

on Checklist

Number : LDG-078854-25
Number: ABP-322154-25
Owner: Briskalagh Limited
Lodgement Date: 26/03/2025 16:45:00
Validation Officer: David Behan
PA Name: Kilkenny County Council
PA Reg Ref: 2560003
Case Type: Normal Planning Appeal PDA2000
Lodgement Type: Appeal



An
Bord
Pleanála

Validation Checklist	Value
Confirm Classification	Confirmed - Correct
Confirm PA Case Link	Confirmed-Correct
Confirm ABP Case Link	Confirmed-Correct
Fee/Payment	Valid – Correct
Name and Address available	Yes
Agent Name and Address available (if engaged)	Yes
Subject Matter available	Yes
Grounds	Yes
Sufficient Fee Received	Yes
Received On time	Yes
3rd Party Acknowledgement	Not Applicable
Eligible to make lodgement	Yes
Completeness Check of Documentation	Yes
Valid Lodgement Channel	Yes

BP01 - 1st Party

BP07
Digitally - PA -

Run at: 27/03/2025 12:48

Run by: David Behan

David Behan

To: planning@kilkennycoco.ie
Subject: Appeal

A Chara,

The Board received an appeal on 26th of March 27, 2025, from a 1st party in relation to your reference;
2560003

Please note our reference is; APB-322154-25

In order for the Board to validate this appeal, can you please confirm the following;

Your date of decision

Full Development Description

If an EIAR was submitted with the planning application at any stage?

If an NIS was submitted with this planning application at any stage?

If this planning application is for an LRD (Large Residential Development) or if is for a Normal Planning Application?

Many thanks,
David

Lodgement Cover Sheet - LDG-078854-25

Details

Lodgement Date	26/03/2025
Customer	Briskalagh Limited
Lodgement Channel	In Person
Lodgement by Agent	Yes
Agent Name	MKO
Correspondence Primarily Sent to	Agent
Registered Post Reference	

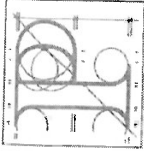
Categorisation

Lodgement Type	Appeal
Section	Processing

Fee and Payments

Specified Body	No
Oral Hearing	No
Fee Calculation Method	System
Currency	Euro
Fee Paid	3000.00
Refund Amount	

Appeal



An
Bord
Pleanála

Lodgement ID	LDG-078854-25
Map ID	
Created By	Anthony Kelly
Physical Items included	No
Generate Acknowledgement Letter	
Customer Ref. No.	
PA Reg Ref	2560003

PA Name	Kilkenny County Council
Case Type (3rd Level Category)	

Observation/Objection Allowed?	
Payment	PMT-061572-25
Related Payment Details Record	PD-061422-25

Revised 27/2/25 ~ 26/3/25 ~
DD - 021030 - 25 ~
ABP - 322154 - 25 ~

Appeals Type	
--------------	--

PA Case Details Manual	
PA Case Number	
PA Decision	
PA Decision Date	
Lodgement Deadline	
Development Description	
Development Address	



AN BORD PLEANÁLA	
LDG-	078854-25
ABP-	
26 MAR 2025	
Fee: €	3000.00
Type:	CARD
Time:	16.35
By:	ITAMU

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

Our ref: 230502-g
Your ref: N/A

Date: 26th March 2025

Re: First Party Appeal of Decision to Refuse Permission – Kilkenny County Council Pl. Ref. 25/60003

Dear Sir/Madam,

MKO of Tuam Road, Galway, H91 VW84 have been instructed on behalf of our client, **Briskalagh Ltd. ('the Applicant') of Lissarda Industrial Park Lissarda, Co.Cork, Cork, P14 YN56** to prepare and lodge this First-Party Grounds Of Appeal (GOA) against the decision of Kilkenny County Council to refuse planning permission for a proposed renewable energy development comprising of 7 no. wind turbines, a permanent 38kV onsite substation, grid connection underground cabling and all associated infrastructure (the Proposed Project), in the townlands of Acragar, Ballyconra, Ballycuddihy, Ballyroe, Ballyroe (Grace), Ballyroe (Maher), Baunaniska, Boherkyle, Briskalagh, Brittas, Clone, Coolnapisha, Curraghduff, Freshford, Freshford Lots, Graigueswood, Grange, Huntstown, Kilmanagh, Knockeenglass, Knockown, Moatpark, Monabrika, Monavadaroe, Moneenaun, Oldtown, Oldtownhill, Parksgrove, Picketstown, Rathealy, Sart, Sweethill, Tobernapeastia, Tullaroan, Upperwood Demesne, Co. Kilkenny.

The planning application was lodged with KCC on 3rd January 2025 and was assigned the planning reference Pl. Ref. 25/60003. The planning application was accompanied with an Environmental Impact Assessment Report (ELAR), Natura Impact Statement (NIS) along with all required statutory planning application documentation. Permission was refused by KCC on the 27th February 2025. The deadline for the submission of this appeal to An Bord Pleanála (the Board) is the 26th March 2025, by 5.30pm.

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

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

We, Briskalagh Ltd., intend to apply for permission for a period of 10 years for a development at this site situated in the townlands of Acragar, Ballyconra, Ballycuddihy, Ballyroe, Ballyroe (Grace), Ballyroe (Maher), Baunaniska, Boherkyle, Briskalagh, Brittas, Clone, Coolnapisha, Curraghduff, Freshford, Freshford Lots, Graigueswood, Grange, Huntstown, Kilmanagh,

MKO, Tuam Road, Galway, H91 VW84
+353 (0)91 735 611 | mkoireland.ie | info@mkoireland.ie

Dublin - MKO, 9C Beckett Way, Park West Business Park, Dublin, D12 XN9W
McCarthy Keville O'Sullivan Ltd t/a MKO. Registered in Ireland No: 462657. VAT No: IE9693052R

Knockeenglass, Knockown, Moatpark, Monabrika, Monavadaroe, Moneenaun, Oldtownhill, Parksgrove, Picketstown, Rathealy, Sart, Sweethill, Tobernapeastia, Tullaroan, Upperwood Demesne, Co. Kilkenny.

