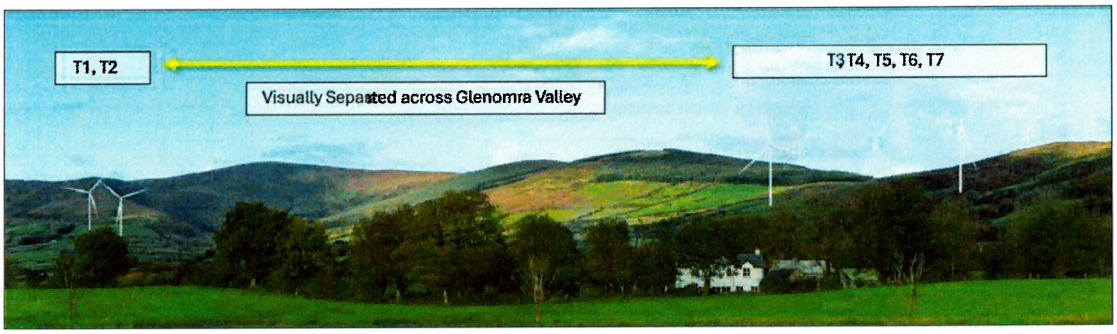


Figure 4-4: Visual Separation of Northern and Southern Turbines at VP07

Scenic Route has Relatively Few Receptors. The Project LVIA (p.13-106) notes that R466/SR-26 is 'not a well-trafficked tourism route due to its remote location in a sparsely populated enclosed valley away from national motorways and is therefore unlikely to be considered a destination of national renown drawing high numbers of travellers, thus the receptors most likely to be affected by views of the proposed turbines from open portions of SR-26 are mainly limited to the sparse local population'.

CCDP Policy Wording on Scenic Route Impact is Adhered to. Finally, the Project LVIA reports on two points related to the following extracted CCDP policy text for designated scenic routes in the CCDP Landscape chapter (CCDP *Section 14.5*, p.356):

> *'There is a need to protect and conserve views adjoining public roads throughout the County where these views are of high amenity value. In conserving views, it is not proposed that this should give rise to the prohibition of development along these routes but development, where permitted, should not seriously hinder or obstruct these views and should be designed and located to minimise their visual impact'.*

The Project LVIA (p.13-106) found that the Proposed Development meets the following two points of the above wording: (1) The view is not *'seriously hindered or obstructed'* and (2) the Proposed Project is *'designed and located to minimise the visual impact'*, thus it is asserted that the overall views are conserved in accordance with the policy wording above and the development should not be prohibited. Clear reasoning is listed in the Project LVIA (pp.13-104 to 13-107, Section 13.7.3.2.2 Scenic Route SR-26 at Cloonyconry More & Ballyquin Beg), including a description of unobstructed views and design/locational elements contributing to visual impact minimisation.

4.2.2.5 Impact on Character of Rural Landscape

The quoted statement in the Refusal (p.4) and CCC Planner's Report (p.63) continues with:

'Furthermore, it is considered that the development [...] would negatively alter the character of this rural landscape'.

Landscape Character Effects Range from Imperceptible to Slight. The argument that the 'character' of the 'rural landscape' will be negatively altered is vague, as the Proposed Wind Farm is sited within a transitional type of landscape already highly modified by on-going human activity—commercial forestry and low-intensity agriculture, the likes of which are evolving in general character throughout the country as appropriate landscape types for wind energy development—these two along with other degraded/modified landscapes such as cutover peatlands (recall the previous explanation of key characteristics of general suitability of upland landscapes for wind energy development in Section 4.2.2.2 above). The fact that the chosen site is spread across a mix of landscape types in an upland area is ideal in terms of meeting WEDG (2006, 2019) guidance for siting and design of wind farms and this is demonstrated clearly in the Project LVIA (again, see previous Section 4.2.2.2). Further discussion on the representation of changes to the landscape are addressed below in Section 4.2.3.3 Representation of Landscape Changes by use of Photomontages.

The Project LVIA appraises characteristics of the landscape in its immediate setting as indicators of overall landscape sensitivity in a detailed table (pp.13-45 to 13.48, Table 13-5, Section 13.4.3 Landscape Sensitivity of the Site: Landscape Value and Susceptibility to Change), assigning a landscape value of 'Low to Medium' and indicating that the landscape's susceptibility to change with respect to the Proposed Project is 'Low', with an overall sensitivity of 'Low'; further, it is reiterated that the wider upland landscape of Slieve Bernagh Uplands LCA-8 has been designated with the lowest possible sensitivity rating to wind energy development by the CCDP. As set out in the impact assessment on landscape character in the Project LVIA (see results in Section 13.7.3.1 Landscape Effects (Operational Phase), pp.13-95 to 13-98), the Proposed Wind Farm was found to have residual effects on landscape character ranging from 'Imperceptible' to 'Slight'.

4.2.2.6 Compliance with Objectives CDP14.2 and CDP14.7

The Refusal (p.4) and CCC Planner's Report (p.63) state:

'Having regard to the foregoing and noting also the significant potential for cumulative impacts arising when the proposed development is considered in-combination with permitted and proposed wind farm development in the surrounding area, it is considered that the proposed development, would contravene Objectives CDP14.2 and CDP14.7 of the Clare Count[y] Development Plan 2023-2029 and would be contrary to the proper planning and development of the area.'

Cumulative Impacts. The cumulative impact of the Proposed Development in-combination with other permitted and proposed wind farms in the area, particularly Fahy Beg Wind Farm, is discussed below in Section 4.2.3 LVIA Topics from CCC Planner's Report.

Objectives CDP14.2 and CDP14.7 are Not Contravened. The first policy objective CDP14.2 (CCDP, p.349) relates to developments in 'Settled Landscape' of Co. Clare, in which the Proposed Development is located. The second policy objective CDP14.7 (CCDP, p.356) on Scenic Routes pertains to 'valuable views and prospects' of Co. Clare, which the LVIA and CCC Planner's Report both acknowledge that the Proposed Development impacts on the R466 Regional Road/Scenic Route SR-26, as described previously in Section 4.2.2.4 Visibility from Designated Scenic Route R466/SR-26. These objectives are reproduced in Table 4-1: Policy Objectives CDP14.2 and CDP14.7 (reproduced from CCDP 2023-2029).

Table 4-1: Policy Objectives CDP14.2 and CDP14.7 (reproduced from CCDP 2023-2029)

CCDP Development Plan Objectives	
CDP14.2 Settled Landscapes (p.349)	'It is an objective of Clare County Council: To permit development in areas designated as 'settled landscapes' to sustain and enhance quality of life and residential amenity and promote economic activity subject to: › Conformity with all other relevant provisions of the Plan and the availability and protection of resources; › Selection of appropriate sites in the first instance within this landscape, together with consideration of the details of siting and design which are directed towards minimising visual impacts; › Regard being had to the need to avoid intrusion on scenic routes and on ridges or skylines. Developments in these areas will be required to demonstrate: › (a) That the site has been selected to avoid visual prominence; › (b) That the site layouts avail of existing topography and vegetation to reduce visibility from scenic routes, walking trails, water bodies, public amenities and roads; › (c) That design of buildings and structures reduces visual impact through careful choice of forms, finishes and colours, and that any site works seek to reduce visual impact.'
CDP14.7 Scenic Routes (p.356)	'It is an objective of Clare County Council: › (a) To protect sensitive areas from inappropriate development while providing for development and change that will benefit the rural community; › (b) To ensure that proposed developments take into consideration their effects on views from the public road towards scenic features or areas and are designed and located to minimise their impact; and › (c) To ensure that appropriate standards of location, siting, design, finishing and landscaping are achieved'.

Contrary to the finding of the CCC Planner's Report, it is asserted that CCDP policy objectives CDP14.2 and CDP14.7 would **not** be contravened by the development of the Proposed Development, as supported by the following points detailed in the above Sections 4.2.2.1 to 4.2.2.5:

i. The Proposed Development is located in *'settled landscape'* with the *'envisioned usage'* of *'energy'* also in an area zoned as 'Open to Consideration' in an LCA with the lowest sensitivity designation for wind energy development in Co. Clare;
ii. Site selection and design avails of appropriate landscape type and was found to be optimised with regard to WEDG (2006, 2019) guidance towards minimising visual impact;
iii. Visual prominence is avoided (with visibility largely altogether absent) from long-range viewpoints, and in close proximity, is limited to a very low number of receptors;
iv. Visibility from the affected scenic route is minimised by roadside screening and the greatest effects are localised to a short stretch of the route.

4.2.3 LVIA Topics from the CCC Planner's Report

The CCC Planner's Report (p.52 and p.62) states a total of four additional topics relating to the visual impact of the Proposed Development; these are quoted in the relevant sections below and summarised as follows. The first two topics relate to specific proposed turbines—stating that T1 and T2 have the lowest level of visual impact due to their locational siting with uplands providing a visual backdrop, and stating that T5 and T6 sited on the ridgeline are highly prominent. The third topic relates to the cumulative effect with Permitted Fahy Beg Wind Farm, located on the low south-eastern aspect of Lackareagh Mountain, outside the enclosure of Glenomra Valley. The fourth topic is regarding the lack of landscape-related changes visually represented in the photomontages. The following sections address these topics.

4.2.3.1 Cumulative Impact with Permitted Fahy Beg Wind Farm

The CCC Planner's Report (p.52) states:

> *'The most significant issue of concern is the cumulative impact of the permitted Fahey Beg wind farm and the proposed Lackareagh wind farm. The potential combined visual impact of both developments will severely alter the character of the local area. This will be most particularly evidence from the R466 Scenic Route and from Gap Road westbound from Killaloe to Kilbane, particularly in the river valley in Aillemore area (VP15)'.*

And (p.62) states:

> *'It will also dominate the landscape when viewed from the Gap Road from Killaloe to Kilbane. The potential for cumulative visual impacts is also significant. The proposed development site adjoins the site of the permitted Fahey Beg windfarm (permitted by ABP under application 23/148). The cumulative visual impacts and landscape alterations of both developments would be severe'.*

The assertion that the combined visual impact of Fahy Beg and Lackareagh Wind Farms would 'severely alter the character of the local area' or cause 'severe' visual impact and landscape alternations is unwarranted; this is supported by the following evidence.

Visibility of the Proposed Turbines from R466/SR-26 is Mostly Intermittent/Partial. As previously detailed above in Section 4.2.2.4, visibility of the proposed Lackareagh turbines is mostly intermittent, with the turbines only appearing 'highly visible' from a small portion of the route. Thus, any cumulative effects with Fahy Beg turbines will be limited to these small portions of the road. The cumulative effects from VP04, VP07 and VP08 on the scenic route are reported in the Project LVIA Appendix 13-3 as follows:

> *VP04 (p.13): 'The permitted Fahy Beg turbines will be clustered around the southern aspect of Lackareagh Mt, visually separate from the proposed Lackareagh turbines. There will be a degree of in-combination visual effects where both developments are seen from the same location, particularly for southbound receptors on this part of the regional road'.*

> *VP07 (p.22): '...it is anticipated that permitted Fahy Beg turbines, located at the south end of Glenomra Valley off the right edge of the image, are likely to be visible sequentially with the proposed turbines in a journey scenario along SR-26'.*

> *VP08 (p.24): 'The proposed turbines do not substantially contribute to the cumulative effects, as only blades and blade-tips will be visible directly behind the Fahy Beg turbines. The greatest magnitude of change is attributed to the permitted Fahy Beg Wind Farm turbines, all of which have partial visibility of towers and primarily full blades in close proximity to the settlement infrastructure'.*

Given that the scenic route has potential for in-combination or sequential cumulative effects on only a small portion of the route, combined with the previously detailed points in Section 4.2.2.4, namely the route being relatively not well-trafficked, the route showing a natural variation in the nature and degree of visual effects based on the position of the viewer and the design/siting of the proposed turbines not *'seriously hindering or obstructing'* the view, there is little support for *'severe'* cumulative landscape and visual effects as a result of both developments.

Fahy Beg Turbines are Not Visible from VP15. The issue of cumulative effects from VP15 in the River Ardclooney Valley (or Aillemore Area) is unfounded; its inclusion in the CCC Planner's Report indicates that the comprehensive assessment of photomontages provided in Appendix 13-3 was either not consulted or entirely dismissed.

Appendix 13-3 (p.44) of the Project LVIA reports clearly that, for VP15:

> *'No existing or proposed wind farms are visible from this viewpoint. Graphical modelling as part of the photomontage visual analysis determined that the permitted Fahy Beg turbines will not be visible due to topographical visual screening by Lackareagh Mt peak'.*

Visibility Westbound from Killaloe is Densely Screened. The issue of cumulative effects along The Gap Road westbound from Killaloe to Kilbane is unfounded and the assertion that the Proposed Development will *'dominate the landscape when viewed from the Gap Road from Killaloe to Kilbane'* is false, it again indicates that the comprehensive Route Screening Analysis results of the Project LVIA were either not consulted or entirely dismissed. We refer to the analysis, conducted on all roads extending from the Proposed Wind Farm site to Killaloe at 6km, which covers the area stated in this point. Below, Figure 4-5 extracted from the Project LVIA (p.13-18) shows that visual screening along the relevant section of The Gap Road is primarily 'Dense/Full' (shown in orange colour), meaning there is no visibility of the proposed turbines from most sections of road. Following this, Figure 4-6 extracted from the Project LVIA (p.13-17) shows a typical example of 'Dense/Full' visual screening within the study area, illustrating the degree of screening in this category.

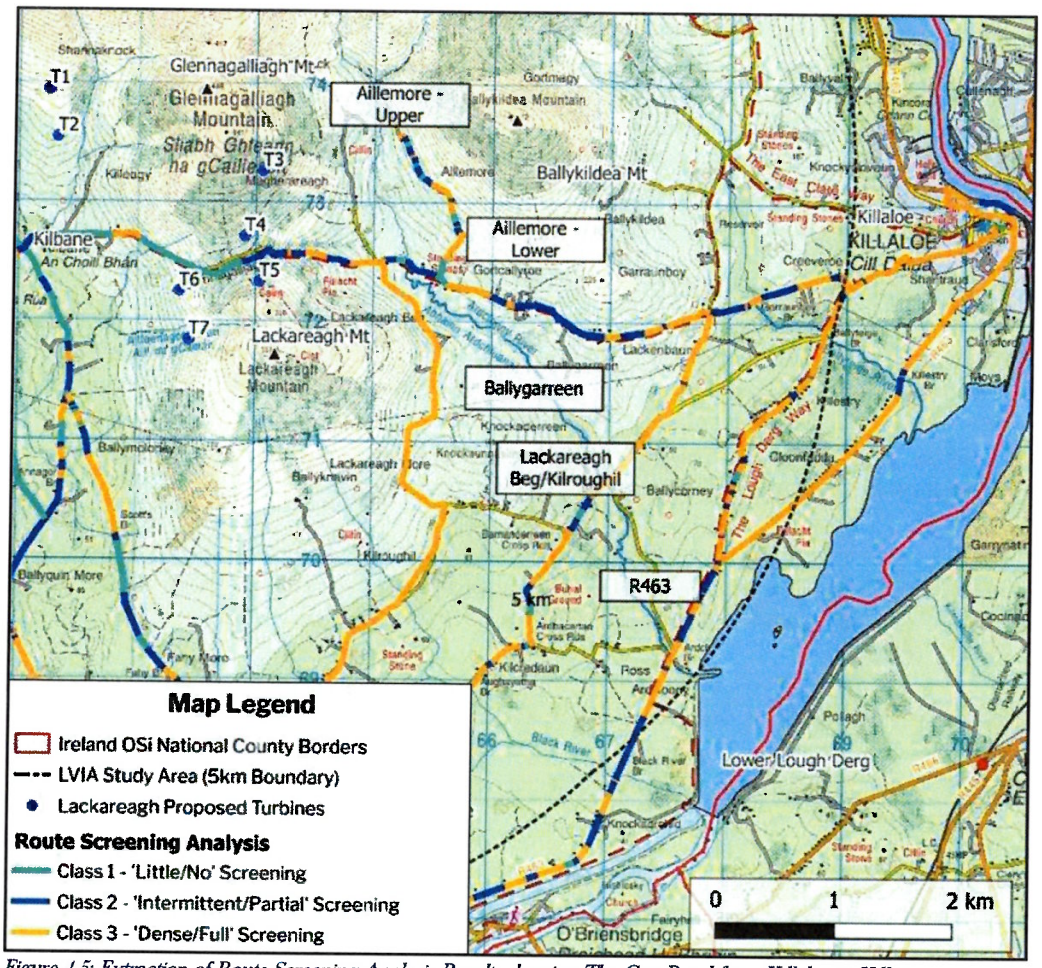


Figure 4-5: Extraction of Route Screening Analysis Results showing The Gap Road from Killaloe to Kilbane

Figure 4-6: Example of 'Dense/Full' Visual Screening along Scenic Route SR-27/R463 Regional Road

Further to the above, small areas of 'Intermittent/Partial' visual screening and tiny instances of 'Little/No' visual screening are also present along the relevant stretch of The Gap Road from Killaloe westbound towards Kilbane; views from these areas of the road were comprehensively assessed for cumulative effects with respect to receptors on the local roads as well as residences in the area, represented by VP15 as well as VP03 called 'The Gap Road at Ballygarreen'. As reiterated above, VP15 has no cumulative visibility, despite its being in close proximity and at an elevated vantage point. For VP03,

the cumulative effects are reported in Appendix 13-3 (p.11) and were found to present visual balance as follows:

> *'Cumulative effects arise as three proposed turbines are visible in combination with the permitted Fahy Beg Turbines. There is a degree of visual balance as the two developments (proposed Lackareagh and permitted Fahy Beg) are clustered on slightly lower lands to either side of the central peak of Lackareagh Mt.'.*

Overall Cumulative Effects were Found to be Limited. Finally, the assertion that potential for cumulative landscape effects is '*significant*' is false, it again indicates that the cumulative effects sections of the Project LVIA and its associated appendices were either not consulted or was dismissed. The cumulative effects of the Proposed Development with all other permitted, proposed and existing wind farms within the 20km LVIA Study Area, not just Fahy Beg, was a primary focus of the Project LVIA, covered in all 15 no. VPs assessed. The key point from the findings of the cumulative assessment portion of the Project LVIA (p.13-51) reports limited impact, as follows:

> *'...that cumulative landscape and visual effects are limited to the relatively small number of receptors within the Glenomra Valley itself (comprising the Transitional Marginal Landscape type) due to the spatial enclosure provided by the well-defined ridgelines and landform characteristics'.*

Further to this, the Project LVIA notes that 'there is an accumulation of wind energy developments proposed in East Clare, particularly in the LCA-8 Slieve Bernagh Uplands, an area where wind energy is strategically directed in local planning policy (CWES)' and the cumulative effects summary (p.13-127) reports that overall 'Significant' cumulative effects were found to be limited:

> *'This LVIA has determined that the undulating and well-defined landform features and valleys in the Slieve Bernagh Uplands have the potential to reduce the extent of cumulative visual effects experienced by visual receptors in the area. Further, this LVIA notes that LCA-8 Slieve Bernagh Uplands has the capacity to absorb the Proposed Project and will have limited significant cumulative or in-combination effects with the other potential wind energy developments identified in this LVIA'.*

4.2.3.2. Prominence of Proposed Turbines T5 and T6 on Ridgeline

The CCC Planner's Report (p.52) states:

> *'Proposed T1 and T2 are considered to have the lowest level of visual impact due to the higher lands on Slieve Bernagh to the north and northwest, which provides a strong backdrop to the turbines.*
>
> *Proposed T5 and T6 are exceptionally prominent from numerous vantage points, due to their siting on a ridgeline / close to a ridge. They are the most prominent turbines due to the extent that they break the skylines'.*

Visual Impact is Measured Relative to Receptors, not by Individual Turbines. The implication that the Proposed Development should be refused on the basis that individual turbines have been assigned with a specific (i.e. *'lowest'* or *'prominent'*) level of visual impact is dismissive of the LVIA process. This is because the measure of individual turbines having low or high visual impact naturally varies greatly with distance and vantage point, as well as with geographical context and the context of receptor numbers and types, and the turbines must be considered and assessed as a visual unit in whole. The prominence of any individual turbine naturally increases as one travels closer to it, thus the LVIA process is not to assign prominence but to evaluate the degree of impact with respect to the project as a whole, its landscape and geographical setting, and the number and type of affected receptors.