The development will consist of the provision of the following:

- i. 7 no. wind turbines with an overall turbine tip height of 185 metres; a rotor blade diameter of 163 metres; and hub height of 103.5 metres, and associated foundations and hard-standing areas;*
- ii. A permanent 38kV substation compound (control building with welfare facilities, all associated electrical plant and apparatus, security fencing, underground cabling, storage containers, wastewater holding tank, site drainage and all ancillary works);*
- iii. Permanent underground electrical (38kV) and communications cabling to the existing Ballyragget 110kV substation in the townland of Moatpark (including joint bays, communication and earth sheath link chambers and all ancillary works along the route). This cabling route is primarily located within the public road corridor which includes a Protected Structure (Kilkenny RPS Ref. C886);*
- iv. Underground electrical (33kV) and communications cabling connecting the wind turbines and meteorological mast to the on-site substation;*
- v. 3 no. temporary construction compounds (including site offices and welfare facilities);*
- vi. A meteorological mast with a height of 30 metres, security fencing and associated foundation and hard-standing area;*
- vii. A new temporary site entrance on the L1009;*
- viii. A new gated site entrance on the L5024;*
- ix. Upgrade of existing site tracks/ roads and provision of new site access roads, junctions and hardstand areas;*
- x. A borrow pit;*
- xi. Spoil Management;*
- xii. Tree felling and hedgerow removal;*
- xiii. Biodiversity Management and Enhancement Plan measures (including establishment of a riparian buffer and hedgerow enhancement);*
- xiv. Site Drainage;*
- xv. Operational Stage site signage; and*
- xvi. All ancillary works and apparatus.*

A thirty five-year operational life from the date of full commissioning of the wind turbines and subsequent decommissioning of the wind turbines is being sought.

An Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) have been prepared in respect of the proposed development and accompany this application.

The GOA Report outlines the project background, the reasons for Kilkenny County Council's refusal, and the Applicant's Grounds of Appeal. It directly addresses and refutes the three refusal reasons, demonstrating that they are fundamentally flawed and that the Proposed Project aligns with proper planning and sustainable development. As such, it argues that Kilkenny County Council's decision should be overturned and planning permission granted by An Bord Pleanála. Additionally, the GOA Report provides a comprehensive response to all Third-Party and Statutory Consultee submissions and

highlights An Bord Pleanála's legal obligations under the Climate Action and Low Carbon Development Act 2015 (as amended) and the Planning and Development Act 2000 (as amended) in assessing renewable wind energy projects. The Proposed Project, if permitted, will contribute towards national wind energy target of 9GW. The importance of the Proposed Project with regards to the climate goals cannot be overlooked.

Ultimately, it is considered that the Proposed Project 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 are ruled out, such as the Proposed Project, 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 Project.

Therefore, it is respectfully requested that the Board overturn the decision of Kilkenny County Council and resultingly grant planning permission for the Proposed Project in accordance with the provisions of proper planning and sustainable development.

The GOA Report is enclosed which also includes the following appendices:

- **Appendix 1** - Notification of Decision to Refuse Planning Permission by Kilkenny County Council.
- **Appendix 2** - Response by Hydro-Environmental Services.
- **Appendix 3** - Response by AWN Consulting Ltd.

The sum of €3,000 will be paid by card upon submission of this appeal.

If you have any queries, please do not hesitate to get in touch.

Yours faithfully,

Alan Clancy

Alan Clancy BA, MPlan, MIPI

Project Planner, MKO

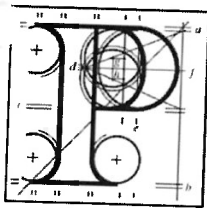
Enclosed:

- Completed Appeal Form
- Grounds of Appeal Report

MKO, Tuam Road, Galway, H91 VW84
+353 (0)91 735 611 | mkoireland.ie | info@mkoireland.ie

Dublin - MKO, 9C Beckett Way, Park West Business Park, Dublin, D12 XN9W
McCarthy Keville O'Sullivan Ltd t/a MKO. Registered in Ireland No: 462657. VAT No: IE9693052R





An
Bord
Pleanála

Planning Appeal Form

Your details

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

Your full details:

(a) Name

Briskalagh Ltd.

(b) Address

Lissarda Industrial Park Lissarda, Co.Cork, Cork,
P14 YN56

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

Alan Clancy

(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)

Kilkenny County Council

(b) Planning authority register reference number

(for example: 18/0123)

25/60003

(c) Location of proposed development

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

the townlands of Acragar, Ballyconra, Ballycuddihy, Ballyroe, Ballyroe (Grace), Ballyroe (Maher), Baunaniska, Boherkyle, Briskalagh, Brittas, Clone, Coolnapisha, Curraghduff, Freshford, Freshford Lots,

Graigueswood, Grange, Huntstown, Kilmanagh, Knockeenglass,
Knockown, Moatpark, Monabrika, Monavadaroe, Moneenaun, Oldtown,
Oldtownhill, Parksgrove, Picketstown, Rathealy, Sart, Sweethill,
Tobernapeastia, Tullaroan, Upperwood Demesne, Co. Kilkenny.

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 Grounds Of Appeal 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.





Planning and
Environmental
Consultants

First Party Grounds of Appeal

Briskalagh Renewable Energy Development.

Kilkenny County Council, Planning Ref No.
25/60003





DOCUMENT DETAILS

Client: **Briskalagh Limited**

Project Title: **Briskalagh Renewable Energy Development.**

Project Number: **230502-g**

Document Title: **First Party Grounds of Appeal**

Document File Name: **230502-g Briskalagh WF GOA F
2025.03.26**

Prepared By: **MKO
Tuam Road
Galway
Ireland
H91 VW84**



Planning and
Environmental
Consultants

Rev	Status	Date	Author(s)	Approved By
02	Draft	24/03/2025	AC/EMcC	MC
03	Final	26/03/2025	AC/EMcC	MC