Specifically to the quoted point above, proposed turbines T1 and T2 are sited at lower elevation in low-intensity agricultural landcover, while T5 and T6 are sited on either side of the ridgeline saddle between the mountain peaks in commercial forestry as well as low-intensity agriculture and are visible above the ridgeline from multiple vantage points; yet these are design choices contributing to the overall optimisation of project design to achieve functionality while meeting WEDG guidance (2006, 2019) recommendations for the appropriate landscape character type (detailed previously in Section 4.2.2.2.2).

Turbines Visible Above the Skyline is Considered Appropriate Wind Farm Design. From an LVIA perspective, it is questionable to suggest that viewing turbines against a backdrop is advantageous and beneficial in mitigating visual impacts.

Considering best practice guidance for the siting and design of wind farms (WEDGs, 2006, 2019) viewing turbines against a backdrop (e.g. a ridgeline) is not typically considered a preferable visual aesthetic from an LVIA perspective. Whilst viewing turbines against a distinct landform can be acceptable and utilised in a manner to balance the wind farm design (as is the case with proposed turbines T1 and T2), the preference for doing this is typically to strategically position turbines within the enclosure of a landform feature (i.e. in this case, the Glenomra Valley) to provide visual screening from sensitive receptors. When considering the suitability of 'backdrops', the context of the landscape and landscape type must be taken into account, considering characteristics such as the complexity or simplicity of landcover. From an LVIA perspective, it is generally considered best practice and preferable to design scenarios where the blades and hubs of wind turbines are viewed above the horizon so that the moving components are viewed against the sky. When the moving parts of turbines are viewed against the clutter and complexity of the visible landscape, this can cause visual confusion and would not be preferable from an LVIA perspective. The suitability of this depends on the landscape type and nature of landcover.

In the case of the Proposed Wind Farm sited in 'Transitional Marginal' Landscape', the landscape comprises a mix of commercial forestry and low-intensity agricultural land where there is a complexity to the landcover and landform. According to the siting and design guidance for this landscape type in the WEDGs (2006 p.59, 2019 p.111):

> *'As wind energy developments, for reasons of commercial viability, will typically be located on ridges and peaks, a clear visual separation will be achieved from the complexity of lower ground'.*

As shown in the photomontages included in the Project LVIA, the moving components of the proposed turbines sited at lower elevations in the Glenomra Valley (e.g. T1, T2, T3 and T4) are typically visible against backdrops of either mountain moorland or banks of commercial forestry where there is a simplicity to the landcover and clear visual separation from the complexity of agricultural lands of the lower valley. The proposed turbines at higher elevation (e.g. T5 and T6) are typically seen above the horizon, reducing visual clutter and confusion, which is deemed appropriate from an LVIA perspective.

Prominence of T5 and T6 is Visually Balanced and Affects Few Receptors. The assertion that proposed turbines T5 and T6 are *'exceptionally prominent from numerous vantage points'* is unwarranted, as was shown previously (see above Sections 4.2.2.4 and 4.2.3.1); the main reasons being that on-site appraisals and Route Screening Analysis showed a high degree of visibility only from a small portion of R466/SR-26 scenic route in Glenomra Valley west of the site, and extensive visual screening in the River Ardcloony Valley (or Aillemore area) east of the site.

The Project LVIA (pp.13-118 to 13-119, Section 13.7.3.3.2 Residential Context: Population Density and Arrangement of Dwellings) reports clearly on the impact and degree of prominence of the proposed turbines straddling the ridgeline, that is, T5 and T6 and also including T3 and T4, finding that only the blades of T6 show from the eastern side of the ridge and that the low number of residential receptors in the River Ardcloony Valley (or Aillemore area) will be impacted to the greatest degree by the

prominent turbines, with the visual effect being 'Moderate' owing to the low number and even spacing of the turbines as well as the avoidance of visual stacking:

> *'It is noted that only the proposed turbines anchored immediately outside the spatial enclosure of Glenomra Valley [meaning T3, T4 and T5] are visible from these vantage points [meaning VP03 and VP15]; the remaining turbines inside Glenomra Valley are not visible despite their close proximity to VP15 and [the photowire image] PW-H. Therefore, the number of proposed turbines impacting the view from these sites is low, though they are prominent in the view. While all towers and blades of T3, T4, and T5 are visible above the ridgeline, the turbines are evenly spaced across the landscape and avoid visual stacking from both vantage points'.*

Again, we refer to the advantage of turbines being sited along the ridgeline such that the visual complexity of the backdrop is minimised and avoids visual clutter, thereby achieving visual coherence in the surrounding landscape (recall previous paragraph on WEDGs siting and design guidance).

The Project LVIA (p.13-104, Section 13.7.3.2.1 Photomontage Viewpoint Assessment Outcomes) reports on the prominence of turbines and emphasises that the resulting 'Significant' effects are extensively limited, such that only a few receptors are affected by it:

> *'It is to be anticipated that wind farms inevitably cause some 'Significant' visual effects on proximate sensitive visual receptors due to the prominence of turbines within landscape views and the 'Substantial' magnitude of change which will arise in close proximity to a wind farm development. A key focus in this LVIA is identifying the scenarios where the greatest likelihood of significant effects occur. Significant residual visual impacts have been determined from three photomontage viewpoints (see Appendix 13-3). It is key to note that the residual significant impacts only occur for a small number of receptors and are not representative of effects on receptors in a vast proportion of the LVIA Study Area'.*

4.2.3.3 Representation of Landscape Changes by use of Photomontage Visualisation

The CCC Planner's Report (p.62) states:

> *'The photomontages are noted, and they particularly demonstrate the aforementioned visual impacts. It is also noted that they show the turbine emerging organically from the hillside. This is no visual representation of access roads, tree clearance, settlement ponds, swales etc many of which will remain in situ during the operation phase of development and will result in significant alteration to the landscape. While the photomontages are a useful assessment tool, they do not fully represent the landscape changes which will occur, particularly at a local level'.*

Visualisation of Non-Turbine Infrastructure is Not Required for a Robust LVIA. The implication that the photomontages prepared for the Proposed Development *'do not fully represent landscape changes'* at the local level is dismissive of the comprehensive impact assessments discussed and reported in the Project LVIA which follows the methods and processes set out in best practice guidance for Landscape and Visual Impact Assessment.

The purpose and methods of using photomontage visualisations are thoroughly addressed in the following sections and appendices of the Project LVIA, and summarised in the subsequent paragraph below:

- 13.1.3.1 Essential Aspects of Proposed Project from LVIA Perspective;
- 13.1.3.2 Range of Turbine Dimensions Assessed in this Chapter;
- 13.2 Brief Methodology and Assessment Criteria;
- 13.5.4 Viewpoint Selection: Photomontage and Photowire Locations;

- 13.7.3.3.1 Use of Photomontages & Photowires to Assess Close-Proximity Residential Receptors;
- Appendix 13-1 LVIA Methodology;
- Appendix 13-3 Photomontage Visual Impact Assessment Tables.

As set out in best practice guidance, LVIA must be proportional. It is not possible or necessary to produce a photomontage to show impacts from every receptor in an LVIA. The key focus within any LVIA should be on the aspects of the development likely to cause significant landscape and visual effects.

The Project LVIA utilised verified photomontages to visually represent and assess the essential aspect of the Proposed Development from an LVIA perspective, that is, the proposed turbines, deemed the most prominent element of the project by their tall, vertical nature. In addition, one non-turbine infrastructure—the proposed substation—was found to have potential for visibility from the designated scenic route R466/SR-26 from certain vantage points within the Glenomra Valley; a comprehensive impact assessment including photographic visualisation of the substation was included considering its potential for visual prominence as an element of above ground infrastructure (see Project LVIA, pp.13-107 to 13-109, Section 13.7.3.2.3 SR-26 View of Proposed Substation).

Regarding the assessment of non-turbine infrastructure, the Project LVIA states the following (p.13-3, Section 13.1.3.1):

> *'Ancillary elements of the Proposed Project are deemed to be less visually prominent than the proposed turbines; however, these components may also potentially give rise to localised landscape and visual effects. Although these ancillary elements are not the primary focus of the LVIA, they are also given due consideration and assessment in this Chapter'.*

Visual Effects and Visualisation of Non-Turbine Infrastructure and Other Elements are Assessed and Reported. The stated point about non-turbine infrastructure and other project elements being excluded from visualisation is unwarranted, as the visual effects of non-turbine elements are clearly addressed, reported and rationalised in the Project LVIA, and the visualisation of other elements is either presented in alternate form besides photomontage or is considered relative to project design elements i.e the Biodiversity Management and Enhancement Plan (BMEP) included as Appendix 6-4 in the submitted EIAR.

The inclusion of the above relevant comments suggests that the Visual Effects sections of the Project LVIA, as well as other relevant chapters and their supporting appendices in the submitted EIAR, namely Ch.4 Description, Ch.6 Biodiversity and Ch.9 Water, were either not consulted or were dismissed. This is supported by the following evidence detailed in the next paragraphs.

'Access roads' are an ancillary project element and the visual effects of which are reported in the Project LVIA, found to be 'Slight' considering their flat nature and localised visual impact, as well as the mitigation visual screening effects after proposed planting in the Biodiversity Management and Enhancement Plan (BMEP) included as Appendix 6-4 in the submitted EIAR (p.13-121, Section 13.7.3.4 Visual Effects: Ancillary Project Elements (Non-Turbine Components)):

> *'The proposed access roads and hardstand areas are flat features. They will be most visible within their immediate surroundings; therefore, any landscape and visual effects will be very localised. Every use will be made of the existing tracks within the site. Some tracks will be upgraded appropriately, construction of new roads will also be required to connect all components of the Proposed Project. In time, following establishment and maturity of planting proposed as part of the BMEP (Appendix 6-4), the site access road will be mostly visually screened from view, mitigating visual effects. Overall, visual effects are likely to be highly localised, Long-Term and will be Slight'.*

The other parts of the Proposed Development cited in the CCC Planner's Report were 'tree clearance, settlement ponds, swales, etc.' which are elements of biodiversity management and enhancement and drainage design, all forming fundamental elements of the Proposed Development design. The LVIA process does not present a visualisation of these project features in the Photomontage Booklet as they constitute localised changes to the immediate landscape around the site or are included in on-site alterations and will inherently have no visibility from the vast majority of the 20km LVIA Study Area; however, the impact of these items were considered as part of the impact assessment of in the LVIA, and elsewhere in the EIAR as follows.

'Tree clearance' is reported in Ch.6 Biodiversity of the original EIAR, summarised in the form of totalling the extent of habitat to be lost in Section 6.5.2.1 Effects on Habitat During Construction, see Table 6-14 (p.6-71). The table lists 15 affected habitat types, four of which relate to tree clearance and report the anticipated permanent losses as a result of the Proposed Development, ranging from 0.05ha to 3.30ha and less than 250m length of treelines. The loss of habitat will be mitigated through the establishment and enhancement of approx. 2,673m of planting comprising native broadleaved trees, shrubs and hedgerow habitat within the Proposed Wind Farm site. Planting will be of semi-mature specimens to ensure connectivity is immediate and will be of local provenance outlined in the Biodiversity Enhancement and Management Plan (BEMP), (Appendix 6-4). In addition, stone walls that have to be taken down will be re-instated where possible. Where stone walls are re-instated, they will be left to naturally re-colonise with vegetation.

'Settlement ponds' and 'swales' are elements of the drainage design, also known as 'stilling pond' system, built during the construction phase and retained during the operational life of the Proposed Development specifically with the intention of having no negative impact on the water quality of the site and its associated rivers and lakes, and consequently no impact on downstream catchments and ecological ecosystems; they are described in detail in Section 4.7 of Ch.4 Description, of the submitted EIAR and visualised in two places: first, Figure 4-25 of the same chapter shows an illustrative example of a stilling pond system; second, settlement ponds are visualised in Appendix 4-8 of the same Ch.4, presenting technical drawings of all drainage design elements.

The Applicant is confident that the detailed descriptive impact assessment in the Project LVIA is proportionate, appropriate and robust to represent and assess the effects of ancillary infrastructure as described above.

4.2.4 Summary Conclusion

As outlined in the LVIA (Ch.13 of the submitted EIAR) and detailed in this appeal document, the following key points justify the permission of the Proposed Development from an LVIA perspective and are contrary to the opinions and reasons cited by CCC in their Refusal and in the CCC Planner's Report:

- Slieve Bernagh Uplands LCA-8 has low sensitivity;
- Impact on designated scenic amenities does not preclude development;
- Scale and siting of the Proposed Development in open and exposed landscape is appropriate;
- Spatial enclosure of Glenomra Valley limits long-range views;
- Local prominence of proposed turbines has limited impact;
- Greatest visual impact on scenic route affects only a small stretch;
- Scenic Route R466/SR-26 has relatively few receptors;
- CCDP policy wording on scenic route impact is adhered to;
- Landscape character effects range from Imperceptible to Slight;
- Objectives CDP14.2 and CDP14.7 are not contravened;
- Visibility of the proposed turbines from R466/SR-26 is mostly Intermittent/Partial;
- Fahy Beg turbines are not visible from viewpoint VP15;
- Visibility westbound from Killaloe is densely screened;

- Overall cumulative effects were found to be limited;
- Turbines breaking the skyline is considered good wind farm design;
- Prominence of proposed turbines T5 and T6 is visually balanced and affects few receptors;
- Visualisation of non-turbine infrastructure is not required for a robust LVIA;
- Visual effects and visualisation of non-turbine infrastructure and other elements are assessed and reported.

Following the clarification and explanation provided above, it is clearly demonstrated that the issues raised in the reason for refusal one has been comprehensively addressed and that the information before ABP is adequate and that no deficiencies in information remain. As such, the Proposed Development will not seriously injure the visual amenities of the area or negatively alter the character of the rural landscape to a significant degree; moreover, the visual impact to R466/SR-26 scenic route will be limited to a small section of the route and a small number of local receptors. As such, the Proposed Development will not be contrary to Objective CDP14.2 and 14.7 of the Clare County Development Plan 2023-2029 and will not be contrary to the proper planning and sustainable development of the area.

4.3 Reason for Refusal 2- Hydrological Impact on European Sites

Clare County Council's second reason for refusal is stated as follows:

> 2. *The Planning Authority notes that there is hydrological connectivity between the proposed development site and both the Lower River Shannon SAC, and the River Shannon and River Fergus Estuaries SPA. The majority of the habitats and species for which both European sites are designated are water dependent habitats and species with requirements for high to pristine water quality.*
>
> *Having regard to the particulars submitted with the planning application, with particular reference to the peat and spoil management proposals, surface water management plans, and the WFD Assessment contained in Appendix 9-3 of the submitted documents, the Planning Authority, as the competent authority in the appropriate assessment process, is unable to conclude, beyond reasonable scientific doubt, that the proposed development will not adversely affect the integrity of downstream European sites. The proposed development would be contrary to Objective CDP15.3 of the County Development Plan and contrary to the proper planning and sustainable development of the area.*

4.3.1 Grounds of Appeal against Refusal Reason 2

This refusal reason relates to hydrology and the potential effect of the Proposed Development on downstream watercourses and designated sites. In the interest of clarity, this response is structured so as to address the hydrological issues raised and following that the implications of those hydrological concerns on biodiversity, namely on designated sites.

4.3.1.1 Water

This response was prepared by Hydro-Environmental Services (HES) who prepared Chapter 8 of the EIAR: Land, Soils & Geology, and Chapter 9 of the EIAR: Water, along with the detailed drainage design for the Proposed Development.

The response has been prepared by Michael Gill, the Managing Director of HES, and is included as **Appendix 2** to this response document. A summary of the response provided by HES is included below, and is structured as follows:

- Water Framework Directive (WFD) Compliance Assessment
- Cumulative Hydrological Assessment

4.3.1.1.1 Water Framework Directive Compliance Assessment

The Planning Authority raised concerns regarding the screening process used in the WFD Compliance Assessment, included as Appendix 9-3 of the EIAR, and the potential effects on Doon Lough and Doon Lough NHA. The Planner states that they:

"don't agree with the consensus that because Doon Lough provides a dilution effect all surface waterbodies downstream of Doon Lough are screened out of the compliance assessment. The author indicates that the lough acts as a hydrological buffer between the Proposed Wind Farm and the Proposed Grid Connection Route and downstream watercourses, however, this also implies that the lough is impacted most by any pollution from either the construction and/or operation."

The statement that the WFD Compliance Assessment suggests that Doon Lough or Doon Lough NHA will be impacted by the Proposed Project is incorrect. The WFD Compliance Assessment states that there will be no change in the WFD status of any downstream surface waterbody as a result of the Proposed Project. The implementation of the prescribed mitigation measures ensure that the downstream surface waterbodies and protected areas are guarded from any potential deterioration. This applies to all waterbodies and protected areas screened into the assessment. By protecting these 'screened in' waterbodies and designated sites which are in close proximity to the Proposed Project site, all other downstream waterbodies and designated sites are also protected.

For clarity, Section 3.1 and 3.2 in Appendix 2, comprehensively describes the basis for the WFD Compliance Assessment screening process and the reference to Doon Lough and its associated dilution effects, the conclusions of the WFD Compliance Assessment and summarises how the concerns regarding Doon Lough expressed in the Planning Authority's Planning Report are unfounded.

As identified in Appendix 9-3, the WFD Compliance Assessment concludes that mitigation for the protection of surface water during the construction, operation and decommissioning phases of the Proposed Development will ensure that the qualitative and quantitative status of all receiving waterbodies will not be altered by the Proposed Development.

4.3.1.1.2 Cumulative Hydrological Assessment

The Planning Authority raised concerns regarding the delineated cumulative hydrological study area. The Planning Authority states that:

> *"the inverse of this is that both Doon Lough and Lough Derg can take impacts from the proposed development and assimilate them based on the dilution factor"*

and

> *"this would again indicate that both lakes will be impacted and take any potential pollutants arising from the construction or ongoing operation of the proposed windfarm".*

Neither of these statements represent what was included in the EIAR. The statements indicate a significant misunderstanding of the cumulative hydrological assessment as presented in Section 9.5.7 of the EIAR.

The cumulative hydrological assessment does not in any way suggest that Doon Lough or Lough Derg will be impacted by the Proposed Development, nor are they [Doon Lough or Lough Derg] considered as a buffer to downstream impacts. Such an approach would be illogical considering the WFD and the Surface Water Regulations (S.I. no. 272/2009 as amended) applies to all waterbodies irrespective of their locations relative to the Proposed Development site.

These lakes were used to delineate the downstream extent of the cumulative hydrological study area due to the significant volumes of water which they contain as well as the area and runoff occurring from the upstream catchments. The assessment however does not indicate that these waterbodies will be impacted by the Proposed Development. Mitigation measures detailed in the EIAR for the protection of surface water quality/quantity will ensure that there is no significant effect on any watercourse in the vicinity or downstream of the Project Development site.

For clarity, Section 4.1 and 4.2 in Appendix 2 comprehensively describe the basis for the delineated cumulative hydrological study area, the conclusions of the cumulative hydrological assessment and highlight how the concerns expressed in the Planning Report are unfounded.

The cumulative hydrological assessment is underpinned by the mitigation measures prescribed in Chapter 9 of the EIAR for the protection of surface water quality/quantity.

The hydrological/hydrogeological impact assessment for the Proposed Project is presented in Chapter 9, and precedes the cumulative hydrological assessment, and concludes that with the implementation of the prescribed mitigation measures that there will be no significant residual effects on the hydrological environment.

4.3.11.3 Key Surface Water Protection Mitigation Measures

A comprehensive range of surface water protection mitigation measures are presented in Chapter 9: Water, of the EIAR. For clarity, a summary of the mitigation measures are included below:

- The key surface water control is that there will be no direct discharge of any wind farm runoff into any local watercourses or into the existing drainage network at the Proposed Wind Farm site;
- This will be achieved through avoidance (i.e. self-imposed buffer zones were used during the design of the Proposed Development to avoid sensitive hydrological features) and the proposed surface water drainage measures;
- Two distinct methods will be employed to manage drainage water within the Proposed Development:
  - Firstly, clean water will be kept clean by avoiding disturbance to existing drainage features, minimising any works in or around existing drainage features and by diverting clean water around the proposed works areas; and,
  - Secondly, all drainage waters from the proposed works areas that may carry silt or sediment, will be routed towards silt traps and settlement ponds prior to controlled diffuse release via buffered outfalls.
- The Proposed Development drainage system comprises of source controls (interceptor drains, small working areas etc.), in-line controls (such as check dams, sand bads, silt fences etc) and treatment systems (settlement ponds and sediment traps):
  - Each individual element of the treatment train is not intended to be a standalone or a single treatment but rather forms part of a treatment train of water quality improvements/control systems;
  - The drainage measures will be installed prior to the onset of construction works;
  - Source controls are designed to reduce the volume of water requiring treatment and include the use of interceptor drains, small working areas, covering stockpiles and the cessation of works during periods of heavy rainfall;
  - Runoff from the works areas will be collected in collector drains and treated and attenuated via in-line controls and treatment systems such as check dams, silt traps, silt fences and settlement ponds;
  - All water will be treated to a high quality and slowed down prior to release; and,
  - The treated water will be released in a diffuse and controlled manner through the use of level spreaders and vegetation filters and will not be directly discharged into any watercourse.
- Furthermore, all works will be completed cognisant of weather forecasts and no works will be completed during or within 24 hours of heavy rainfall events. This will minimise the risk of the entrainment of suspended solids in runoff;
- Best-practice mitigation measures will also be employed in relation to the protection of surface water quality during felling works including the application of buffer zones, the use of brash mats, suitable machine combinations and the installation of silt traps in advance of all felling works;
- Additional mitigation measures will be implemented where works are proposed within the hydrological buffer zones including the use of double or triple silt fences and the completion of works during dry weather conditions;

- An inspection and maintenance plan for the onsite construction drainage system will be prepared in advance of construction activities and will include regular inspections of the drainage systems and the removal of any excess build-up of silt which may decrease the effectiveness of the drainage system;
- The proposed drainage system has also been designed to account for climate change effects on rainfall with the settlement ponds designed for the 1 in 10-year flows plus a 20% allowance; and,
- Preventative measures relating to fuels and concrete management are also identified in Chapter 9 of the EIAR.

These mitigation measures are tried and trusted, best-practice mitigation measures for the protection of surface water quality and are used at construction sites across the country.

4.3.1.1.4 *Summary*

HES completed a comprehensive hydrological/hydrogeological impact assessment, WFD Compliance Assessment and cumulative hydrological impact assessment for the Proposed Development which concluded that there will be no significant effects on the local and downstream hydrological/ hydrogeological environment as a result of the Proposed Development.

The reference to the dilution capacity of Doon Lough and Lough Derg solely relate to the early WFD screening process and also the delineation of the cumulative hydrological study area and are completed at the earliest stages of assessment which do not consider the mitigation measures prescribed in the EIAR. The WFD Compliance Assessment and the cumulative hydrological impact assessment do not in any way suggest that Doon Lough, Doon Lough NHA, Lough Derg will be impacted by the Proposed Project, nor are they considered as a buffer to downstream impacts.

The WFD Compliance Assessment and the cumulative hydrological impact assessment rely on the implementation of strict mitigation measures for the protection of water quality and quantity of all waterbodies at and downstream of the Proposed Development site. The mitigation measures, detailed in Section 4.3.1.1.3 above and further in Chapter 9: Water, of the EIAR are designed to ensure that the small streams and rivers which drain the Proposed Development site do not experience any deterioration in water quality/quantity as a result of the Proposed Development. By protecting these proximal watercourses and headwater streams from potential effects, all other downstream watercourses and designated sites are also protected from potential effects. The Proposed Development will not cause a deterioration in the WFD status of any waterbody or protected area and will not jeopardise the WFD objectives to achieve 'Good' status in the future. The Proposed Project is therefore compliant with the requirements of the Water Framework Directive (2000/60/EC).

Furthermore, the Planning Authority states that the cumulative assessment is at odds with the conclusions of the NIS which indicate that mitigation measures will be needed to protect surface water quality in Doon Lough and Lough Derg. This interpretation is completely misguided as the cumulative assessment also relies upon the mitigation measures prescribed in the preceding sections of the EIAR. The Proposed Project will not result in any effects on downstream designated sites and is therefore complaint with objective 15.3 of the County Development Plan and the EU Habitats Directive.

4.3.1.2 Biodiversity & Appropriate Assessment

This response has also been prepared by Neansaí O'Donovan (B.Sc.) of the MKO Ecology team who prepared Chapter 6 of the EIAR: Biodiversity, and the Appropriate Assessment Screening Report (AASR), and Natura Impact Statement (NIS). Neansaí has over three years' experience in ecological consultancy and has completed Appropriate Assessment reports and Ecological Impact Assessments for a range of project types, including commercial infrastructure, transport infrastructure and forestry.

This report has been reviewed by Sarah Mullen (B.Sc., M.Sc., Ph.D., ACIEEM). **Sarah Mullen is a Project Director at MKO, with over 8 years' professional experience in consultancy. Sarah oversees**

MKO's Ecology team. Her key strengths and areas of e xpertise are in Appropriate Assessment of plans and projects, Ecological Impact Assessment, Flora and Fauna surveys and project management for projects across a wide range of sectors.

In relation to European Designated Sites, the Planning Authority as the competent authority in the appropriate assessment process, has identified that they are unable to conclude, beyond reasonable scientific doubt, that the Proposed Development will not adversely affect the integrity of downstream European sites.

The Appropriate Assessment Screening Report (AASR) prepared by MKO to accompany the planning application for the development identified hydrological connectivity between the Proposed Project site and the following European Sites: Lower River Shannon SAC and River Shannon and Fergus Estuary SPA. Therefore, in the absence of mitigation, a potential pathway for likely significant effects on these European Sites due to deterioration of water quality and habitat degradation during construction, operation and decommissioning of the Proposed Development was identified. As a result, an NIS was prepared by MKO to assess the potential for adverse effects on these European Designated Sites.

The MKO Ecology team utilised submitted EIAR Chapter 9 Water and its relevant appendices to ensure a robust assessment of the potential for adverse effects on these European designated sites from a hydrological perspective. In specific relation to the hydrological connectivity of the Proposed Development to the Lower River Shannon SAC and River Shannon and River Fergus Estuaries SPA, Sections 5.1.2 and Section 5.1.4 of the NIS provide a robust overview of these European Sites and any potential for adverse effects as a result of the Proposed Development. This included the identification of Qualifying Interests (QIs) and Special Conservation Interests (SCIs) on which a potential pathway for adverse effects due to deterioration of water quality was identified. Where a potential for adverse effects on QI/SCI habitat/species was identified, the relevant receptor underwent further assessment (within the identified sections of the NIS above).

Following this, the NIS outlined a range of detailed mitigation measures in Sections 6.5.2.1.2, 6.5.3.1.1, 6.5.4 of the document (based on those prescribed in Chapter 9 of the EIAR and summarised above in Section 4.3.1.1.3) to ensure that there would be no significant deterioration of water quality in any downstream waterbodies, thereby ensuring that there is no potential for adverse effects on any downstream European Sites or their Qualifying Interests (QIs) and/or Special Conservation Interests (SCIs) during the construction, operation or decommissioning of the Proposed Development. The NIS concludes that:

> '*Where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur has been robustly blocked through the use of avoidance, appropriate design and mitigation measures as set out within this report and its appendices. The measures ensure that the construction and operation of the Proposed Project does not adversely affect the integrity of European sites.*'

and

> '*in view of best scientific knowledge, on the basis of objective information, there is no potential for adverse effect on the identified QIs/SCIs and their associated targets and attributes, or on any European Site Potential pathways for effect have been robustly blocked through measures to avoid impacts and the incorporation of best practice/mitigation measures into the project design.*'

The Planning Authority, when undertaking their Appropriate Assessment acknowledges that in relation to water quality and downstream European Sites '*Detailed mitigation measures related to this issue are contained in both the NIS and the EIAR.*' The Planning Authority when undertaking their Appropriate Assessment also states:

'The Planning Authority is satisfied that the mitigation for the protection of surface water will ensure that the qualitative status of the receiving Surface Water Bodies will not be altered.'

The concerns raised by the Planning Authority in relation to Doon Lough (Doon Lough NHA) and Lough Derg (both located downstream of the Proposed Development) and the premise that these waterbodies will provide a buffering/dilution effect for potential effects on downstream European Sites, has been addressed by HES in their response above.

As identified in HES' Response included as Appendix 2 and summarised above, the WFD Compliance Assessment and the cumulative hydrological impact assessment do not in any way suggest that Doon Lough, Doon Lough NHA, or Lough Derg will be impacted by the Proposed Development, nor are they considered as a buffer for potential effects on downstream European Sites.

As outlined in Section 9.5.2.18 in Chapter 9 of the EIAR: Water, '*proven and effective measures to mitigate the risk of surface and groundwater contamination have been proposed which will break the pathway between the potential source and the downstream receptor. These mitigation measures will ensure that surface water runoff from the Proposed Project site will be equivalent to baseline conditions and will therefore have no impact on downstream surface water quality and/or the status or ecology of the protected species and habitats within the designated sites. The residual effect is considered to be Negative, imperceptible, indirect, short term, unlikely effect on downstream designated sites.'*

As stated in the HES response above '*the implementation of the prescribed mitigation measures [within the WFD Compliance Assessment] ensure that the downstream surface waterbodies and protected areas are guarded from any potential deterioration. This applies to all waterbodies and protected areas screened into the assessment. By protecting these 'screened in' waterbodies and designated sites which are in close proximity to the Proposed Project site, all other downstream waterbodies and designated sites are also protected.*'

The mitigation measures for the protection of water quality serve to protect all downstream waterbodies. This includes Doon Lough, Lough Derg, any downstream European Sites as well as any Natural Heritage Areas (NHAs) or proposed Natural Heritage Areas (pNHAs). This is comprehensively supported by HES, who completed a comprehensive hydrological/hydrogeological impact assessment, WFD Compliance Assessment and cumulative hydrological impact assessment for the Proposed Development which concluded that there will be no significant effects on the local and downstream hydrological/ hydrogeological environment as a result of the Proposed Development. ¬

4.3.2 Summary Conclusion

Following the clarification and explanation provided above, it is clearly demonstrated that the issues raised in the reason for refusal two have been comprehensively addressed and that the information before ABP is adequate and that no deficiencies in information remain. The Proposed Development will not have an adverse effect on any European Site, will not be contrary to Objective CDP15.3 of the Clare County Development Plan 2023-2029 and will not be contrary to the proper planning and sustainable development of the area.

4.4 Reason for Refusal 3 – Cumulative Effects on Birds

Clare County Council's second reason for refusal is stated as follows:

3. *It is an objective of Clare County Council, under Objective CDP15.12 of the Clare County Development Plan 2023-2023 to inter alia to promote the conservation of biodiversity through the protection of sites of biodiversity importance and wildlife corridors, both within and between the designated site and the wider plan area. Having*

regard to the importance of the area for multiple bird species, as evidenced by the survey results submitted with the development proposal, it is considered that there is significant potential for cumulative effects through the in-combination effects of other proposed and permitted windfarm developments in the area, all of which contain significant numbers of birds of conservation concern and red-listed bird species.

In the absence of a strategic level cumulative assessment of the impact of the construction of a large number of turbines within one geographical area (66 turbine proposed or permitted), the Planning Authority cannot satisfactorily determine that the proposed development will not give rise to, or contribute to, significant or adverse effects on either the Special Conservation Interests of the Special Protection Areas in the zone of influence of the proposed development, Birds of Conservation Concern or on the Red List.

Having regard to the foregoing, the Planning Authority considers that the proposed development would significantly diminish the biodiversity value of the area, would be contrary to Objective CDP15.12 of the Clare County Development Plan 2023-2029 and would be contrary to the proper planning and sustainable development of the area

4.4.1 Grounds of Appeal against Refusal Reason 3

This response has been prepared by Padraig Cregg, a Principal Ornithologist with MKO and has over eleven years of experience working in environmental consultancies. Padraig holds a BSc (Hons) in Zoology and Masters in Evolutionary and Behavioural Ecology. Prior to taking up his position with MKO in December 2018, Padraig worked as a Senior Ornithologist and held previous posts with TOBIN Consulting Engineers, Energised Environments Ltd in Scotland, WSP Environment and Energy Ltd in Scotland and BirdWatch Ireland. Padraig has specialist knowledge in designing, executing and project managing ornithological assessments, primarily in the renewable industry. Padraig's key strengths and areas of expertise are in ornithology and ecology surveying and in writing Natura Impact Statements (NIS) and the Biodiversity chapter of Environmental Impact Assessment Reports (EIAR) to accompany planning applications.