Table of Contents

EXECUTIVE SUMMARY	3
1. INTRODUCTION.....	5
1.1 Background	5
1.2 Proposed Project.....	5
1.2.1 References to the Proposed Project.....	6
1.3 Policy Overview	7
1.4 Need for the Proposed Project	10
1.4.1 An Bord Pleanála's Legal Obligations.....	10
2. LOCAL PLANNING AUTHORITY DECISION	13
3. GROUNDS OF APPEAL.....	15
3.1 Grounds of Appeal against Refusal Reason 1.....	15
3.2 Grounds of Appeal for Refusal Reason 2	22
3.3 Grounds of Appeal for Refusal Reason 3.....	25
3.3.1 Conclusion	34
4. RESPONSE TO SUBMISSIONS.....	35
4.1 Response to Third-Party Observations	35
4.1.1 Visual Impact.....	36
4.1.1.1 Response to CASS Ltd. Submission.....	36
4.1.1.2 Residential Visual Amenity.....	39
4.1.1.3 Visual Impact on Local Settlements and Local Rural Landscape	41
4.1.1.4 Other Landscape and Visual Receptors.....	42
4.1.1.5 Response to Specific Topics relating to methods and processes used in the LVIA Chapter and Production of Photomontages.....	43
4.1.1.6 Impact Assessment of Photomontage Viewpoints and Cumulative Visual Effects	49
4.1.1.7 LVIA Conclusions	51
4.1.2 Impact on Water and Flood Risk	51
4.1.3 Human Health	52
4.1.4 Noise.....	53
4.1.5 Cumulative effect	53
4.1.6 Consideration of alternatives and Proposed Project design	54
4.1.7 Construction Traffic	55
4.1.8 Biodiversity	57
4.1.8.1 Botanical Data.....	57
4.1.8.2 Black poplar.....	58
4.1.8.3 Aquatic Environment	58
4.1.8.4 Water Quality Impacts	59
4.1.8.5 Felling along the Proposed Grid Connection	59
4.1.8.6 Bats.....	59
4.1.8.7 Marsh Fritillary	60
4.1.8.8 Compliance with CJEU Case 258/11.....	60
4.1.9 Birds	62
4.1.10 Impact on Property Prices	64
4.1.11 Lack of Community Engagement.....	65
4.1.12 Impact on Sensitive Receptors.....	67
4.1.13 Built Heritage and Archaeology.....	69
4.1.14 Land, Soils and Geology.....	70
4.1.15 Insufficient Turbine Spacing	70
4.1.16 Multiple Applications.....	71
4.1.17 Concern about Applicant's Company Structure and Agent	71
4.1.18 Policy and Legislation	72
4.2 Response to Statutory Consultees Observations.....	73
4.2.1 Department of Housing, Local Government and Heritage.....	74
4.2.1.1 Archaeology.....	74

4.2.1.2	Natural Heritage	74
4.2.2	Inland Fisheries Ireland	82
4.2.3	Transport Infrastructure Ireland	82
4.2.3.1	Official Policy	82
4.2.3.2	National Road Network Maintenance and Safety	82
4.2.4	Uisce Éireann	84
4.2.5	Irish Aviation Authority	85
4.2.6	Gas Networks Ireland	85
4.2.7	Health Service Executive	85
5.	CONCLUSION	87

TABLE OF FIGURES

Figure 1-1 Main climate and renewable energy policy drivers	7
Figure 3-1 European Designated Sites in relation to the Proposed Project	26
Figure 4-1 Alternative VP1 (extracted from third-party submissions) - Lack of Accuracy on Field of View	47
Figure 4-2 Alternative VP3 (extracted from third-party submissions) - Warping and Imagery Distortion	47
Figure 4-3 Third Party Alternative Viewpoint 3 - Proposed View	48
Figure 4-4 Third Party Alternative Viewpoint 3 - Proposed View overlain with the Third-Party Wireline	48
Figure 4-5 Third Party Alternative Viewpoint 3, turbine T7 wireline inconsistency	48
Figure 4-6 Alternative VP1 (extracted from third-party submissions) - Wireline Inconsistency	49
Figure 4-7 Alternative VP7 (extracted from third-party submissions) - Wireline Inconsistency	49

TABLE OF TABLES

Table 1 Key Themes from Third-Party Submissions and Lead Authors for Response	35
Table 2 List of Statutory Consultees and Lead Authors for Response	73

LIST OF APPENDICES

- Appendix 1** – Notification of Decision to Refuse Planning Permission by Kilkenny County Council.
Appendix 2 – Response by Hydro-Environmental Services.
Appendix 3 – Response by AWN Consulting Ltd.

EXECUTIVE SUMMARY

MKO has been appointed by Briskalagh Ltd. (of Lissarda Business Park, Lissarda, County Cork) to submit a First-Party Grounds of Appeal (GOA) against Kilkenny County Council's refusal of planning permission for the Briskalagh Renewable Energy Development. The Proposed Project includes seven wind turbines, a 38kV substation, underground grid connection cabling, and associated infrastructure. The planning application, submitted on January 3, 2025 (Pl. Ref. 25/60003), was accompanied by an Environmental Impact Assessment Report, a Natura Impact Statement, and all necessary documentation. Kilkenny County Council refused planning permission on February 27, 2025 citing 3 no. refusal reasons. This appeal demonstrates the project's suitability in terms of proper planning and sustainable development. This GOA sets out the background to the project, the reason for refusals issued by Kilkenny County Council and sets out the Applicant's Grounds of Appeal. The GOA provides a response and rebuttal to the three reasons for refusal demonstrating that the Proposed Project is appropriate in terms of proper planning and sustainable development, and therefore KCC's decision should be overturned, and planning permission granted by An Bord Pleanála. For completeness, the GOA also contains a full and comprehensive response to all Third-Party and Statutory Consultee submissions that were submitted on the planning application file.

The Proposed Project is strongly supported by European and national policy and legislation. At a European Union level the Proposed Project is supported by the EU Renewable Energy Directive and REPowerEU. At a national level, the Proposed Wind Farm is supported by the National Planning Framework, Climate Action Plan 2024, the National Energy Security Framework, among other national climate and energy policies. The local planning policy framework is also supportive with the Kilkenny City and County Development Plan 2021-2027 providing for the development of indigenous energy resources, with an emphasis on renewable energy supplies and setting ambitious target for the deployment of renewable energy, including a target of 100% of electricity demand for the County through renewables by 2030 by promoting and facilitating all forms of renewable energies and energy efficiency improvements.

An Bord Pleanála has clear legal obligations under the Climate Action and Low Carbon Development Act 2015 (as amended) and the Planning and Development Act 2000 (as amended) when assessing planning applications for renewable wind energy developments. The Board is required to make decisions consistent with national climate policies and objectives, including the latest climate action plan, national adaptation frameworks, and the overarching goal of reducing greenhouse gas emissions. This obligation takes precedence over the requirement to simply "have regard to" local planning policies.