This refusal reason relates to Birds, and the potential for significant cumulative impacts to result from the number of permitted and proposed turbines in the wider surroundings of the Proposed Development. It is of note that the Planning Authority considers the Proposed Development alone to be unlikely to significantly affect the local avian community. They state the following:

> *"The extensive bird surveys undertaken by the applicant are generally robust and the development, considered in isolation, is unlikely to significantly impact on bird species in the locality."*

The concern relates to the cumulative effect of the 66 No. permitted or proposed turbines in the "relatively small geographical area". The following was stated:

> *"However, at present there are a total of 66 no. turbines permitted/proposed in a relatively small geographic area and there is significant concern in relation to the potential cumulative effects of the overall developments proposed in the area."*

In effect, the Planning Authority has stated that if there were 66 No. turbines within this geographical area this would exceed a threshold for acceptable change and significant cumulative effects would result. While the threshold was not specified, it is of note that the Planning Authority did not state that the permitted turbines alone meet that threshold. It, therefore, follows that some number of proposed in addition to permitted turbines would be permissible before the threshold is crossed for significant cumulative effects. This being the case, it further follows that a grant of planning permission for a relatively benign development such as the proposed Lackareagh Wind Farm (which has been

acknowledged as such by the Planning Authority) is highly unlikely to contribute to significant negative cumulative effects. The rationale for this assertion is elaborated further in the below detailed analysis of cumulative effects within this "geographical area".

This response first briefly summarises the EIAR cumulative assessment findings (for ease of reference) and then provides additional information.

As stated in the EIAR and reiterated herein, no significant negative cumulative effects are predicted to result from the Proposed Development. Section 7.9.2 of the EIAR, provides a detailed species-specific cumulative impact assessment for the following key ornithological receptors: hen harrier; peregrine, kestrel, red grouse, snipe, buzzard and sparrowhawk. These are the "birds of conservation concern" that occurred, with any regularity onsite. In undertaking the cumulative assessment consideration was given to the predicted impacts from surrounding existing, permitted and proposed development for shared key ornithological receptors. An assessment was also provided on the relative ecological value of the habitats present. In addition, consideration was given to the commitments of various projects to undertake enhancement measures for the benefit of the local avian community, namely the following projects, permitted Carrownagowan, proposed Oatfield and proposed Knockshanvo wind farms. Taking into consideration the reported effects at other wind farms (following enhancement measures), the ecological value of the habitats present and the predicted effects of the Proposed Project, no significant residual additive, antagonistic or synergistic effects were identified. The below-following paragraphs serve to further corroborate the findings of the cumulative assessment as submitted in the EIAR and provide a further "strategic level" assessment of potential cumulative effects as requested by the Planning Authority.

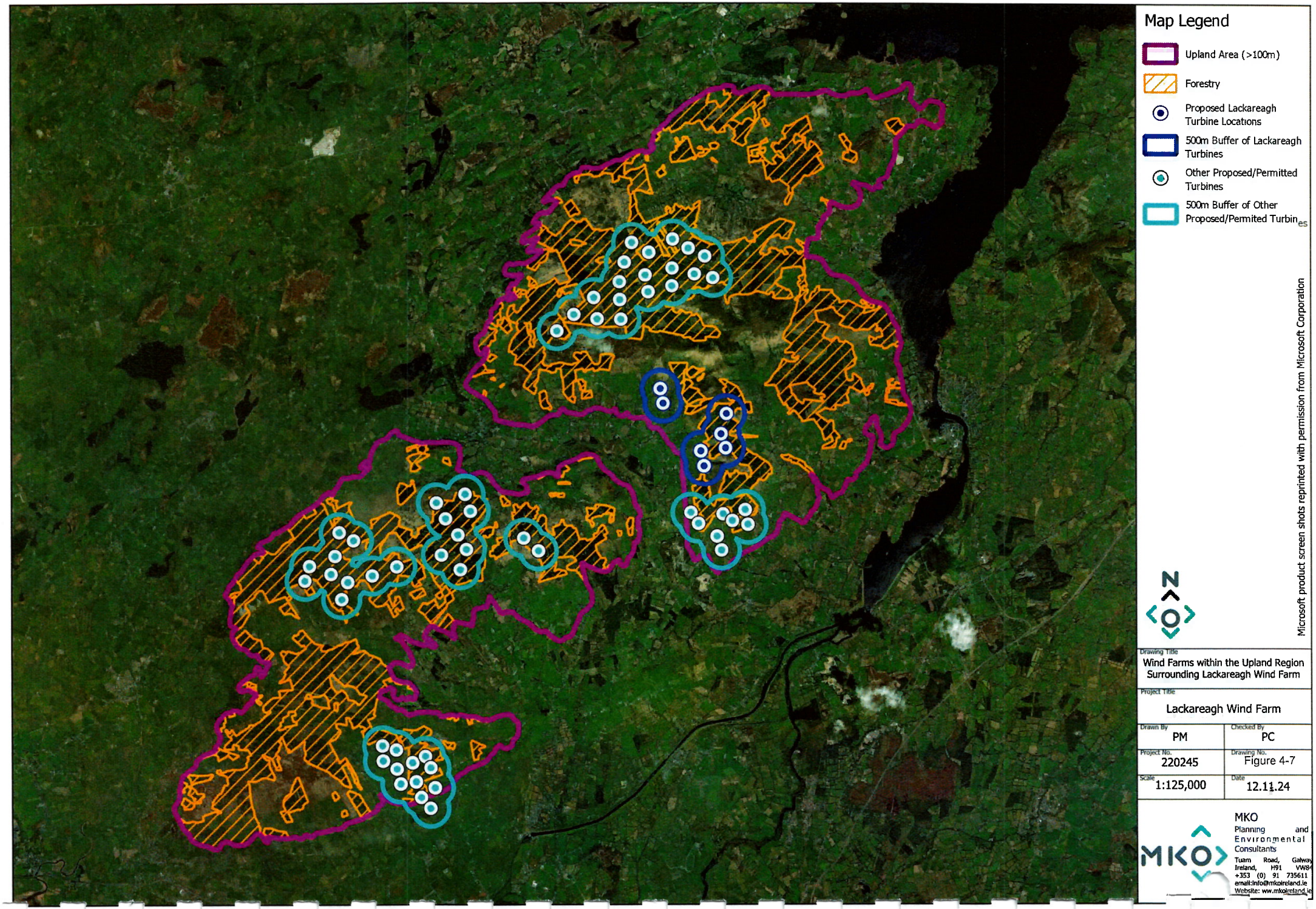
An analysis was undertaken that focused on the upland area surrounding the Proposed Development for three key reasons:

- Firstly, the Proposed Development is sited in these uplands;
- Secondly, it is largely one coherent ecological unit that contains a contiguous mosaic of similar habitats that likely contain similar species as occurred within the Proposed Development;
- And finally, as this is where the 66 No. proposed/permitted turbines mentioned by the Planning Authority are located.

It is noted (as per EIAR Table 7-22) that there are three single existing turbines located to the south and outside of these uplands (as per Figure 4-7 Birds Cumulative below). Owing to their scale and their separation distance from the Proposed Development/the surrounding uplands, cumulative impacts are predicted to be effectively zero.

A GIS mapping exercise was undertaken that aimed to quantify the amount of land within the uplands that is unlikely to be significantly impacted by the presence of turbines. Impacts were predicted to be restricted to the area near a turbine. Near to a turbine was defined as within 500m. This 500m distance was chosen as Pearce-Higgins *et al.* (2009) identified, for a range of species, significant avoidance of turbines between 250m and 500m. It therefore follows that significant effects are unlikely at distances greater than 500m.

- In undertaking the GIS mapping exercise, it was found that by including lands above 100m in elevation a reasonable approximation of the upland area where the wind farms mentioned by the Planning Authority occurred, namely: the permitted Carrownagowan, permitted Fahy Beg, proposed Lackareagh, proposed Oatfield, proposed Knockshanvo and proposed Ballycar wind farms. Please see Figure 4-7 for details. The GIS exercise provided the following results.


Map Legend
Upland Area (>100m)
Forestry
Proposed Lackareagh Turbine Locations
500m Buffer of Lackareagh Turbines
Other Proposed/Permitted Turbines
500m Buffer of Other Proposed/Permited Turbines
Microsoft product screen shots reprinted with permission from Microsoft Corporation
N
Drawing Title
Wind Farms within the Upland Region Surrounding Lackareagh Wind Farm
Project Title
Lackareagh Wind Farm
Drawn By
PM
Checked By
PC
Project No.
220245
Drawing No.
Figure 4-7
Scale
1:125,000
Date
12.11.24
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The total upland area (>100m elevation) is 17,218ha and of this, 1,254ha[21] (7.3%) is within 500m of a permitted turbine. It is noted that there are no existing turbines within this upland area. The two main land uses in these uplands are forestry and pastoral agriculture which is the 'open habitat' mentioned below. There is the following breakdown of forestry and open habitat.

- The total area of forestry = 6,682ha (38.8% of the total upland area)
    - Forestry greater than 500m from permitted turbines = 5,802ha (or 86.8% of the forestry).
    - Forestry greater than 500m from permitted and the proposed Lackareagh Wind Farm = 5,675ha (or 84.9% of the forestry).
    - Forestry greater than 500m from permitted and all proposed turbines (incl. Lackareagh Wind Farm) = 4,726ha (or 70.7% of the forestry)[22].
- The total area of open habitat = 10,536ha (61.2% of the total upland area)
    - Open areas greater than 500m from permitted turbines = 10,162ha (or 96.5% of the open habitat).
    - Open area greater than 500m from permitted and the proposed Lackareagh Wind Farm is 9,905ha (or 94.1% of the open habitat).
    - Open area greater than 500m from permitted and all proposed turbines (incl. Lackareagh Wind Farm) is 5,554ha[23] (or 52.7% of the open habitat).

Having undertaken the above analysis of the available area within the surrounding uplands the following is of note:

- There is currently a low density of turbines permitted within these uplands and no existing turbines. Only 7.3% of the land is within 500m of a permitted turbine.
- If the proposed Lackareagh Wind Farm was granted planning permission, there would continue to be a low density of turbines in this area.
- If all the proposed wind farms received planning permission and were built, there would continue to be 10,280ha greater than 500m from a turbine. This would continue to constitute a significant amount of upland habitat.

In summary, there is currently a low density of turbines in these uplands, the addition of the Proposed Development would not significantly alter that situation and if all proposed wind farms were built there would continue to be a large area of upland habitat (as per Figure 4-7). It is noted that in that scenario, these upland habitats would then also include large areas of enhancement lands managed for the benefit of local birds. This is of note as not just the quantity, but also the quality of the available habitat is key in maintaining a region's carrying capacity. A further consideration in the cumulative assessment is whether all the currently proposed wind farms are likely to receive planning permission. Based on the average national success rate of wind farm planning applications, it is unlikely all the proposed wind farms will receive planning permission. In the 18 months between January 2023 and June 2024, there were 13 wind farms granted and 14 refused by An Bord Pleánala. As previously outlined and reiterated here, a grant of planning permission for a relatively benign development such as the proposed Lackareagh Wind Farm site (which has been acknowledged as such by the Planning Authority) is

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[21] Permitted Carrownagowan = 930ha, permitted Fahy Beg (within upland area) = 324 ha
[22] Permitted Carrownagowan = 785ha, permitted Fahy Beg (within upland area) = 95 ha, proposed Lackareagh = 127ha, proposed Oatfield and proposed Knockshanvo combined = 817ha, proposed Ballycar = 132ha
[23] Permitted Carrownagowan = 145ha, permitted Fahy Beg (within upland area) = 229 ha, proposed Lackareagh = 257ha, proposed Oatfield and proposed Knockshanvo combined= 271ha, proposed Ballycar = 223ha

within the threshold for acceptable change and highly unlikely to contribute to significant negative cumulative effects.

4.4.2 Summary Conclusion

Following the clarification and explanation provided above, it is clearly demonstrated that the issues raised in the reason for refusal three have been comprehensively addressed and that the information before ABP is adequate and that no deficiencies in information remain. In summary, **no likely significant cumulative effects** are predicted. As such, the Proposed Development would not significantly diminish the biodiversity value of the area, would not be contrary to Objective CDP15.12 of the Clare County Development Plan 2023-2029 and would not be contrary to the proper planning and sustainable development of the area.

5. CONCLUSION

This First Party Appeal is being lodged in respect of the decision issued by Clare County Council to refuse planning permission for the Lackareagh Wind Farm proposed under Pl. Ref.24/60411. This First Party Appeal document has set out Clare County Council's reasons for refusal; a summary of their assessment of the Proposed Development with responses to issues raised provided by the Applicant where appropriate; An Bord Pleanála's obligations and a detailed Grounds of Appeal.

The Proposed Development, if permitted, will contribute towards national wind energy target of 9GW.

In summary, the Proposed Development is strongly supported by the following:

European & National Energy and planning policy, guidance and legislation, including

- REPowerEU and Renewable Energy Directive III,
- Project Ireland 2040 National Planning Framework (including the Draft Revised NPF),
- National climate and energy policy including the CAP 24, with regard to the acceleration of renewable energy roll-out and greenhouse gas emissions reductions,
- The Climate Act, which requires public bodies to carry out their functions in accordance with the national climate policies and objectives,
- The provisions of the Wind Energy Development Guidelines, Guidelines for Planning Authorities issued in 2006, and the Draft Wind Energy Guidelines issued in 2019,
- The National Energy Security Framework and Energy Security in Ireland to 2030 – Energy Security Package.

Regional and Local Level Policy, including:

- The Regional Spatial and Economic Strategy,
- The policies of the planning authority as set out in the Clare County Development Plan 2023-2029 in relation to achieving national climate and renewable energy targets and addressing climate change.

Other Matters, including

- Clare County Council's assessment of the EIAR and NIS, highlights that the site is considered to be acceptable for wind energy across a number of key environmental considerations. Any other perceived deficiencies in the planning application have been comprehensively addressed within the contents of this first party appeal report. The refusal reasons issued by Clare County Council in relation to the landscape and visual impact, the hydrological impact, and the impact on avian populations have been comprehensively addressed in this report.

In response to refusal reason 1, it is clearly demonstrated that the landscape and visual impact of the Proposed Development will not seriously injure the visual amenities of the area or negatively alter the character of the rural landscape to a significant degree. Moreover, the visual impact to R466/SR-26 scenic route will be limited to a small section of the route and a small number of local receptors. It is concluded that the landscape can accommodate the Proposed Development and will not have any significant impacts on the key scenic sensitivities of designated scenic routes or protected views.

In response to refusal reason 2, it has been demonstrated that the Planning Authority has misinterpreted the findings of the Water Framework Directive Compliance assessment and cumulative hydrological assessment which in turn has misinformed the Planning Authority's appropriate assessment. Further clarity has been provided to address the comments of the Environment Section and the Planning

Authority. It is concluded that the Proposed Development will not have an adverse effect on any European Site, will not be contrary to Objective CDP15.3 of the Clare County Development Plan 2023-2029 and will not be contrary to the proper planning and sustainable development of the area.

In response to refusal reason 3, it has been demonstrated that the Proposed Development, being relatively benign from an avian perspective, is unlikely to contribute to significant negative cumulative effects. Further information from a GIS mapping exercise undertaken has been provided. The exercise identified that there is currently a low density of turbines in the uplands area in which the Proposed Development and cumulative projects are located, and the addition of the proposed development would not significantly alter that situation. As previously outlined and reiterated here, a grant of planning permission for a relatively benign development such as the proposed Lackareagh Wind Farm site (which has been acknowledged as such by the planning authority) is within the threshold for acceptable change and highly unlikely to contribute to significant negative cumulative effects.

Ultimately, it is considered that this Proposed Development is in accordance with the provisions of proper planning and sustainable development and should be granted planning permission in respect of the suitability of the site and the need for renewable energy development. It is the policy of the government to rapidly accelerate the roll-out of renewable energy technology. However, if suitable sites such as the Proposed Development are ruled out, it is unlikely that any acceleration will be seen.

To combat the effects of climate change, Ireland must decarbonise its economy by 2050. There is no "silver bullet" to do so. It will take hundreds, if not thousands, of individual renewable energy projects to decarbonise the Irish economy. The scale of the challenge we face to decarbonise the Irish economy is enormous, but the climate change implications of not doing so are even greater. There is no other way to decarbonise a modern society except through renewable energy projects such as the Proposed Development.

Therefore, it is respectfully requested that the Board overturn this reason for refusal and resultingly grant planning permission for this development in accordance with the provisions of proper planning and sustainable development.

APPENDIX 1

CLARE COUNTY COUNCIL REFUSAL DECISION

COMHAIRLE CONTAE AN CHLÁIR | CLARE COUNTY COUNCIL

23rd October 2024

EDF Renewables Ireland Limited
c/o MKO Planning & Environmental Consultants
Tuam Road
Galway
H91 VW84

Ref No.: P24-60411
PERMISSION for development in the Townlands of Kilbane, Killeagy (Ryan), Shannaknock, Killeagy (Stritch), Killeagy (Goonan), Ballymoloney, Magherareagh and Lackareagh Beg, Co. Clare.

A Chara,

I refer to attached notification of the decision to refuse to grant permission for the above development.

Please find attached Determination under Section 177(V) of the Planning and Development Act 2000 (as amended).

Mise, le meas

ANNE O'GORMAN
STAFF OFFICER
PLANNING DEPARTMENT
ECONOMIC DEVELOPMENT DIRECTORATE

Comhairle Contae an Chláir
Clare County Council

CLARE COUNTY COUNCIL
PLANNING AND DEVELOPMENT ACT 2000 (AS AMENDED)
NOTIFICATION OF DECISION TO REFUSE TO GRANT PERMISSION
UNDER SECTION 34 OF THE ACT.