The continued refusal of viable wind energy projects poses a serious risk to Ireland's ability to meet its CAP 24 targets and legally binding EU climate commitments. Ireland must deploy at least 5GW of new onshore wind capacity by 2030 to meet its renewable electricity targets, yet current planning trends jeopardise these goals. Failure to meet EU climate targets could result in financial penalties, increased carbon credit costs, and greater reliance on fossil fuel imports, undermining energy security and economic stability. Moreover, prolonged planning delays create uncertainty for investors, threatening job creation and regional economic growth. The Board has a statutory duty to consider the national interest and the strategic importance of renewable energy expansion. Without a shift in approach to ensure alignment with national climate objectives, Ireland risks missing its climate targets, incurring financial consequences, and undermining its energy security. Every viable renewable energy project plays a crucial role in meeting Ireland's climate targets. The approval of well-planned projects, such as the Proposed Project is not just beneficial—it is imperative. Without decisive action to facilitate renewable energy deployment, Ireland risks missing national and EU commitments, incurring financial penalties, and undermining energy security.

Section 3 of this document outlines the First-Party Grounds Of Appeal against Kilkenny County Council's refusal, addressing in turn each of the stated reasons for refusal. The first refusal reason cited by the Planner concerns potential adverse effects on residential amenity in the surrounding area, specifically in relation to visual impact, noise, shadow flicker, and access disturbance. Each of these aspects is examined

in detail as part of the appeal. It is not considered accepted that the Proposed Project would, as stated in Refusal Reason 1, “give rise to excessive levels of adverse effects on residential amenity in the area” that are “incapable of being mitigated”. As discussed in Section 4 of this document, mitigation in the form of appropriate design, good construction practices, installation of screening measures, use of turbine control measures and traffic management will ensure that there will be no significant adverse effects on residential amenity arising from the Proposed Project.

The second refusal reason questions the adequacy of the data presented in the EIAR, particularly regarding cumulative effects, residential amenity, and compliance with statutory requirements. MKO strongly refutes this opinion of the Authority. It is the case that the EIAR fully complies with statutory Environmental Impact Assessment (EIA) requirements. The quality and scope of data within the EIAR is robust, including the detailed assessments of landscape and visual impact, material assets, noise, ecology (biodiversity and ornithology), and hydrology. The EIAR also provides sufficient detail on cumulative effects and potential impacts on residential amenity, ensuring a comprehensive evaluation of the project's implications.

The third refusal reason for refusal claims that there is a significant lack of supporting information for certain ecological receptors (such as birds) in both the Stage 1 Screening and Stage 2 Natura Impact Statement (NIS), and certain elements of the mitigation measures presented with the planning application. MKO strongly refutes this claim. Comprehensive surveys of the Site, including the Proposed Wind Farm and the Proposed Grid Connection, were undertaken by qualified ecologists across a range of dates in 2023 and 2024 covering February, March, April, June, July and August. During these surveys, comprehensive information on the baseline environment was collected. The data collected is considered to be more than adequate to inform the NIS and undertake a robust assessment of all potential adverse effects on European Sites. The assessment considered all potential for adverse effects on the River Barrow and River Nore SAC and the River Nore SPA, including potential for cumulative effects on European Sites. The mitigation prescribed within the NIS is considered appropriate to ensure that there is no potential for adverse effects on the integrity of any European Sites.

Section 4 of the Grounds of Appeal addresses all Third-Party and Statutory Consultee submissions received by Kilkenny County Council in relation to the Proposed Project. It clearly demonstrates that any concerns raised were addressed by way of the information already contained within the planning application, demonstrating the thorough and robust nature of the EIAR, NIS, and supporting documentation. This section first responds to Third-Party observations, grouped by theme, followed by a detailed response to submissions from Statutory Bodies, ensuring that all concerns raised by Third Parties and Statutory Bodies are fully and robustly addressed in this Grounds of Appeal.

In conclusion, this First-Party Grounds Of Appeal challenges Kilkenny County Council's refusal of planning permission for the Briskalagh Renewable Energy Development. The Proposed Project aligns with European, national, regional, and local energy policies, supporting Ireland's target of 9GW of onshore wind. It has been demonstrated that the Proposed Project will not cause excessive adverse effects on residential amenity, that the EIAR is robust, and that appropriate mitigation will ensure that no adverse effects on European Sites will occur as a result of the Proposed Project. Given Ireland's urgent need to accelerate renewable energy deployment to meet climate targets, refusing appropriately located and well-designed projects like this will hinder decarbonisation efforts. The Board is therefore respectfully urged to overturn the refusal and grant planning permission for the Proposed Project in line with proper planning and sustainable development.

INTRODUCTION

Background

MKO have been appointed by Briskalagh Ltd., (the Applicant) of Lissarda Industrial Park Lissarda, Co.Cork, Cork, P14 YN56 to prepare and lodge this First-Party Grounds of Appeal (GOA), against the decision of Kilkenny County Council (KCC) to refuse planning permission for a proposed renewable energy development comprising of 7 no. wind turbines, a permanent 38kV onsite substation, grid connection underground cabling and all associated infrastructure (the Proposed Project), in the townlands of Acragar, Ballyconra, Ballycuddihy, Ballyroe, Ballyroe (Grace), Ballyroe (Maher), Baunaniska, Boherkyle, Briskalagh, Brittas, Clone, Coolnapisha, Curraghduff, Freshford, Freshford Lots, Graigueswood, Grange, Huntstown, Kilmanagh, Knockeenglass, Knockown, Moatpark, Monabrika, Monavadaroe, Moneenaun, Oldtown, Oldtownhill, Parksgrove, Picketstown, Rathealy, Sart, Sweethill, Tobernapeastia, Tullaroan, Upperwood Demesne, Co. Kilkenny.

The planning application was lodged with KCC on 3rd January 2025 and was assigned the planning reference Pl. Ref. 25/60003. The planning application was accompanied with an Environmental Impact Assessment Report (EIAR), Natura Impact Statement (NIS) along with all required statutory planning application documentation. Permission was refused by KCC on the 27th February 2025. The deadline for the submission of this appeal to An Bord Pleanála (the Board) is the 26th March 2025, by 5.30pm.