To: EDF Renewables Ireland Limited
c/o MKO Planning & Environmental Consultants
Tuam Road
Galway
H91 VW84

Planning Register Number: P24/60411

Valid Application Received: 29/08/2024

In pursuance of the powers conferred upon them by the above-mentioned Act, Clare County Council has by order dated 23rd October 2024 decided to refuse to grant permission for the following works:

(i) The construction of 7 no. wind turbines with the following parameters: a. Total tip height range of 179.5m – 180m, b. Rotor diameter range of 149m – 155m, c. Hub height range of 102.5m to 105m, (ii) Const ructon of associated foundations, hardstand and assembly areas; (iii) All associated wind farm underground electrical and communications cabling connecting the turbines and mast to the proposed electrical substation; (iv) Construction of 1 no. permanent 38kV electrical substation including a single-story control building with welfare facilities, all associated electrical plant and equipment, security fencing, entrance on to new access road, all associated internal underground cabling, drainage infrastructure, wastewater holding tank, retention separator tank, and all ancillary works, in the townland of Killeagy (Goonan), Co. Clare; (v) A Battery Energy Storage System within the 38kV electrical substation compound; (vi) 1 no. permanent meteorological mast of c. 36.5m in height, associated foundation and hard-standing area in the townland of Shannaknock; (vii) The permanent upgrade of 1 no. existing site entrance off the L7080 ('The Gap Road') for the provision of construction and operational access; (viii) Provision of 3 no. new permanent site entrances off the L7080 for the provision of construction and operational access; (ix) Provision of 3 no. new temporary site entrances off the L7080 for the provision of construction access; (x) Upgrade of existing tracks/ roads, including the L7080, and the provision of new site access roads, 4 no. watercourse crossings, junctions and hardstand areas; (xi) 1 no. temporary construction compound with temporary offices and staff facilities in the townland of Killeagy (Goonan); (xii) 1 no. temporary storage area in the townland of Killeagy (Goonan); (xiii) 1 n o. borrow pit in the townland of Killeagy (Goona n); (xiv) Peat and Spoil Management; (xv) Tree Felling to accommodate the construction and operation of the proposed development; (xvi) Operational stage site and amenity signage; and (xvii) All ancillary apparatus and site development works above and below ground, incl uding soft and hard landscaping and drainage infrastructure. 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. A Design Flexibility opinion issued by Clare County Council on 22nd April 2024 accomanies this application. The details unconfirmed in this application are the turbin tip height, rotor diameter and hub height. the range of parameters s under which the turbine dimensions will fall are specified on this notice and in the design flexibility opinion that accompanies this application. An Environmental Impact Assessm ent Report (EIAR) and Natura Impact Statement (NIS) have been prepared in respect of the proposed development and will be submitted to the Planning Authority with the application at In the Townlands of Kilbane, Killeagy (Ryan), Shannaknock, Killeagy (Stritch), Killeagy (Goonan), Ballymoloney, Magherareagh and Lackareagh Beg, Co. Clare.

Under Article 20 of the Planning and Development Regulations 2001 (as amended), the applicant shall remove the site notice following the notification of the Planning Authority's decision.

The Planning Authority in its decision has had regard to submissions/observations received (if any) in accordance with Planning and Development Regulations 2001 (as amended).

SIGNED on behalf of the said Council this 23rd day of October 2024.

Anne O'Gorman

STAFF OFFICER,
PLANNING DEPARTMENT
ECONOMIC DEVELOPMENT DIRECTORATE

SCHEDULE

1. The proposal site is located in the Slieve Bernagh Bog Landscape Character Area (LCA), in an area where windfarm developments are 'Open to Consideration'. In accordance with Objective WES10 of the Clare Wind Energy Strategy *wind energy developments in these areas can be considered on a case-by-case basis subject to viable wind speeds, environmental resources and constraints and cumulative impacts.*

   Having regard to the location of the site in the more sensitive and scenic area of the LCA (Lackereagh and Glenvagalliagh Mountains), the Planning Authority considers that the proposed turbine structures, by reason of their height (tip height up to 180m), scale and siting on this open, exposed and sensitive upland landscape would constitute a prominent feature on the landscape from both local and long range viewpoints, and would therefore seriously injure the visual amenities of the area. Furthermore, it is considered that the development would be highly visible from, and negatively impact upon, the R466 Regional Road which is a designated Scenic Route and would negatively alter the character of this rural landscape.

   Having regard to the foregoing and noting also the significant potential for cumulative impacts arising when the proposed development is considered in-combination with permitted and proposed wind farm development in the surrounding area, it is considered that the proposed development, would contravene Objectives CDP14.2 and CDP14.7 of the Clare County Development Plan 2023-2029 and would be contrary to the proper planning and development of the area.

2. The Planning Authority notes that there is hydrological connectivity between the proposed development site and both the Lower River Shannon SAC, and the River Shannon and River Fergus Estuaries SPA. The majority of the habitats and species for which both European sites are designated are water-dependent habitats and species with requirements for high to pristine water quality.

   Having regard to the particulars submitted with the planning application, with particular reference to the peat and spoil management proposals, surface water management plans, and the WFD Assessment contained in Appendix 9-3 of the submitted documents, the Planning Authority, as the competent authority in the appropriate assessment process, is unable to conclude, beyond reasonable scientific doubt, that the proposed development will not adversely affect the integrity of downstream European sites. The proposed development would be contrary to Objective CDP15.3 of the County Development Plan and contrary to the proper planning and sustainable development of the area.

3. It is an objective of Clare County Council, under Objective CDP15.12 of the Clare County Development Plan 2023-2023 to *inter alia* to promote the conservation of biodiversity through the protection of sites of biodiversity importance and wildlife corridors, both within and between the designated site and the wider plan area.

   Having regard to the importance of the area for multiple bird species, as evidenced by the survey results submitted with the development proposal, it is considered that there is significant potential for cumulative effects through the in-combination effects of other proposed and permitted windfarm developments in the area, all of which contain significant numbers of birds of conservation concern and red-listed bird species.

In the absence of a strategic level cumulative assessment of the impact of the construction of a large number of turbines withi none geographical area (66 turbine proposed or permitted), the Planning Authority cannot satisfactorily determine that the proposed development will not give rise to, or contribute to, significant or adverse effects on either the Special Conservation Interests of the Special Protection Areas inthe zone of influence of the proposed development, Birds of Conservation Concern or on the Red List.

Having regard to the foregoing, the Planning Authority considers that the proposed development would significantly diminish the biodiversity value of the area, would be contrary to Objective CDP 15.12 of the Clare County Development Plan 2023-2029 and would be contrary to the proper planning and sustainable development of the area.

IMPORTANT NOTE: REGARDING APPEALS

An appeal against the decision of a Planning Authority on an application may be made to An Bord Pleanála. Appeals must be received by An Bord Pleanála within **four weeks** beginning on the date of the making of the decision by the Planning Authority. (N.B. not the date on which the decision is sent or received).
An appeal
shall:

(a) be made in writing and state the name and address of the appellant or person making the referral and of the person, if any, acting on his or her behalf.
(b) state the subject matter of the appeal with details of the nature and site of the proposed development, the name of the Planning Authority, the planning register number and the applicant's name and address (if you are a third party).
(c) state the **full** grounds of appeal and be accompanied by supporting material and arguments. The Board cannot take into consideration any grounds of appeal or information submitted after the appeal (except information specifically requested by the Board) and it cannot consider non-planning issues so grounds of appeal should not, therefore, include such issues.
(d) In the case of a third party appeal, be accompanied by the acknowledgement by the Planning Authority of receipt of the submission or observations made by the person to the Planning Authority at application stage. (A copy of the notification of the decision or similar is not accepted as an acknowledgement of receipt of the submission or observation)
(e) be accompanied by the appropriate fee (see below for details). **An Appeal, submission or observation to An Bord will be invalid unless it is accompanied by the appropriate fee.**

A request An Bord Pleanála for an Oral Hearing shall be accompanied by the appropriate fee and such request must be made within the period for lodging the appeal, but where the developer is sent a copy of a third party appeal, he/she is allowed four weeks from this date.

All appeals, submissions, observations and other documents should be addressed to **The Secretary, An Bord Pleanála 64, Marlborough Street, Dublin 1** or delivered by hand to an employee of An Bord Pleanála at their offices during office hours (9.15 a.m. to 5.30 p.m. on Monday to Friday, except public holidays and Good Friday): The telephone number of An Bord Pleanála is (01-8588100). Web: http//www.pleanala.ie. email: bord@pleanala.ie.

Note: Under Section 251 of the Planning & Development Act 2000 (as amended) where calculating any period referred above, the period between the 24th December & 1st January both days inclusive shall be disregarded.

Appeals/Referrals under Planning Acts	On or before 2nd September 201 1	On or after 5th September 20 1
(a) Appeals against decisions of Planning Authorities		
Appeal		
(i) 1st party appeal[1] relating to commercial development[2] where the application included the retention of development.	€4,500 or €9,000 if an EIS[3] involved	€4500 or €9,000 if an EIS or NIS[4] involved
(ii) 1st party appeal relating to commercial development (no retention element in application).	€1,500 or €3,000 if EIS involved	€1,500 or €3,000 if EIS or NIS involved
(iii) 1st party appeal non-commercial development where the application included the retention of development.	€660	€660
(iv) 1st party appeal solely against contribution condition(s) – (2000 Act[5] section 48 or 49).	€220	€220
(v) Appeal following grant of leave to appeal.	€110	€110
(vi) An appeal other than referred to in (i) to (v) above.	€220	€220
(b) Referral.	€220	€220
(c) Reduced fee for appeal or referral (applies to certain specified bodie s[6])	€110	€110
(d) Application for leave to appeal (section 37(6)(a) of 2000 Act).	€110	€110
(e) Making submission or observation (specified bodies exempt[6]).	€50	€50
(f) Request for oral hearing under section 134 of 2000 Act.	€50	€50
Note: The above fee levels for planning appeals and referrals remain unchanged from those already in force since 2007 (but note the addition of NIS in (i) and (ii) above).		

Substitute Consent Part XA of 2000 Act	On or before 2nd September2011	On or after 5thSeptember 2011
(a) Application for leave to apply for substitute consent.	Nil	€3,000 except no fee where previous permission set aside by Court decision.
(b) Application for substitute consent.	Nil	Similar to fee for application to Planning Authority.
(c) Requestfor oral heari ngunder section 177Q of 2000 Act.	N il	€50

General		
(a) Request for scoping of an EIS.	Nil	€5,000
(b) Submission of EIS following request from Board.	Nil	€1,500
(c) Submission of NIS following request from Board.	Nil	Commercial development €1,500 Non-commercial development €220

[1] An appeal made by the person by whom the planning application was made.
[2] Commercial development includes residential development of 2 or more houses.
[3] Environmental Impact Statement.
[4] Natura Impact Statement.
[5] 2000 Act means Planning and Development Act 2000 as amended.
[6] A list of these bodies is available from the Board.
[7] Where cost recovery applies fees are offset against costs incurred.
[8] Fees under section 66 of the Water Services Act 2007 will only apply when that section is commenced after the 5th September, 2011.
[9] After 5th September, 2011 the reduced appeal fee applies to appeals made by any person entitled to appeal other than the applicant for a licence, the person causing, making or permitting the discharge or the occupier of the premises from which the discharge is made (in effect all third party appeals including those by certain specified bodies).
[10] The Board's power to set fees does not cover fees relating to appeals under section 20 of the 1977 Act and these fees remain as set by Ministerial Regulation. In these cases the reduced fee applies to certain prescribed bodies.
[11] The Board has no power to amend existing fees under the Air Pollution Act and these fees remain as heretofore as set by Ministerial Regulation.

COMHAIRLE CONTAE AN CHLAIR | CLARE COUNTY COUNCIL

Determination under Section 177V of the Planning and Development Act 2000 (as amended) in relation to whether Planning Application P.24/60411 would adversely affect the integrity of a European site.

I refer to the refusal of permission for the development associated with P.24/60411. In accordance with Section 177V (3) this determination is a record of the planning authorities' conclusion in accordance with the Appropriate Assessment process which was carried out in line with Article 6 (3) of the Habitats Directive and Section 177V (1)of the Planning and Development Act (as amended).

Determination

Having regard to the content of the Planning Application as submitted, the Plans and Particulars of the Application including the Natura Impact Statement together with all internal reports and third-party submissions received, it has been determined that there is insufficient information in terms of the cumulative and in-combination effects of the Proposed Windfarm in conjunction with the proposed and/or permitted windfarms within approximately 25km of the application and the mitigation measures required to avoid, reduce, or remediate the potential for adverse effects, to conclude a finding of no adverse effects beyond scientific doubt as is required under Article 6 (3) of the Habitats Directive.

This determination is made considering the following;

- Having reviewed the Qualifying Interest Features of the Glenomra Wood SAC [001013] and the Lower River Shannon SAC[002165] together with the Special Conservation Interests of the Lough Derg (Shannon) SPA [004058] and River Shannon and River Fergus Estuaries SPA [004077].
- While there is an absence of a direct footprint associated with the works within a European Site, there is a potential for in-direct and adverse effects due primarily to the hydrological connectivity across the landscape to the receiving environment of the River Shannon catchment which has a dual designation as a European Site.
- The finding of no adverse effects on the European sites located downstream of the Proposed Windfarm is based on the findings of each of the individual windfarm applications and their application of mitigation measures. There is no consideration of the cumulative or in-combination impacts arising from each of these windfarms albeit at a lower level which cumulatively could lead to adverse effects downstream.
- There is no analysis, information, or scientific assessment to indicate how this conclusion has been reached. Specifically with respect to the 2 no. windfarms which have been included in the cumulative hydrological study area Clare County Council raised a number of issues with the Fahy Beg application both as part of the environmental assessment and as part of the refusal reasons in the Chief Executives Order. Issues pertaining to noise, the management of the excavated soils and materials on the proposal site, risk to the Qualifying Interests and Special Conservation Interests of the associated European Sites which were inadequately addressed in the NIS amongst others were raised but have not been assessed in the application to hand as part of the cumulative and in-combination effects.

- With respect to bird species, it is difficult to see how the cumulative impact of 66 turbines comprising those already permitted or proposed in conjunction with the current application for 7. No turbines within a 25km radius have been sufficiently assessed within the NIS.
- The NIS talks to each of the previous applications but dismisses the potential for adverse effects to arise individually based on the identification and application of mitigation measures.
- Significant doubt remains as to the cumulative impact of either the construction or operational phase impacts that may arise and lead to significant or adverse effects on the Special Conservation Interests of the associated SPAs.
- With respect to the cumulative assessment of the impacts from the project on water quality having considered the requirements of the Water Framework Directive in terms of achieving at least *Good Status* in all surface and groundwater bodies by 2027 at the latest I am not satisfied that the project as proposed, can achieve this and therefore ensure the absence of adverse effects downstream on the associated European sites.
- This risk is predominantly associated with the identification of Doon Lough (which is an important NHA in Clare) as a *Hydraulic Buffer* which will provide a *dilution effect* to the River Shannon downstream.

- In conclusion, having regard to the Natura Impact Statement submitted as part of the planning application and following review of same I am not satisfied that there is no risk of adverse effects on the integrity of the associated European Sites (either directly or indirectly), alone or in-combination with other plans or projects. The application as submitted contains reasonable scientific doubt which in line with case law precludes the Competent Authority from concluding a finding of no adverse effects.

Signed Helen Quinn.

Helen Quinn
Senior Planner
23-10-2024.

APPENDIX 2

HES APPEAL RESPONSE

HYDRO ENVIRONMENTAL SERVICES

22 Lower Main St
Dungarvan
Co.Waterford
Ireland

tel: +353 (0)58 44122
fax: +353 (0)58 44244
email: info@hydroenvironmental.ie
web: www.hydroenvironmental.ie

Date: 18th November 2024
Our Ref: P1598-1-0010

An Bord Pleanála
64 Marlborough Street,
Dublin 1,
D01 V902.

To whom it may concern,

Re: An Bord Pleanála Appeal Submission

Hydrological Responses to the Reasons for Refusal Issued By Clare County Council in Relation to the proposed Lackareagh Wind Farm, Co. Clare (Planning Reference Number: P24/60411)

Hydro-Environmental Services (HES) were requested by MKO Ireland (MKO) to respond to the hydrological and hydrogeological issues raised in Clare County Council's decision to refuse the application for the proposed Lackareagh Wind Farm and the associated Planning Report.

In a letter issued by Clare County Council on 23rd October 2024, the Planning Authority notified EDF Renewables Ireland Limited of their decision to refuse to grant permission for the proposed wind farm development. The schedule accompanying the refusal notice set out 3 no. reasons for refusal.

This appeal response letter responds to the hydrological reasons for refusal and addresses issues and concerns raised in the associated Planning Application Report 1 (hereafter referred to as the 'planning report').

1 STATEMENT OF EXPERIENCE – WIND FARM DRAINAGE

Hydro-Environmental Services (HES) has extensive wind farm drainage and hydrogeological experience relevant to this project. Wind farm environmental impact assessment in respect of geology, hydrology, and hydrogeology has and is a core business area for HES presently and also over the past 18 years. Wind farm drainage design/management requires experience both as a civil/drainage engineer, a hydrologist, and as a hydrogeological specialist. HES has these combined experiences and expertise. HES has worked on over 100 wind farm projects in Ireland and Northern Ireland. Many of these required assessments of existing drainage features and streams and water quality data. HES work at all stages of wind farm developments including feasibility stage, layout design & preliminary drainage design/planning stage, FRAs, and also at construction management stage.

HES's experience also covers the key area of water quality and drainage controls and mitigation during the construction phase of wind farm developments. HES work at EIAR/planning stage to assist with the development of the optimal site layout which involves the development of hydrological constraints maps and interaction with geotechnical and ecological specialists and with site designers. HES also provide a follow-on consultancy service (if planning is granted and the development proceeds to construction) of detailed drainage design and construction management for drainage during wind farm development/construction stage. This practical on-site experience is invaluable as it has led to the development of improved preliminary and detailed drainage layouts and also many improvements/optimisations to standard peatland drainage mitigation measures.

HES specialises in wetland and peatland eco-hydrology. We also complete flood risk assessments for all types of developments across the country.

All these experiences are particularly relevant to this project, and they have been applied through the project development phase, the constraints mapping phase, and EIAR preparation work, including the cumulative impact assessment. This response submission has been prepared by Michael Gill and Conor McGettigan. Michael and Conor prepared the Land Soil and Geology and Water Chapters of the submitted EIAR, and their qualifications, competencies, and experience are already presented in the EIAR.

2 CLARE COUNTY COUNCIL REFUSAL ITEM 2

Refusal Item 2 relates to hydrology and the potential effect of the proposed development on downstream watercourses and designated sites. Refusal Item 2 states the following:

> *"The Planning Authority notes that there is hydrological connectivity between the proposed development site and both the Lower River Shannon SAC, and the River Shannon and River Fergus Estuaries SPA. The majority of the habitats and species for which both European sites are designated are water-dependent habitats and species with requirements for high to pristine water quality.*
>
> *Having regard to the particulars submitted with the planning application, with particular reference to the peat and spoil management proposals, surface water management plans, and the WFD Assessment contained in Appendix 9-3 of the submitted documents, the Planning Authority, as the competent authority in the appropriate assessment process, is unable to conclude, beyond reasonable scientific doubt, that the proposed development will not adversely affect the integrity of downstream European sites. The proposed development would be contrary to Objective CDP15.3 of the County Development Plan and contrary to the proper planning and sustainable development of the area."*

Sections 3 and 4 below address hydrological issues raised by the Planning Authority which led to the above reason for refusal. The main concerns related to the WFD Compliance Assessment and the cumulative hydrological assessment. The following sections highlight how the Planning Authority's concerns are unfounded and that the impact assessment presented in the EIAR, including the cumulative hydrological assessment, and the WFD Compliance Assessment, conclude that the Proposed Project will not result in any significant effects on downstream watercourses or designated sites.

A detail summary of our appeal submission relating to refusal reason 2 is presented in Section 5 of this letter.

3 HES RESPONSE TO COMMENTS ON WFD COMPLIANCE ASSESSMENT

The planner raised concerns regarding the screening process used in the WFD Compliance Assessment and the potential effects on Doon Lough and Doon Lough NHA. The Planner states that they:

> *"don't agree with the consensus that because Doon Lough provides a dilution effect all surface waterbodies downstream of Doon Lough are screened out of the compliance assessment. The author indicates that the lough acts as a hydrological buffer between the Proposed Wind Farm and the Proposed Grid Connection Route and downstream watercourses, however, this also implies that the lough is impacted most by any pollution from either the construction and/or operation."*

The statement that the WFD Compliance Assessment suggests that Doon Lough or Doon Lough NHA will be impacted by the Proposed Project is incorrect. The WFD Compliance Assessment states that there will be no change in the WFD status of any downstream surface waterbody as a result of the Proposed Project. The implementation of the prescribed mitigation measures (refer to Section 5 below) ensure that the downstream surface waterbodies and protected areas are guarded from any potential deterioration.

This applies to all waterbodies and protected areas screened into the assessment. By protecting these 'screened in' waterbodies and designated sites which are in close proximity to the Proposed Project site, all other downstream waterbodies and designated sites are also protected.

For clarity, the following paragraphs comprehensively describe the basis for the WFD Compliance Assessment screening process and the reference to Doon Lough and its associated dilution effects, the conclusions of the WFD Compliance Assessment and summarises how the concerns regarding Doon Lough expressed in the Planning Report are unfounded.

3.1 WFD Screening Procedure and Doon Lough

The purpose of the WFD Compliance Assessment screening process is to identify those waterbodies and those protected areas which may have the potential to be impacted by the Proposed Project in an unmitigated worst-case scenario. Those waterbodies and protected areas deemed to have the potential to be impacted by the Proposed Project are screened in for further assessment whilst those which have no potential to be impacted, even in the absence of mitigation measures, are screened out. The screening process presented in Section 3 of the WFD Compliance Assessment (attached as Appendix 9-3 to the submitted EIAR) is considered to be extremely conservative and presents a reasoned and logical hydrological approach to the consideration of potential effects on downstream waterbodies and associated designated sites.

Both Chapter 9 of the submitted EIAR and the appended WFD Compliance Assessment state that the Proposed Wind Farm site is located across 2 no. regional surface water catchments. The east of the Proposed Wind Farm site is located in the Lower Shannon surface water catchment whilst the west of the Proposed Wind Farm site is located in the Shannon Estuary North surface water catchment. Given, that the Proposed Wind Farm site drains in two directions, the WFD screening process required consideration of the potential effects in both of these surface water catchments.

Within the Shannon Estuary North regional surface water catchment the WFD Compliance Assessment screened in all waterbodies between the Proposed Wind Farm site and Doon Lough (referred to by the WFD as the Duin CE Lake waterbody). For the purposes of a conservative assessment, Doon Lough itself was also screened into the WFD Compliance Assessment.

Within this catchment it is the smaller watercourses and tributaries of the Glenomra River, which drain the western section of the Proposed Wind Farm site, which are most susceptible to potential effects from the Proposed Project. The potential for hydrological effects (in an unmitigated worst-case scenario) decreases progressively downstream as more tributaries flow into the Glenomra/Broadford River as it flows westwards towards Doon Lough. Doon Lough itself receives water from 3 no. main rivers (the Broadford River from the east, the Owenogarney River from the north and the O'Callaghansmills River from the northwest) and has a significant catchment area in excess of 100km^2. This is a significant increase in catchment area in comparison to the Glenomra River immediately downstream of the Proposed Wind Farm site (~9km^2).

Table A below demonstrates how flow volumes increase downstream of the Proposed Wind Farm site based on the EPA Hydrotool dataset (www.catchments.ie). The progressively increasing flow volumes reduces the potential for effects due to an increased dilution effect. This reasoned and logical hydrological approach was presented both within the EIAR and in the WFD Compliance Assessment.

However, it is imperative to point out that this conclusion does not in any way imply that mitigation for surface water quality protection at the development site is therefore absolved or not necessary. In fact, the exact opposite position is taken in the WFD Compliance Assessment and the EIAR, where clear and very detailed drainage mitigation/controls are outlined.

Based on the above, and given the large catchment area associated with Doon Lough (>100km²) and the large flow volumes in the Broadford River upstream of this lake (dry weather flow is 142l/s), the inclusion of this lake waterbody for further assessment within the WFD Compliance Assessment is considered to be ultra conservative. All watercourses and protected areas downstream of Doon Lough were screened out due to the substantial flow volumes in the Owenogarney River downstream of the lake (dry weather flow of 319L/s). Even in the absence of mitigation measures (i.e. a worst-case scenario), no hydrological effects associated with the Proposed Project would extend downstream of Doon Lough.

Table A: Summary of Flow Volumes and Catchment Areas Downstream of the Proposed Wind Farm Site in the Shannon Estuary North Surface Water Catchment

Watercourse/Lake		EPA Node	Catchment Area (km²)	50%ile flow (L/s)	95%ile flow (L/s)
Glenomra River		27_323	8.968	135	33
Doon Lough	Broadford River	27_287	35.223	554	142
	Owenogarney River	27_150	36.804	411	54
	O'Callaghansmills	27_253	34.064	392	87
Owenogarney River downstream of Doon Lough		27_614	111.134	1,471	319

3.2 Conclusions of the WFD Compliance Assessment

The initial WFD screening process, detailed above, does not consider or take account of the mitigation measures prescribed in the EIAR.

Section 4.2.7 of the WFD Compliance Assessment shows the potential effects on the 'screened-in' waterbodies following the implementation of the prescribed mitigation measures.

The WFD Compliance Assessment concludes that mitigation for the protection of surface water during the construction, operation and decommissioning phases of the Proposed Project will ensure that the qualitative and quantitative status of all receiving waterbodies will not be altered by the Proposed Project.

There will be no change in the WFD status of downstream SWBs resulting from the Proposed Project and all downstream SWBs are protected from any potential deterioration.

4 HES RESPONSE TO CONCERNS REGARDING THE CUMULATIVE ASSESSMENT

Similar concerns were raised in the Planning Report regarding the cumulative assessment presented in Chapter 9: Hydrology and Hydrogeology of the submitted EIAR. While the following is largely a repeat of what we have presented above, we feel that it is necessary to be thorough in order to ensure there is no further misunderstanding with regards to the delineation and the purpose of the cumulative study area boundary.

The concerns relate to the delineated cumulative hydrological study area, which does not extend downstream of Doon Lough in the Shannon Estuary North surface water catchment or Lough Derg in the Lower Shannon surface water catchment due to the significant volume of water and the considerable dilution effect provided by these lakes. The Planning Report states that:

> *"the inverse of this is that both Doon Lough and Lough Derg can take impacts from the proposed development and assimilate them based on the dilution factor"*

and

> *"this would again indicate that both lakes will be impacted and take any potential pollutants arising from the construction or ongoing operation of the proposed windfarm".*

Neither of these statements represent what was included in the EIAR. The statements indicate a significant misunderstanding of the cumulative hydrological assessment as presented in Section 9.5.7 of the EIAR.

The cumulative hydrological assessment does not in any way suggest that Doon Lough or Lough Derg will be impacted by the Proposed Project, nor are they [Doon Lough or Lough Derg] considered as a buffer to downstream impacts. Such an approach would be illogical considering the WFD and the Surface Water Regulations (S.I. no. 272/2009 as amended) applies to all waterbodies irrespective of their locations relative to the Proposed Project site.

These lakes were used to delineate the downstream extent of the cumulative hydrological study area due to the significant volumes of water which they contain as well as the area and runoff occurring from the upstream catchments. The assessment however does not indicate that these waterbodies will be impacted by the Proposed Project. Mitigation measures detailed in the EIAR for the protection of surface water quality/quantity (refer to Section 5 below) will ensure that there is no significant effect on any watercourse in the vicinity or downstream of the Project Site.

For completeness and clarity, the following paragraphs comprehensively describe the basis for the delineated cumulative hydrological study area, the conclusions of the cumulative hydrological assessment and highlight how the concerns expressed in the Planning Report are unfounded.

4.1 Delineated Cumulative Study Area

The first step in the completion of a cumulative assessment is the delineation of a cumulative study area, which defines the study area for the assessment, and allows for the subsequent identification of other developments and/or projects which may have potential to result in cumulative or in-combination effects with the Proposed Project.

A separate cumulative study area is delineated for each environmental aspect assessed in the EIAR. The cumulative hydrological study area relates solely to the potential cumulative hydrological/hydrogeological effects and is not used for other aspects such as noise.

As detailed in the Chapter 9 of the EIAR, the main likelihood of cumulative effects on the water environment is assessed to be hydrological (surface water quality) rather than hydrogeological (groundwater) due to the hydrogeological setting of the Proposed Wind Farm site (i.e. low permeability peat and subsoils overlying locally important and poor bedrock aquifers) and the near surface nature of the construction activities. With the Proposed Wind Farm site being located across 2 no. surface water catchments, 2 no. cumulative hydrological study areas were delineated:

1. The west of the Proposed Wind Farm site is drained by the Glenomra/Broadford River which flows to the west before discharging into Doon Lough ~6.4km downstream of the Proposed Wind Farm site. In an unmitigated worst-case scenario, there would be no potential for hydrological effects associated with the Proposed Wind Farm downstream of Doon Lough due to the significant volumes of water within this lake, and also coming from the upstream catchment.
2. The east of the Proposed Wind Farm is drained by the Ardcloony River which flows to the east before discharging into Lough Derg ~5km downstream of the Proposed Wind Farm site. In an unmitigated worst-case scenario, there would be no potential for hydrological effects associated with the Proposed Wind Farm downstream of Lough Derg due to the significant volumes of water within this lake, and also coming from the upstream catchment.

With regards to the study area within the Lower Shannon surface water catchment the Planning Report states that:

> *"Both the Ardcloony and O'Briensbridge (Bridgetown catchment) discharge to Lough Derg. Given the location at this both rivers discharge to Lough Derg at the*

> *southern end it is likely that any impacts will affect the River Shannon as opposed to Lough Derg and therefore Lough Derg does not provide a buffering effect to the downstream catchment."*

The Proposed Wind Farm is drained by the Ardcloony River which discharges into the Lough Derg ~1km upstream of where the Lower Shannon outflows from Loug Derg. The O'Briensbridge Stream flows into Lough Derg at its southern end but is only included in the assessment area as it contains the location of the proposed Temporary Transition Compound within this river sub-basin. Regardless of whether these watercourses discharge into Lough Derg or the River Shannon, both of these receiving waters (Lough Derg and the River Shannon) contain significant volumes of water (relative to the runoff contributions from the Proposed Development site). There would be no potential for effects downstream of Lough Derg even in an unmitigated worst-case scenario.

The delineated cumulative hydrological study area identifies the area which has the potential to be impacted by the Proposed Wind Farm in an unmitigated worst-case scenario.

Contrary to the Planning Report this does not suggest that the Proposed Project will impact these lakes. These lakes simply mark the conservative downstream extent of the cumulative hydrological study area.

4.2 Conclusions of the Cumulative Hydrological Assessment

Following the delineation of the cumulative hydrological study area, Section 9.5.7.1 to Section 9.5.7.6 of the EIAR detail the potential cumulative and in-combination effects associated with other developments and water pressures identified with the study area. The comprehensive assessment included potential cumulative effects with water quality pressures such as forestry, agriculture and wastewater discharges, potential cumulative effects with other wind farm developments and potential cumulative effects with other non-wind farm developments.

The cumulative hydrological assessment is underpinned by the mitigation measures prescribed in Chapter 9 of the EIAR for the protection of surface water quality/quantity.

The hydrological/hydrogeological impact assessment for the Proposed Project is presented in Chapter 9, and precedes the cumulative hydrological assessment, and concludes that with the implementation of the prescribed mitigation measures that there will be no significant residual effects on the hydrological environment.

The EIAR cumulative assessment (Chapter 9) concludes that:

> *"with the implementation of the mitigation measures detailed in this EIAR, the cumulative assessment found that there will be no significant cumulative effects on the hydrological and hydrogeological environments."*

5 SUMMARY OF KEY SURFACE WATER PROTECTION MITIGATION MEASURES

A comprehensive range of surface water protection mitigation measures are presented in Chapter 9 of the EIAR. For clarity, a summary of those mitigation measures are included below:

- The key surface water control is that there will be no direct discharge of any wind farm runoff into any local watercourses or into the existing drainage network at the Proposed Wind Farm Site;
- This will be achieved through avoidance (*i.e.* self-imposed buffer zones were used during the design of the Proposed Project to avoid sensitive hydrological features) and the proposed surface water drainage measures;
- Two distinct methods will be employed to manage drainage water within the Proposed Project:

  - Firstly, clean water will be kept clean by avoiding disturbance to existing drainage features, minimising any works in or around existing drainage features and by diverting clean water around the proposed works areas; and,
  - Secondly, all drainage waters from the proposed works areas that may carry silt or sediment, will be routed towards silt traps and settlement ponds prior to controlled diffuse release via buffered outfalls.
- The Proposed Project drainage system comprises of source controls (interceptor drains, small working areas etc.), in-line controls (such as check dams, sand bads, silt fences etc.) and treatment systems (settlement ponds and sediment traps etc.):
  - Each individual element of the treatment train is not intended to be a standalone or single treatment but rather forms part of a treatment train of water quality improvements/control systems;
  - The drainage measures will be installed prior to the onset of construction works;
  - Source controls are designed to reduce the volume of water requiring treatment and include the use of interceptor drains, small working areas, covering stockpiles and the cessation of works during periods of heavy rainfall;
  - Runoff from the works areas will be collected in collector drains and treated and attenuated via in-line controls and treatment systems such as check dams, silt traps, silt fences and settlement ponds;
  - All water will be treated to a high quality and slowed down prior to release; and,
  - The treated water will be released in a diffuse and controlled manner through the use of level spreaders and vegetation filters and will not be directly discharged into any watercourse.
- Furthermore, all works will be completed cognisant of weather forecasts and no works will be completed during or within 24 hours of heavy rainfall events. This will minimise the risk of the entrainment of suspended solids in runoff;
- Best-practice mitigation measures will also be employed in relation to the protection of surface water quality during felling works including the application of buffer zones, the use of brash mats, suitable machine combinations and the installation of silt traps in advance of all felling works;
- Additional mitigation measures will be implemented where works are proposed within the hydrological buffer zones including the use of double or triple silt fences and the completion of works during dry weather conditions;
- An inspection and maintenance plan for the onsite construction drainage system will be prepared in advance of construction activities and will include regular inspections of the drainage systems and the removal of any excess build-up of silt which may decrease the effectiveness of the drainage system;
- The proposed drainage system has also been designed to account for climate change effects on rainfall with the settlement ponds designed for the 1 in 10-year flows plus a 20% allowance; and,
- Preventative measures relating to fuels and concrete management are also identified in Chapter 9 of the EIAR.

These mitigation measures are tried and tested, best-practice mitigation measures for the protection of surface water quality and are used at construction sites across the country.