This GOA sets out the background to the project, the reasons for refusals issued by KCC and sets out the Applicant's Grounds of Appeal. The GOA provides a response and rebuttal to the three reasons for refusal demonstrating that the Proposed Project is appropriate in terms of proper planning and sustainable development, and therefore KCC's decision should be overturned, and planning permission granted by the Board. The refusal issued by KCC is attached to this Report as **Appendix 1** for reference. For completeness, the GOA also contains a full and comprehensive response to all Third-Party and Statutory Consultee submissions that were submitted on the planning application file. Third-Party Submissions are addressed thematically, while Statutory Consultee Submissions are responded to directly.

Proposed Project

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

We, Briskalagh Ltd., intend to apply for permission for a period of 10 years for a development at this site situated in the townlands of Acragar, Ballyconra, Ballycuddihy, Ballyroe, Ballyroe (Grace), Ballyroe (Maher), Baunaniska, Boherkyle, Briskalagh, Brittas, Clone, Coolnapisha, Curraghduff, Freshford, Freshford Lots, Graigueswood, Grange, Huntstown, Kilmanagh, Knockeenglass, Knockown, Moatpark, Monabrika, Monavadaroe, Moneenaun, Oldtown, Oldtownhill, Parksgrove, Picketstown, Rathealy, Sart, Sweethill, Tobernapeastia, Tullaroan, Upperwood Demesne, Co. Kilkenny.

The development will consist of the provision of the following:

- i. 7 no. wind turbines with an overall turbine tip height of 185 metres; a rotor blade diameter of 163 metres; and hub height of 103.5 metres, and associated foundations and hard-standing areas;*
- ii. A permanent 38kV substation compound (control building with welfare facilities, all associated electrical plant and apparatus, security fencing, underground cabling, storage containers, wastewater holding tank, site drainage and all ancillary works);*
- iii. Permanent underground electrical (38kV) and communications cabling to the existing Ballyragget 110kV substation in the townland of Moatpark (including joint bays, communication and earth sheath link chambers and all ancillary works along the route).*

This cabling route is primarily located within the public road corridor which includes a Protected Structure (Kilkenny RPS Ref. C886);

- iv. *Underground electrical (33kV) and communications cabling connecting the wind turbines and meteorological mast to the on-site substation;*
- v. *3 no. temporary construction compounds (including site offices and welfare facilities);*
- vi. *A meteorological mast with a height of 30 metres, security fencing and associated foundation and hard-standing area;*
- vii. *A new temporary site entrance on the L1009;*
- viii. *A new gated site entrance on the L5024;*
- ix. *Upgrade of existing site tracks/roads and provision of new site access roads, junctions and hardstand areas;*
- x. *A borrow pit;*
- xi. *Spoil Management;*
- xii. *Tree felling and hedgerow removal;*
- xiii. *Biodiversity Management and Enhancement Plan measures (including establishment of a riparian buffer and hedgerow enhancement);*
- xiv. *Site Drainage;*
- xv. *Operational Stage site signage; and*
- xvi. *All ancillary works and apparatus.*

A thirty five-year operational life from the date of full commissioning of the wind turbines and subsequent decommissioning of the wind turbines is being sought.

An Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) have been prepared in respect of the proposed development and accompany this application.

12.1 References to the Proposed Project

The following text in relation to references to the Proposed Project has been reproduced from Chapter 1, Section 1.1.1, of the EIAR.

The Proposed Project, is known as the 'Briskalagh Renewable Energy Development'.

For the purposes of this document:

- Where the 'Proposed Project' is referred to this encompasses the entirety of the project for the purposes of this EIA in accordance with the EIA Directive. The Proposed Project is described in detail in Chapter 4 of the EIAR.
- Where the 'Proposed Wind Farm' is referred to, this refers to turbines and associated foundations and hard-standing areas, meteorological mast, access roads, temporary construction compounds, underground cabling, borrow pit, spoil management, site drainage, biodiversity enhancement and all ancillary works and apparatus. The Proposed Wind Farm is described in detail in Chapter 4 of the EIAR.
- Where the 'Proposed Grid Connection' is referred to, this refers to the 38kV onsite substation, associated temporary construction compound and 38kV underground cabling connecting to the existing Ballyragget 110kV substation, and all ancillary works and apparatus. The Proposed Grid Connection is described in detail in Chapter 4 of the EIAR.

- Where the 'Site' is referred to, this relates to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-1 of the EIAR and encompasses an area of approximately 1,000 hectares.
- Where the 'Proposed Wind Farm site' is referred to, this refers to the portion of the Site surrounding the Proposed Wind Farm but excluding the portion of the Site surrounding the Proposed Grid Connection underground cabling route.

1.3

Policy Overview

The following section provides a summary of the planning, renewable energy and climate policy context relevant to the Proposed Project. It is clear from the policies outlined below that the Proposed Project is strongly supported in principle by policy at all levels. The following section contains a synopsis of the current policies in place and their relevance to the Proposed Project. A more detailed discussion of these policies can be found in the Planning Report submitted as part of the planning application.

The Proposed Project 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 Directive¹ (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**.

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)

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 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.

Kilkenny City and County Development Plan

The Kilkenny City and County Development Plan 2021-2027 (KCCDP) came into effect on the 15th of October 2021. The KCCDP incorporates the aims, objectives, policies and guidelines to provide for the proper planning and sustainable development of County Kilkenny.

The KCCDP provides for the development of indigenous energy resources, with an emphasis on renewable energy supplies. The Council acknowledges the importance of renewable energy in reducing anthropogenic greenhouse gas emissions and the contribution of renewable energy in achieving national and EU target net zero greenhouse gas emissions by 2050.

Climate change mitigation and adaptation objectives have been incorporated into the policies of the KCCDP. This is to ensure that climate change has been consistently integrated into the policy themes addressed by the KCCDP.

The KCCDP also outlines policies and objectives related to Climate Action, Renewable Energy, Biodiversity, and Archaeology, along with the Development Management Requirements that the Planning Authority may take into account when assessing wind energy development applications. A statement of consistency demonstrating the Proposed Project's alignment with these policies, objectives and Development Management Standards is provided in **Table 6-2** and **Table 6-4** of the Planning Report submitted as part of the planning application.