6 SUBMISSION SUMMARY

In summary and in response to Clare Co. Co.'s overall hydrological reason for refusal:

- HES completed a comprehensive hydrological/hydrogeological impact assessment, WFD Compliance Assessment and cumulative hydrological impact assessment for the Proposed Lackareagh Wind Farm development which

concluded that there will be no significant effects on the local and downstream hydrological/hydrogeological environment as a result of the Proposed Project;

- The WFD Compliance Assessment and the cumulative hydrological impact assessment do not in any way suggest that Doon Lough, Doon Lough NHA, Lough Derg will be impacted by the Proposed Project, nor are they considered as a buffer to downstream impacts;
- Such an approach would be illogical considering the WFD and the Surface Water Regulations (S.I. no. 271/2009 as amended) applies to all waterbodies irrespective of their locations relative to the Proposed Project site;
- Lough Derg and Doon Lough simply mark the downstream extent of the study areas and even in an unmitigated scenario there would be no potential for effects to extend downstream of these lakes. The Proposed Project does not in any way rely on downstream lakes or rivers to dilute potential water quality effects;
- The reference to the dilution capacity of Doon Lough and Lough Derg solely relate to the early WFD screening process and also the delineation of the cumulative hydrological study area. The WFD screening process and the delineation of the cumulative hydrological study area are completed at the earliest stages of assessment which do not consider the mitigation measures prescribed in the EIAR (refer to Section 5 above);
- HES has completed similar WFD screening processes and have delineated cumulative hydrological study areas, using a comparable logical and conservative hydrological approach, for over 30 other wind farm developments and they have never been interpreted in the way the Lackareagh WF assessment has been by Clare Co. Co;
- The WFD Compliance Assessment and the cumulative hydrological impact assessment rely on the implementation of strict mitigation measures for the protection of water quality and quantity of all waterbodies at and downstream of the Proposed Project site;
- Furthermore, the Planning Authority states that the cumulative assessment is at odds with the conclusions of the NIS which indicate that mitigation measures will be needed to protect surface water quality in Doon Lough and Lough Derg. This interpretation is completely misguided as the cumulative assessment also relies upon the mitigation measures prescribed in the preceding sections of the EIAR;
- As stated in Chapter 9 of the submitted EIAR, the construction phase is when there is the greatest potential for effects on the hydrological environment and is the key period for the implementation of mitigation measures. Nevertheless, the EIAR details mitigation measures for all phases of the Proposed Project (i.e. the Construction Phase, the Operational Phase, and the Decommissioning Phase);
- The mitigation measures and water management systems, as detailed in Chapter 9 of the submitted EIAR, are widely used and tried and tested measures for the protection of both surface water quality and quantity;
- The mitigation measures (refer to Section 5 above) are designed to ensure that the small streams and rivers which drain the Proposed Project site do not experience any deterioration in water quality/quantity as a result of the Proposed Project;
- By protecting these proximal watercourses and headwater streams from potential effects, all other downstream watercourses and designated sites are also protected from potential effects;
- As such, the construction, operation and decommissioning phases of the Proposed Project will not cause a deterioration in the WFD status of any waterbody or protected area and will not jeopardise the WFD objectives to achieve 'Good' status in the future;

- The Proposed Project is therefore compliant with the requirements of the Water Framework Directive (2000/60/EC);
- Furthermore, the Proposed Project will not result in any effects on downstream designated sites and is therefore complaint with objective 15.3 of the County Development Plan and the EU Habitats Directive; and,
- The Proposed Project will also not result in any cumulative or in-combination hydrological effects with other developments.

We trust to above demonstrates the detailed consideration of drainage mitigation and surface water quality protection proposed as part of the Proposed Project.

Yours sincerely,

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APPENDIX 3

CLARE COUNTY DEVELOPMENT PLAN 2023-2029 - COMPLIANCE SUMMARY TABLE

Table 1: Proposed Development's compliance with CCDP - Table 6-2 in the Planning Report submitted as part of the planning application

Policy Theme	Policy/ Objective	Compliance
Climate Action	**CDP2.1: Climate Action** It is an objective of Clare County Council: a) To support the implementation of the National Climate Action Plan 2023 and the National Climate Change Adaptation Framework (and any subsequent versions thereof), and to work with the Regional Climate Action Offices to enable County Clare to transition to a low carbon and climate resilient county; b) To adopt sustainable planning strategies through integrating land use and transportation and by facilitating mixed use developments as a means of supporting national targets of climate policy mitigation and adaptation objectives, and reducing our carbon footprint and greenhouse gas emissions; and; c) To raise awareness and understanding of the impacts of climate change on both the local economy and communities in the county, and the ways communities can increase their response and grow their resilience to these impacts.	The Proposed Wind Farm is in compliance with CDP 2.1 as it directly contributes to the wind energy target of 9GW of onshore wind introduced by CAP 23. The Proposed Development will generate clean, renewable electricity, which will be integrated into the grid, helping to electrify and decarbonise other sectors. This will also aid in achieving the climate change and renewable energy objectives to reach national targets and transition to a low carbon economy.
	CDP2.2: Climate Change Mitigation, Adaption and resilience It is an objective of the Clare County Council: a) To support the implementation of the Clare Climate Change Adaptation Strategy 2019-2024 (and any subsequent versions); b) To promote measures that build resilience to climate change to address impact reduction, adaptive capacity, awareness raising, providing for nature-based solutions and emergency planning; c) To raise awareness of issues relating to climate change and climate change adaptation during the lifetime of this plan;	The Proposed Wind Farm supports the implementation of the Clare Climate Change Adaptation Strategy 2019-2024. The Proposed Wind Farm will aid decarbonisation measures in the County and is therefore in line with the aims of the Adaptation Strategy. The Proposed Wind Farm will contribute to the progression of renewable energy generation and technologies in Co. Clare.

Policy Theme	Policy/ Objective	Compliance
	d) To liaise, collaborate and work in partnership with the relevant government approved sectors in relation to initiatives and activities across the county; e) To support the Ennis 2040 Spatial and Economic Strategy and its aspiration for Ennis to become Irelands first climate adaptive town; and f) To facilitate and support the relevant stakeholders and enterprises in the progression of advancements in climate adaptation solutions and renewable energy generation and technologies.	
	CDP2.14 Transition to a Low Carbon Economy and Society It is an objective of Clare County Council: a) To facilitate measures which will accelerate the transition to a low carbon economy and a circular economy through mechanisms such as the Climate Action Competitive Fund; b) To support the development of enterprises that create and employ green technologies and to promote County Clare as a low carbon county as a means of attracting inward investment to the county and to the wider Southern Region; c) ... d) To support and facilitate the implementation of the Clare Climate Change Adaptation Strategy 2019-2024; e) To ensure that the development of green industry and technologies incorporates careful consideration of potential environmental impacts at project level including the capacity of the receiving environment and existing infrastructure to serve these new industries. f) To facilitate the development of energy sources which will achieve low carbon output. g) ...	By supplying sustainable renewable energy, the Proposed Wind Farm will reduce the need for non-renewable sources like coal and oil, helping to transition toward a low carbon economy and cleaner energy usage in the county. By providing c. 46 MW of energy, the Proposed Wind Farm of 7 no. wind turbines at Lackareagh, Co. Clare supports the implementation of the provisions of Ireland's Transition to a Low Carbon Energy Future 2015-2030 through renewable energy generation in the County.

Policy Theme	Policy/ Objective	Compliance
	h) To work to implement the provisions of Ireland's Transition to a Low Carbon Energy Future 2015-2030 as they relate to County Clare; i) ... j) To promote climate change issues across business, public and residential sectors and to target measures and support initiatives to achieve reduced greenhouse gas emissions in accordance with current and future national targets, improve energy efficiency and increase the use of renewable energy sources across the key sectors of electricity supply, heating, transport and agriculture; k) ... l)	
Renewable Energy	**CDP 11.47: Renewable Energy** It is an objective of Clare County Council the Development Plan: a) To encourage and to favourably consider proposals for renewable energy developments, including community owned developments, and ancillary facilities in order to meet National, Regional and County renewable energy targets, and to facilitate a reduction in CO2 emissions and the promotion of a low carbon economy; b) To assess future renewable energy-related development proposals having regard to the Clare Renewable Energy Strategy 2023-2030 in Volume 5 of this plan and associated SEA and AA; c) To support the sustainable development of renewable wind energy (on-shore and offshore) at appropriate locations and of its related grid infrastructure in County Clare, in accordance with all relevant policies, guidance and guidelines pertaining to the protection of the environment and protected habitats and species, and to assess proposals having regard to the Clare Wind Energy Strategy in Volume	As a renewable energy project that directly contributes to the achievement of a crucial national climate target, the Proposed Wind Farm contributes directly to this objective and therefore should be favourably considered by Clare County Council. The Proposed Wind Farm is suitably sited in an area classified as 'Open to Consideration' in the Clare Wind Energy Strategy. The Proposed Wind Farm has been designed in compliance with the Wind Energy Guidelines (2006). The wind farm design has had regard for the Draft Wind Energy Guidelines (2019). The Proposed Wind Farm has been designed to limit the impact on the residential properties in the vicinity of the proposed turbines. This will ensure that an appropriate balance is met between facilitating renewable energy development and protecting residential amenity. There are 29 no. properties located within one kilometre of any proposed turbine location, with 7 no. properties belonging to landowners who are participating in the Proposed Project. The Proposed Wind Farm complies with the requirements set out by the

Policy Theme	Policy/ Objective	Compliance
	6 of this plan and the associated SEA and AA, or any subsequent updated adopted Strategy and to national Wind Energy Guidelines; d) To prepare a new and updated Wind Energy Strategy for County Clare during the lifetime of this plan, subject to the publication of the update to the Wind Energy Development Guidelines for Planning Authorities 2006; e) To strike an appropriate balance between facilitating renewable and wind energy-related development and protecting the residential amenities of neighbouring properties; f) To support and facilitate the development of new options and technological advances in relation to renewable energy production and storage, that may emerge over the lifetime of this Plan; g) To support the integration of indigenous renewable energy production and grid injection; h) To ensure that all proposals for renewable energy developments and ancillary facilities in the County are in full compliance with the requirements of the SEA and Habitats Directives and Objective CDP3.3 of this plan; and To promote and market the County as a leader of renewable energy provision.	2006 Guidelines, including noise, set back, shadow flicker. The Proposed Wind Farm also adheres to the 2019 guidelines in relation to shadow flicker (zero). The layout of the proposed wind turbines achieves a 4 times tip height set back distance from all dwellings. The Proposed Project includes a Battery Energy Storage System (BESS) within the onsite substation compound. Battery storage is a critical element of a renewables led electricity network. The proposed BESS will increase the storage capacity of the network, providing system services and reducing the country's reliance on fossil fuel generating stations at times when renewable energy production is low.
	CDP 6.17: Energy Supply It is an objective of Clare County Council: a) To contribute to the economic development and enhanced employment opportunities in the county by: b) Enabling the development of a self sustaining, secure, reliable and efficient renewable energy supply and storage for the County in line with CDP Objective 3.3;	The Proposed Wind Farm directly supports the objectives of CDP6.17. The Proposed Project will create up to approximately 70 jobs during the construction, and operation and maintenance phases, while facilitating Clare County Council's ambition to become a national and international leader in the production of renewable energy.

Policy Theme	Policy/ Objective	Compliance
	c) Facilitating the county to become a leader in the production of sustainable and renewable energy for national and international consumption through research, technology development and innovation; and d) Supporting on-land and off-shore renewable energy production by a range of appropriate technologies in line with CDP Objective 3.3.	
	CDP 8.12: Renewable Energy Development It is an objective of Clare County Council: To support the implementation of the National Renewable Energy Action Plan (NREAP), the Clare Wind Energy Strategy and the Clare Renewable Energy Strategy to facilitate the development of renewable energy developments in rural areas to meet national objectives towards achieving a low carbon economy by 2050 subject to the requirement of the RES SEA Environmental Report and the mitigation measures arising from the CDP Appropriate Assessment as contained in Volume 10(a)	Through the provision of c. 46.2 MW of renewable electricity, the Proposed Wind Farm contributes to the achievement of the policies and objectives of the NREAP, the Clare Wind Energy Strategy and the Clare Renewable Energy Strategy.
	CDP 11.44: Energy Security It is an objective of Clare County Council the Development Plan: To promote and facilitate the sustainable development, maintenance and upgrading of electricity and gas network grid infrastructure, to integrate renewable energy sources, thereby creating a secure and efficient energy supply and storage system for County Clare which is ready to meet increased demand as the regional economy grows.	Projects such as the Proposed Project are a critical component in decoupling the county from reliance on fossil fuels. By generating renewable energy, wind farms contribute to achieving the long-term goal of replacing fossil fuels with sustainable energy sources. The inclusion of the BESS within the substation compound also improves the security of supply via the storage of electricity which can be dispatched onto the electricity grid when required. The Proposed Project therefore aligns with the CDP 11.44 'Energy Security' emphasising a transition away from traditional non-renewable fuels to a renewables led electricity system.

Policy Theme	Policy/ Objective	Compliance
	CDP 11.45: Electricity Networks It is an objective of Clare County Council: a) To facilitate improvements in energy infrastructure and encourage the expansion of the infrastructure within the county; b) To facilitate future alternative renewable energy developments and associated utility infrastructure throughout the county; c) To support the Integrated Single Electricity Market (ISEM) as a key priority for the Southern Region and the sustainable development and reinforcement of the energy grid including grid connections, transboundary networks to and through County Clare subject to appropriate environmental assessment and planning processes; d) To collaborate with EirGrid to facilitate the development of a safe, secure and reliable supply of electricity, enhanced electricity networks and new transmission infrastructure projects that might be brought forward in the lifetime of this Plan under EirGrid's (2017) Grid Development Strategy (subject to appropriate environmental assessment and the planning process); e) To collaborate with EirGrid over the lifetime of the plan to ensure that the county's minimum target of 1,167MW of renewable energy generation is achieved and can be accommodated on the electricity network in County Clare; and f) To have regard to environmental and visual considerations in the assessment of developments of this nature and ensure compliance with the environmental requirements of objective CDP 3.3 of this plan.	By generating approximately 46 MW of renewable energy, the Proposed Project of 7 no. wind turbines at Lackareagh, Co. Clare supports the improvement and expansion of renewable electricity infrastructure in the county.

Policy Theme	Policy/ Objective	Compliance
	CDP 11.48: Renewable Energy Strategy It is an objective of Clare County Council: a) To support implementation of the National Renewable Energy Action Plan (NREAP), and the Offshore Renewable Energy Plan including mitigation measures outlined in their respective SEA and AA and promote County Clare and the Southern Region as a leader and innovator in sustainable renewable energy generation; b) To support the implementation of the Clare Renewable Energy Strategy 2023-2029 in Volume 5 of this plan; and c) To support the development of a Regional Renewable Energy Strategy with relevant stakeholders	The Proposed Project is supported by the policies and objectives of the NREAP. The Proposed Wind Farm is compliant with the policies and objectives of the Renewable Energy Strategy (RES). Compliance with the RES is discussed in further detail in Section 6.4.2 of the Planning Report submitted as part of the planning application.
	CDP 11.51: Energy Storage It is an objective of Clare County Council: a) To support and facilitate the development of secure, appropriately scaled energy storage facilities, particularly green hydrogen gas storage and pumped freshwater hydro energy storage, at suitable locations throughout the county, in compliance with the requirements of objective CDP 3.3 of this plan; and, b) To support initiatives to develop innovation, advances in technology and pilot projects for the sustainable development of energy storage and carbon capture within the region and to work with key stakeholders in developing sustainable forestry to support carbon sequestration and enhance biodiversity.	The Proposed Project includes a Battery Energy Storage System (BESS) within the onsite substation compound. The BESS will be capable of storing energy in times where electricity generation is high and demand is low, before releasing the electricity on to the grid when it is needed. Increasing battery storage capacity is crucial renewables-led electricity systems.
	CDP6.18 Green Technology	The Proposed Wind Farm is a green technology, contributing to a sustainable, low-carbon future.

Policy Theme	Policy/ Objective	Compliance
	To support the development of low carbon and green tech businesses and industries throughout the County.	
Flood Risk Management	**CDP2.6: Flood Risk Assessment and Management** It is an objective of Clare County Council: a) To ensure development proposals have regard to the requirements of the SFRA and Flood Risk Management Guidelines; and where required are supported by an appropriately detailed hydrological assessment / flood risk assessment. b) To ensure that flood risk assessments include consideration of potential impacts of flooding arising from climate change including sea level rise and coastal erosion; c) To integrate sustainable water management solutions, prioritising nature based solutions (such as SUDS, nonporous surfacing and green roofs) into development proposals; d) To include Natural Water Retention Measures (NWRMS) where appropriate in consultation with the Office of Public Works (OPW) and other relevant stakeholders: e) To support investment in the sustainable development of capital works under the Flood Capital Investment Programme and Flood Risk Management Plans developed under the Catchment Flood Risk Assessment and Management (CFRAM) process; and f) To ensure that potential future flood information obtained/generated through the Development Management process is used to inform suitable adaptation requirements in line with the Guidelines for Planning Authorities on Flood Risk Management (DoECLG & OPW, 2009)	A Flood Risk Assessment (FRA) is included as Appendix 9-1 of the EIAR. As outlined within the FRA, the assessment had regard to 'The Planning System and Flood Risk Management Guidelines for Planning Authorities. The FRA includes an assessment of historical mapping, fluvial maps, OPW past flooding events, GSI Historic Surface Water Flood Mapping, CFRAM mapping, OPW National Indicative Fluvial Flooding, Groundwater Flooding, Coastal Flooding and flooding resulting from climate change. Appendix 9-3 of Chapter 9, the Water Framework Directive Assessment outlines the general principal of the sustainable drainage system (SuDs) drainage controls available for the management of surface waters. Table M of EIAR Appendix 9-3 includes a summary of drainage mitigation measures and their application. As identified within Chapter 2: Background of the EIAR, the OPW was contacted as part of the scoping exercise, however no response was received. Drainage measures, as presented in Chapter 9 of the EIAR and its appendices have followed best practice measures. Relating to CDP 2.12, the EIAR includes for a Biodiversity Management and Enhancement Plant (Appendix 6-4) in which biodiversity enhancement measures are presented within this document. Chapter 6 of the EIAR also presents information regarding how the development footprint of the Proposed Project infrastructure has been designed to avoid potential impacts on

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		environmentally sensitive sites subject to the requirements of the Habitats Directive.
	CDP 2.12: Flood Risk Management, Green Infrastructure & Biodiversity It is an objective of Clare County Council: a) To facilitate and implement green infrastructure developments as a means of managing flood risk and enhancing the natural environment in the plan area in compliance with Objective CDP 3.1; and b) To avail of opportunities to enhance biodiversity and amenity and to ensure the protection of environmentally sensitive sites and habitats where flood risk management measures are planned subject to the requirements of the Habitats Directive.	The EIAR includes for a Flood Risk Assessment and Biodiversity Management and Enhancement Plan which allow for the enhancement of biodiversity, protection of sensitive areas and a full assessment of the potential for flooding relating to the Proposed Project, showing full compliance with CDP 2.12.
Biodiversity	**CDP15.1 Biodiversity** It is an objective of Clare County Council: a) To implement the National Biodiversity Action Plan 2017- 2021, the All Ireland Pollinator Plan 2021-2025, the EU A Farm to Fork Strategy 2020, the County Clare Heritage Plan 2017-2023 and the County Clare Biodiversity Plan 2017- 2023, or any subsequent plans, in partnership with all relevant stakeholders; b) To review the Clare County Heritage Plan 2017-2023 and to prepare a new plan, which will be set within the context of the National Heritage Plan "Heritage Ireland 2030", upon the expiry of the existing adopted Plan; c) To support National Biodiversity Week and events such as Bioblitz in order to increase awareness of biodiversity and its benefits to the community;	The Proposed Project takes into consideration the importance of the local biodiversity to make sure it is retained during the construction, operation and decommissioning phases of the Proposed Project. The Biodiversity Management and enhancement measures ensure that no net loss of habitats will occur due to the construction or operation of the Proposed Project.