Need for the Proposed Project

Ireland's Climate Action Plan 2024 (CAP 24) sets ambitious yet essential targets for renewable energy, including 9GW of onshore wind capacity—with at least 5GW to be delivered by 2030—and an 80% share of renewable electricity by the same year. However, multiple assessments, including the Climate Change Advisory Council (CCAC) Annual Review and the Environmental Protection Agency (EPA) emissions projections, confirm that Ireland is not on track to meet these targets. Significant gaps remain in renewable energy deployment, particularly in grid capacity expansion and wind farm development, while continued reliance on fossil fuels threatens national and EU climate commitments.

In this context, KCC sets out an ambitious target in Chapter 11 of the KCCDP

“To generate 100% of electricity demand for the County through renewables by 2030 by promoting and facilitating all forms of renewable energies and energy efficiency improvements in a sustainable manner as a response to climate change in suitable locations having due regard to natural and built heritage, biodiversity and residential amenities”

By 2030, County Kilkenny is projected to consume 633 Gigawatt hours (GWh) of electricity. To achieve its strategic goal of meeting this demand entirely through renewable energy, the county must install 253MW of renewable capacity—representing 2.09% of Ireland's overall 12.1GW onshore and offshore renewable energy target, as outlined in the KCCDP. However, progress toward this target is being hindered by the refusal of planning permissions for appropriately located and well-designed renewable energy projects, including the Proposed Project.

The Proposed Project alone would contribute 49MW of installed capacity to the national electricity grid—accounting for 19% of the total 253MW required. Its approval would make a significant contribution toward Kilkenny's renewable energy ambitions and help bridge the widening gap between policy commitments and actual energy infrastructure development.

An Bord Pleanála's Legal Obligations

The Board 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 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.

Obligations under the Climate Act and the Planning Act

When exercising its decision-making powers under the Planning Act, the Board is obliged to perform its decision-making function (in so far as practicable) 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.

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—

- the most recent approved climate action plan,*
- the most recent approved national long term climate action strategy,*
- 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.” (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 the Board to exercise its decision-making functions *“in a manner consistent with”* National Climate Policies and Objectives takes precedence over the lesser 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.”*

In effect, this means that the provisions of the Climate Act take precedence over the policies and objectives of planning authorities set out in development plans.

In practical terms, this means that where the Board 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 with the National Climate Policies and Objectives.

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)² and where local authorities have an obligation under

² Section 9(6) of the Planning Acts.

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, the Board 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 State³. The accelerated deployment of renewable energy developments is precisely such an issue of strategic economic and social importance to the State.

Given the critical role of wind energy in meeting national climate commitments, it is essential that national climate commitments take precedence over the more limited obligation to merely “have regard to” local planning policies.

Implications of refusals with respect to Ireland’s climate action targets

The refusal of well-planned, appropriately located renewable energy projects, such as the Proposed Project, threatens not only Ireland’s ability to meet CAP 24 targets but also its legal commitments under national and EU law. CAP 24, the CCAC Annual Reviews for 2023 and 2024, and Ireland’s Updated National Energy and Climate Plan (published in July 2024) all highlight the central role of renewable energy targets in addressing climate change.

Reports from the CCAC and the Environmental Protection Agency’s 2023 and 2024 emissions projections indicate that the electricity sector is not on track to meet these targets. Accelerated deployment of onshore wind is essential if Ireland is to reach the CAP 24 goal of 9GW of onshore wind capacity—of which at least 5GW must be delivered by 2030—and an 80% share of renewable electricity by the same year.

Failure to meet binding EU targets will expose Ireland to financial penalties, increased carbon credit costs, and continued dependence on fossil fuel imports—posing serious risks to energy security and economic stability. Furthermore, Ireland’s national interest, as outlined in Section 143(1) of the Planning Act, requires the rapid expansion of renewable energy, making this a matter of strategic economic and social importance.

Beyond environmental and energy security concerns, the economic consequences of ongoing refusals are severe. Investors require certainty before committing to renewable infrastructure projects. Prolonged planning delays create uncertainty, discouraging investment and undermining job creation and regional economic growth. Under Section 143(1) of the Planning Act, the Board is obligated to consider the national interest and the strategic economic and social significance of renewable energy projects. Given the direct link between wind energy expansion and Ireland’s economic resilience, energy independence, and compliance with EU climate mandates, rejecting projects that align with national policies represents a failure to uphold this statutory duty.

Every viable renewable energy project plays a crucial role in meeting Ireland’s climate targets. The approval of well-planned, appropriately located renewable energy projects, such as the Proposed Project is not just beneficial—it is imperative. Without decisive action to facilitate renewable energy deployment, Ireland risks missing national and EU commitments, incurring financial penalties, and undermining energy security.

³ Section 143(1)(b) of the Planning Acts.

2.

LOCAL PLANNING AUTHORITY DECISION

Kilkenny County Council issued a Notification of Decision to Refuse permission for the Proposed Project dated 27th February 2025, with three reasons for refusal as set out below.

Reason for Refusal 1: Visual Impact combined with noise , flicker and disturbance of access

1. *Having regard to the size and scale of the proposed development, the Planning Authority considers that the proposed seven (7) number turbines with 185metre tip height will, due to the cumulative effects of visual intrusion, combined with noise, flicker and disturbance of access, on a significant number of nearby dwellings in and around the settlements of Tullaroan, Kilmanagh, and Ballycallan, give rise to excessive levels of adverse effects on residential amenity in the area. These effects are integral and incapable of being mitigated because they arise from the extent and scale of the proposed works and their proximity and position relative to dwellings. Therefore, notwithstanding the National imperatives on renewable energy it is considered that the proposed development on its own and in combination with other windfarms already constructed and permitted in the area will have a disproportionate undue and unreasonable impact on the visual landscape amenity of the area and in particular will severely impact negatively on the residential amenity of the community in close proximity. The proposed development would therefore be contrary to the proper planning and sustainable development of the area.*

Reason for Refusal 2: Deficiencies in the EIAR

2. *The Planning Authority in its assessments of the applicants' specialist chapters of the EIAR finds that there are a number of significant deficiencies in the quality and quantum of data provided, particularly in the areas of landscape and visual effects, material assets, noise, ecology and hydrology. Furthermore, insufficient detail has been provided on the matter of cumulative effects, especially in regards to the likely effect on the residential amenity of the immediately adjacent residential areas. The EIAR was found to not meet the statutory EIA requirements in relation to the following sections contained therein as follows:*
 - a. *Consideration of Reasonable Alternatives, including cable routes*
 - b. *Description of the Proposed Project*
 - c. *Population and Human Health*
 - d. *Biodiversity (excluding birds)*
 - e. *Birds*
 - f. *Land, Soils and Geology*
 - g. *Hydrology and Hydrogeology*
 - h. *Air Quality*
 - i. *Noise and Vibration*
 - j. *Landscape and Visual*
 - k. *Cultural Heritage*
 - l. *Traffic and Transport*
 - m. *Other Material Assets*
 - n. *Interaction of Effects.*

which has resulted in insufficient information for the Planning Authority to arrive at a reasoned conclusion on the significant effects of the project on the environment. In applying the precautionary principle therefore, the Planning Authority is not satisfied that the environment impacts alone or in combination have been satisfactorily addressed, the development would therefore be contrary to the proper planning and sustainable development of the area if permitted.

Reason for Refusal 3: Lack of supporting information for certain ecological receptors and mitigation measures

- o. There is a significant lack of supporting information for certain ecological receptors (such as birds) in both the Stage 1 Screening and Stage 2 Natura impact Statement, and certain elements of the mitigation measures; with particular regard to*
- a) otter surveys carried out outside of the optimum season,*
 - b) botanical surveys results accuracy and completeness,*
 - c) comprehensive information on all watercourses within the proposed development site that have hydrological connectivity to downstream European sites, and assessment of potential effects with particular regard to cumulative effects and interactions with various construction stages and works areas across the proposed site,*
 - d) full data sets of all SCI species recorded during surveys (including non “target species”),*
 - e) clear rationale for the selection for “target” bird species and exclusion of other SCI species that were recorded within the proposed development site,*
 - f) consideration of SCI species considered for assessment of potential effects in the NIS,*
 - g) inadequate collision risk assessment for SCI species,*
 - h) insufficient assessment for birds in the NIS supplemented with relevant scientific literature*
 - i) regarding the migratory pathways of species recorded,*
 - j) insufficient information regarding the relationship between required works for the proposed*
 - k) grid connection and intersecting European sites to support statements made regarding absence*
 - l) of potential for direct effects, and*
 - (j) sufficiency and implementation of mitigation.*

As a result, the subsequent assessments of potential effects, the application of mitigation measures and the assessment of residual and cumulative effects are not supported in terms of a complete Appropriate Assessment process. Having regard to the Natura Impact Statement submitted as part of the planning application and the lack of supporting information, the planning authority is not satisfied that there is no risk of adverse effects on the integrity of the associated European Sites (either directly or indirectly), along or in-combination with other plans or projects. The application as submitted contains reasonable scientific doubt which in line with case law precludes the planning authority as the competent authority from concluding a finding of no adverse effects.

Section 3 below provides our full grounds of appeal for each of these reasons for refusal.

3.

GROUNDINGS OF APPEAL

The first-party grounds of appeal, which the Applicant wishes to raise in respect of the refusal by Kilkenny 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:

- **Refusal Reason 1:** Effects on Residential Amenity: Visual Impact combined with noise, flicker and disturbance of access,
- **Refusal Reason 2:** Deficiencies in the EIAR,
- **Refusal Reason 3** Lack of supporting information for certain ecological receptors and

3.1

Grounds of Appeal against Refusal Reason 1

The first reason for refusal, provided by the Kilkenny County Council, relates to the potential for excessive levels of adverse effects on residential amenity in the area immediately surrounding the Proposed Project, specifically relating to visual impacts, noise, shadow flicker and disturbance of access. Each of these elements, and their potential for effects on residential amenity, are discussed individually as part of this section of the GOA.

In their report, the Planner states that there, *“is no clear consideration present of cumulative impacts of effects due to visual intrusion in combination with noise, flicker and disturbance of access in terms of road closures, diversions, construction traffic, and other projects, in the applicant’s environmental impact assessment, which is a significant omission in the assessment.”*

The applicant would like to take this opportunity to clarify, as part of this GOA, that visual impact (visual intrusion), noise, shadow flicker and traffic (road closures, diversions, construction traffic) are comprehensively assessed in the submitted EIAR in the following chapters:

- **Chapter 5** – Population and Human Health (Shadow Flicker)
- **Chapter 12** – Noise and Vibration
- **Chapter 13** – Landscape and Visual
- **Chapter 15** – Material Assets (Traffic)

Where the Planner refers to the *“cumulative impacts of effects”*, it is assumed that this actually relates to interaction or combination of effects under the headings listed above. Again, it can be confirmed that this consideration of the interaction of all potential effects arising from the Proposed Project has been undertaken in Chapter 17 of the EIAR. Furthermore, the combination of the potential visual, noise, shadow flicker and traffic impacts and the subsequent effects on residential amenity were considered in Chapter 5 of the EIAR.

As stated in Chapter 5, Section 5.8, of the EIAR, residential amenity relates to the human experience of one’s home, derived from the general environment and atmosphere associated with the residence. The potential overall effect on residential amenity from the Proposed Project 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.

It is reiterated, as per Section 5.8 of the EIAR, that all non-involved properties are located at a minimum of 740m from any proposed turbine, i.e., 4 times the tip height of 185m (specifically set out in the Draft Wind Energy Development Guidelines (December 2019) for the purposes of protecting visual amenity). Ensuring this setback from non-involved sensitive receptors was a key component in the design of the Proposed Wind Farm, as outlined in detail in Chapter 3, Section 3.2.5.2 of the EIAR.

There are 4 no. involved properties that achieve the recommended minimum distance of 500m (as per *Wind Energy Development Guidelines for Planning Authorities* (DoEHLG, 2006)) from any proposed turbine location. The proposed turbine locations adhere to both the Guidelines and the draft Guidelines in relation to turbine setback, a minimum 500m set back from all sensitive receptors, and a minimum setback of four times the tip height of the proposed turbines from all non-involved properties, with a reduced setback of a minimum of 500m from properties involved with the Proposed Project.

It was acknowledged in Chapter 5 of the EIAR that the Proposed Project would have a short-term, negative, slight impact on residential amenity during to the construction phase and a negative, moderate, long-term impact on residential amenity during the operational phase. However, it is not considered that the Proposed Project would, as stated in Refusal Reason 1, “give rise to excessive levels of adverse effects on residential amenity in the area” that are “incapable of being mitigated”. As discussed below, mitigation in the form of appropriate design, good construction practices, installation of screening measures, use of turbine control measures and traffic management will ensure that there will be no significant adverse effects on residential amenity arising from the Proposed Project.