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	d) To ensure that features of importance to local biodiversity are retained as part of developments and projects being undertaken in the County; e) To identify ecological buffer zones, where appropriate, in the Plan area; and f) To support current and future projects with the aim of restoration/ rehabilitation of natural habitats and species.	
	CDP 3.3: Appropriate Assessment, Strategic Environmental Assessment and Strategic Flood Risk Assessment It is an objective of the Clare County Council: a) To require compliance with the objectives and requirements of the Habitats Directive, specifically Article 6(3) and where necessary 6(4), Birds, Water Framework, and all other relevant EU Directives and all relevant transposing national legislation; b) To require project planning to be fully informed by ecological and environmental constraints at the earliest stage of project development and any necessary assessment to be undertaken, including assessments of disturbance to species, where required together with the preparation of both statutory and non-Statutory Ecological Impact Assessments (EcIA); c) To protect, manage and enhance ecological connectivity and improve the coherence of the Natura 2000 Network; d) To require all proposals to ensure there is 'no net loss' of biodiversity within developments; e) To ensure that European sites and Natural Heritage Areas (designated proposed NHAs) are appropriately protected; To require the preparation and assessment of all plans and projects to have regard to the information, data and requirements of the Appropriate Assessment Natura Impact Report, SEA Environmental	The Proposed Project will comply with the objectives and requirement of the Habitats Directive, specifically Article 6(3) and where necessary 6(4), Birds, Water Framework, and all other relevant EU Directives and all relevant transposing national legislation. The application for the Proposed Wind Farm includes an Ecological Impact Assessment, included as Chapter 6 of the EIAR and NIS including the necessary assessments to ensure that there is 'no net loss' of biodiversity and to ensure that all European sites and Natural Heritage Areas are appropriately protected.

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	Report and Strategic Flood Risk Assessment Report contained in Volume 10 of this development plan; and f) to require compliance with the objectives of the Water Framework Directive and support the implementation of the 3rd Cycle River Basin Management Plan (and any other iteration during the lifetime of the plan).	
	CDP15.3 European Sites It is an objective of Clare County Council: a) To afford the highest level of protection to all designated European sites in accordance with the relevant Directives and legislation on such matters; b) To require all planning applications for development that may have (or cannot rule out) likely significant effects on European Sites in view of the site's Conservation Objectives, either in isolation or in combination with other plans or projects, to submit a Natura Impact Statement in accordance with the requirements of the EU Habitats Directive and the Planning and Development Act, 2000 (as amended); and c) To recognise and afford appropriate protection to any new or modified SPAs or SACs that are identified during the lifetime of this Development Plan through the planning application process bearing in mind proposals for development outside of a European site may also have an indirect effect.	The Proposed Project recognises the importance of European Sites in accordance with the relevant Directives and legislation. An NIS is submitted as part of the planning application in accordance with the requirements of the EU Habitats Directive and the Planning and Development Act, 2000 (as amended). The NIS concludes that the Proposed Project, individually or in-combination with other plans or projects, will not adversely affect the integrity of any designated European sites.
	CDP15.4: Requirement for Appropriate Assessment It is an objective of Clare County Council:	Appropriate Assessment has been carried out in relation to the works likely to impact the European sites (SACs and SPAs), whether directly, indirectly or in combination with any plans or projects.

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	a) To implement Article 6(3) and where necessary 6(4) of the Habitats Directive and to ensure that Appropriate Assessment is carried out in relation to works, plans and projects likely to impact on European sites (SACs and SPAs), whether directly or indirectly or in combination with any other plan(s) or project(s); and b) To have regard to Appropriate Assessment of Plans and Projects in Ireland – Guidelines for Planning Authorities 2009 or any updated version.	
	CDP15.5: Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs) It is an objective of Clare County Council: a) To actively promote the conservation and protection of areas designated as NHA's (including proposed sites) and to only consider proposals for development within or affecting an NHA where it can be clearly demonstrated that the proposed development will not have a significant adverse effect on the NHA or pNHA; and b) To identify and afford appropriate protection to any new, proposed or modified NHA's identified during the lifetime of the Development Plan;	Chapter 6 of the EIAR provides a full assessment of any potential impacts from the construction operational and decommissioning phases on all NHAs and pNHAs within 20km of the proposed turbine locations. No negative effects have been identified, thus the Proposed Project is in full compliance with CDP 15.5.
	CDP15.10: Environmental Impact Assessment It is an objective of the Development Plan: a) To implement the EIA Directive, ensuring that all elements/stages or components of the project are included in one overall assessment and all reasonable alternatives are taken into consideration in choosing the option with the least environmental impact;	As set out in Chapter 1: Introduction of the EIAR, and as reinforced throughout the various sections of the document, the EIAR has been prepared in compliance with EIA Directive. Chapter 3 of the EIAR sets out all reasonable alternatives that were assessed as part of the design process of the Proposed Project, ensuring that the final development footprint is the most environmentally prudent version of what it could be.

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	b) To have regard to "Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessments (2018) when considering proposals for which an EIA is required; and c) To ensure full compliance with the requirements of the EU Habitats Directive, SEA Directive and associated legislation/regulations, including the associated European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), European Communities (Environmental Assessment of Certain Plans and Programmes) regulations 2004-2011, and the European Communities (Environmental Impact Assessment) Regulations 1989 – 2011 (or any updated/superseding legislation).	The EIAR has had full regard to all relevant Guidelines, including Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessments (2018), the EU Habitats Directive, SEA Directive and associated legislation/regulations, including the associated European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), European Communities (Environmental Assessment of Certain Plans and Programmes) regulations 2004-2011, and the European Communities (Environmental Impact Assessment) Regulations 1989 – 2011 (or any updated/superseding legislation).
	CDP15.12: Biodiversity and Habitat Protection It is an objective of Clare County Council: a) To protect and promote the sustainable management of the natural heritage, flora and fauna of the County both within protected areas and in the general landscape through the promotion of biodiversity, the conservation of natural habitats, the enhancement of new and existing habitats, and through the integration of Green Infrastructure (GI), Blue Infrastructure and ecosystem services including landscape, heritage, biodiversity and management of invasive and alien species into the Development Plan; b) To promote the conservation of biodiversity through the protection of sites of biodiversity importance and wildlife corridors, both within and between the designated sites and the wider Plan area; c) To support the implementation of the All Ireland Pollinator Plan, National Biodiversity Action Plan and National Raised Bog SAC Management Plan;	Chapter 6: Biodiversity (Flora and Fauna) of the EIAR presents an assessment of all habitats present within the Proposed Wind Farm site boundary, and those of EU importance located within the Zone of Influence (i.e. the within the EIAR Site Boundary, those in proximity to the EIAR Site Boundary, and those with hydrological connectivity), and also demonstrates the avoidance of the Proposed Wind Farm relating to these sensitive habitats. Appendix 6-4 of Chapter 6 also presents Biodiversity Management and Enhancement measures which will both promote the biodiversity of sensitive areas and enhance the biodiversity of new and existing areas of sensitive habitats. Appendix 6-4 also includes for the removal of invasive species on the Third Schedule (i.e. Japanese knotweed, Rhododendron). Also included within Appendix 6-4 are proposals to plant new hedgerow and to improve the quality of existing hedgerow, thus improving existing wildlife corridors for a multitude of species, including birds and bats. The Biodiversity Management and enhancement measures ensure that no net loss of habitats will occur due to the construction or operation of the Proposed Project,

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	d) To ensure there is no net loss of potential Lesser Horseshoe Bat feeding habitats, treelines and hedgerows within 2.5km of known roosts; e) To implement and monitor the actions as set out in the Clare County Biodiversity Plan; and To promote biodiversity net gain in any new plans/projects/policies to promote development that leaves biodiversity in a better state than before	including the feeding and roosting habitat of the Lesser Horseshoe Bat. Further details of the impact of the Proposed Project on Lesser Horseshoe Bats can be found in Appendix 6.2 of the EIAR.
	CDP15.14 Habitat Fragmentation and Green Infrastructure Corridors It is an objective of Clare County Council: a) To ensure that development proposals support and enhance the connectivity and integrity of habitats in the Plan area by incorporating natural features into the design of development proposals. To ensure that the potential impacts upon the migratory routes of fauna including birds and bats and the movement of species between European Sites are fully considered within the relevant ecological assessment. These assessments shall fully consider flight collision risks, habitat fragmentation and barrier risk as required.	Appendix 6-4 Biodiversity Management and Enhancement Plan (BMEP) of the EIAR aims to promote biodiversity within the local area of the Proposed Wind Farm. Appendix 6-4 includes details on the planting of shrubs, hedgerows and treelines within the Proposed Wind Farm which will ensure that no net loss of these habitats is experienced, and that the connectivity of existing sensitive habitats is maintained. The potential impact of the Proposed Project on migratory routes of fauna, including bats and birds, are assessed in Chapter 6 - Biodiversity and Chapter 7 – Ornithology and in the NIS.
	CDP15.19 Woodlands, Trees and Hedgerows It is an objective of Clare County Council: a) To preserve and conserve individual or groups of trees identified in Volume 2 of this Plan as 'Trees for Preservation' which will enhance the character and appearance of an area;	As detailed in Chapter 3: Consideration of Alternatives of the EIAR, the Proposed Project layout was designed on a constraints-led basis Chapter 6 and its appendices of the EIAR also details the surveys carried out on the Proposed Project site. There will be no net loss of habitats as a result of the Proposed Project. As detailed within the EIAR, a felling licence will be applied for before any felling works take place. Forestry to be felled to

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	b) To carry out tree survey work during the lifetime of this Plan to identify future trees of importance in the County and facilitate their future protection; c) To protect individual or groups of trees within the Plan area which are important for environmental, recreational, historical, biodiversity and/or aesthetic reasons or by reason of contribution to sense of place, including groups of trees which correspond with protected habitats, or which support protected species, under the Habitats Directive; d) To work with landowners, local communities and other relevant groups to promote the retention and conservation of existing trees and hedgerows and encourage development proposals that enhance the landscape through positive management and additional planting/sensitive replanting of native tree species; e) To protect woodlands and hedgerows from damage and/or degradation and to prevent disruption of the connectivity of woodlands and hedgerows of the County; f) To ensure, where required, applications for development include proposals for planting / leave a suitable ecological buffer zone, between the development works and areas/features of ecological importance; g) Where hedgerows are required to be removed in the interests of traffic safety or where breaches to hedgerows occur due to river drainage/maintenance works and flood repair, to require the applicant/developer to reinstate the hedgerows with a suitable replacement of native species to the satisfaction of the Council; h) To require each green space in new residential developments to have at least one native oak tree, or other naturalised tree species of similar stature and lifespan, integrated into the agreed planting/landscaping scheme; and	accommodate the Proposed Project is all commercial forestry. Commercial forestry felled in order to facilitate the Proposed Project will be replanted offsite. Hedgerow removal will take place however hedgerows will be replaced within biodiversity enhancement areas.

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	To require, where possible, that all trees felled as a result of development proposals be replaced at a minimum ratio of 10 new native species per 1 tree felled.	
Landscape	**CDP 14.2 Settled Landscape** It is an objective of the Development Plan: To permit development in areas designated as 'settled landscapes' that sustain and enhance quality of life and residential amenity and promote economic activity subject to: I. Conformity with all other relevant provisions of the Plan and the availability and protection of resources; II. Selection of appropriate sites in the first instance within this landscape, together with consideration of the details of siting and design which are directed towards minimising visual impacts; III. Regard being given to avoiding intrusions on scenic routes and on ridges or shorelines. Developments in these areas will be required to demonstrate: a) That the site has been selected to avoid visually prominent locations; b) That the site layouts avail of existing topography and vegetation to reduce visibility from scenic routes, walking trails, water bodies, public amenities and roads; c) That design for buildings and structures reduce visual impact through careful choice of forms, finishes and colours, and that any site works seek to reduce visual impact.	The Proposed Project is located in a settled landscape described as areas where people live and work. Uses envisaged in settled landscapes include **energy,** along with agriculture, forestry, extraction, transportation, industry, commerce, tourism, recreation and leisure, education, healthcare and social infrastructure. In relation to Scenic Routes, the CDP notes that there is a need to protect and conserve views adjoining public roads throughout the county where views are of high amenity value, however it notes that it is not proposed that this should give rise to the prohibition of development along these routes but that development, where permitted, should not seriously hinder or obstruct these views and should be designed to minimise visual impact. The Proposed Project has been designed with regard for the designated Scenic Routes in the area. The impact of the Proposed Project on the 'Settled Landscape' and Scenic Routes are fully assessed in the Chapter 13 - Landscape and Visual of the EIAR. The impact of the Proposed Project on scenic routes and walking trails has been mitigated by design. An informational lookout point is proposed to offset the visual impact on the East Clare Way.

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	CDP14.7 Scenic Routes It is an objective of Clare County Council: a) To protect sensitive areas from inappropriate development while providing for development and change that will benefit the rural community; b) To ensure that proposed developments take into consideration their effects on views from the public road towards scenic features or areas and are designed and located to minimise their impact; and c) To ensure that appropriate standards of location, siting, design, finishing and landscaping are achieved.	The Proposed Project takes into consideration the effects on views from public roads and is located to minimise their impact this can be seen in the photomontage booklet found in Volume 2 of the EIAR that accompanies the application.
Archaeology	**CDP16.1: Archaeology Heritage** It is an objective of Clare County Council: a) To ensure the protection of the architectural heritage of County Clare through the identification of Protected Structures, the designation of Architectural Conservation Areas, the safeguarding of historic gardens, and the recognition of structures and elements that contribute positively to the vernacular and industrial heritage of the county; and b) To ensure that the archaeological and architectural heritage of the county is not damaged either through direct destruction or by unsympathetic developments. c) To support and promote architectural vernacular skills training and facilities in the county	A robust archaeological assessment is provided in Chapter 14 of the EIAR. The Proposed Wind Farm has also been designed with consideration for the recorded monuments of the area. There are no national monuments located within the Proposed Wind Farm site. There are 3 no. recorded monuments located within the Proposed Wind Farm site (CL044-065 -a cairn, CL044-063 – an enclosure, and CL044-031 - an enclosure). Chapter 14 of the EIAR provides a full assessment of the direct and indirect effects of the Proposed Project on the archaeological and architectural heritage within the study area (i.e. 25km from the proposed turbine locations). This assessment includes a visual assessment of the Proposed Project in relation to monuments/areas of archaeological and architectural heritage.
	CDP16.2: Protected Structures	The Proposed Grid Connection Route, subject to a separate future planning application includes for the crossing of 1 no. protected

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	It is an objective of Clare County Council: a) To protect, as set out in the Record of Protected Structures, all structures, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest; and b) To review the Record of Protected Structures periodically and add structures of special interest as appropriate, including significant elements of industrial, maritime or vernacular heritage and any twentieth century structures of merit.	structure (RPS no. 650, Blackwater Bridge). This bridge will be traversed using either the method of Horizontal Directional Drilling (HDD) or by strapping the cable to the side of the bridge. Chapter 14 of the EIAR provides a full assessment in which the scenario of strapping the cable to the bridge is assessed. The assessment had the following conclusion: *'While direct negative effects to the bridge structure as a result of this work are not identified some mitigation measures are proposed in order to ensure that the potential direct effects do not occur at the construction stage of the project.'* Chapter 14 goes on to state that *'the potential residual effect after the implementation of the mitigation measures is likely to be not significant.'.* The Proposed Project is therefore in compliance with CDP 16.2: Protected Structures. It is noted here for clarity that the Proposed Grid Connection Route will be subject to a separate future planning application.
	CDP16.8 Sites, Features and Objects of Archaeological Interest It is an objective of Clare County Council: a) To safeguard sites, features and objects of archaeological interest generally; b) To secure the preservation (i.e. preservation in situ or in exceptional cases preservation by record) of all archaeological monuments included in the Record of Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act, 1994, and of sites, features and objects of archaeological and historical interest generally;	Chapter 14 of the EIAR presents an assessment of the cultural heritage features (including National Monuments, Protected Structures, those on the National Inventory of Architectural Heritage (NIAH)) and the potential impacts of the Proposed Project on these monuments. The EIAR concludes that '*No direct effects to the recorded archaeological resource* [of the area] *are identified.*' The Cultural Heritage assessment goes on to state that *'Where potential effects have been identified, such as to sub-surface archaeology, appropriate mitigation measures have been recommended in order to minimise any such effects.'* Where are relevant mitigation measures have been identified, they will be implemented during the construction, operation and decommissioning phases of the Proposed Project in full.

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	c) In securing such preservation, to have regard to the advice and recommendations of the Department of the Culture, Heritage and the Gaeltacht; d) To have regard to the government publication Framework and Principles for the Protection of the Archaeological Heritage 1999 in relation to protecting sites, features and objects of archaeological interest; and e) To advocate for greater financial assistance for the maintenance and improvement of features of archaeological interests in County Clare.	The Cultural Heritage Chapter of the EIAR has had full regard, and is in compliance with the Record of Monuments and Places, Section 12 of the National Monuments (Amendment) Act, 1994, recommendations of the Department of the Culture, Heritage and the Gaeltacht, Principles for the Protection of the Archaeological Heritage 1999. The EIAR includes for enhancement measures to be undertaken on the Blackwater Bridge (RPS No. 650) during the construction phase of the Proposed Project in order to mitigate against any potential negative effects arising from the construction of the Proposed Grid Connection Route when traversing the Blackwater Bridge. These works will be overseen by a Project Archaeologist and carried out by a suitably qualified contractor.