Visual Intrusion: Residential Visual Amenity

An assessment of effects of the Proposed Project on residential visual amenity is addressed in Chapter 13 of the EIAR which comprises a Landscape and Visual Impact Assessment (LVIA) of the Proposed Project. The LVIA was informed by ZTV mapping, field surveys, a route screening analysis and verified photomontages. The methods and processes followed during the LVIA and resultant Chapter, Appendices and Visualisations included in the EIAR were produced in accordance with the frameworks, specifications and standards set out by benchmark best practice guidance for the LVIA of Wind Energy Developments in Ireland. The methods used for the LVIA and guidance followed is set out in more detail in response to Grounds of Appeal for Refusal Reason 2.

The LVIA in Chapter 13 of the EIAR reports that the Proposed Project is scaled and sited appropriately in a working rural landscape suitable for effectively accommodating wind energy development. Section 5 of this appeal responds to submissions and includes an overview of the various attributes and characteristics of the receiving landscape make it an eminently suitable site for wind. Before directly addressing effects on residential visual amenity, it is re-iterated that the Proposed Project does not significantly impact any landscape or visual amenities of national, regional or county level importance or sensitivity. In this regard, it is aligned with local planning policy and designations pertaining to landscape and visual amenities whilst balancing the requirement to facilitate renewable wind energy development in this area of the country. The LVIA reports that the greatest landscape and visual effects are localised to receptors at a local level of sensitivity, with acceptable levels of impact on residential visual amenity.

The LVIA addresses the impact of the Proposed Project on residential visual amenity, including the settlement clusters of Tullaroan, Kilmanagh, and Ballycallan. The methodology and definitions used for the assessment of visual effects in the LVIA has been informed by a range of best practice guidance and is comprehensively detailed in Section 1.5.2 of the LVIA Methodology Appendix (Appendix 13-1 of the EIAR). An overview of the impact assessment process from Chapter 13 is again reproduced below:

“The methodology includes clear & documented methods based on the GLVIA.3 (LI & IEMA, 2019) guidance, in order to arrive at an assessment. These include consideration of landscape and visual sensitivity balanced with the magnitude of the effect to determine the significance of effects. Mitigating factors are then taken into consideration to arrive at residual landscape and visual effects. Residual landscape and visual effects are graded upon an ‘impact assessment classification of significance’ scale, as defined by the Environmental Protection Agency of Ireland (EPA, 2022).”

It is to be anticipated that wind farms inevitably have the potential to cause some ‘Significant’ visual effects on proximate 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. For

effects on locally sensitive receptors such as residential properties, mitigation measures can be implemented, contrary to what is stated in Refusal Reason 1. Mitigation for visual effects for wind energy development is achieved through design interventions during the iterative design process. In the case of the Proposed Project, several key mitigation measures were specifically incorporated into the project design to mitigate effects on residential visual amenity. For example, the following points are reported in Section 13.1.3 of Chapter 13 of the EIAR – ‘Mitigation by Good Design’:

- *“The turbine layout has been designed to create a coherent arrangement of turbines, contiguous and connected to each other visually and with consistent spacing in line with the siting of wind farms within Hilly and Flat Farmland Landscape Types in the ‘Wind Energy Development Guidelines for Planning Authorities’ published by the Department of the Environment, Heritage and Local Government (DoEHLG) in 2006: hereafter, ‘the Guidelines’.*
- *Siting of proposed turbines adheres to the minimum 500m set back distance from residential receptors in the Guidelines and also the recommended 4 times tip height set back distance to third party properties, explicitly set out for residential visual amenity in the ‘Draft Revised Wind Energy Development Guidelines’ published by the Department of Housing, Planning and Local Government (DoHPLG in 2019): hereafter, ‘the draft Guidelines’.*
- *As a result of the community consultation process, and through engagement with statutory consultees, the layout evolved culminating with the final layout iteration where it was decided to omit a turbine, which was the closest turbine to the settlement of Kilmanagh, resulting in a 7-turbine final layout.”*

Notwithstanding the mitigation measures above, other factors are considered which might or might not cause a wind development to pass a threshold of causing unacceptable visual impacts. MKO have over 15 years of experience conducting LVIA as part of EIARs for large scale wind energy developments in Ireland, including the LVIA of 12 No. commercial wind energy projects accepted and consented by An Bord Pleanála in the past 4 years. Through this experience, site selection, professional judgement and a constraints-based design process have been integral for ensuring appropriate projects are put forward in the planning system with respect to ensuring acceptable levels of effects on residential visual amenity. Many factors, other than specific design interventions, are considered in the ultimate viability of a project and are factored into the ultimate outcome of assessment of visual effects on residential visual amenity. Some critical factors warranting ‘Significant’ visual effects are listed below, these critical factors were **avoided** through site selection and strategic design and were **not** scenarios which will occur as a result of the Proposed Project:

- Surrounding effects – Where turbines are visible in close proximity in opposing directions from residential receptors;
- A very wide horizontal extent of turbines (e.g. >120 degrees) unobscured and visible within primary views of residential visual amenity;
- Excessively dominant turbines relative to residential properties (e.g. turbines on elevated lands above receptors) and the absence of visual screening;

Irrespective of a potential ‘Significant’ impact on visual amenity occurring (**not** in the case of the Proposed Project), a holistic approach to effects on residential visual amenity needs to be considered. For example, the number of residences which may potentially experience effects and other characteristics of the landscape which might warrant the use of viable land for a wind farm in the context of residential visual amenity. The Board’s attention is drawn to Section 13.7.3.8 of Chapter 13 where the effects of the Proposed Project on ‘Residential Visual Amenity’ is specifically addressed in the EIAR. The rural settlements of Kilmanagh, Tullaroan and Balycallan are also specifically assessed in Section 13.7.3.7 of the LVIA. Section 13.7.8 specifically sets out many factors which were considered in the impact assessment of residential visual amenity, including:

- Population density: significantly below the national and county average in the lands comprising and surrounding the Proposed Project;

- The orientation of properties and the nature and scenic quality of views from residences;
- Landscape characteristics influencing actual visibility on the ground: Boundary vegetation is abundant in the receiving landscape and visually screens the Proposed Project from the scenic amenity of many residences (See also Route Screening Analysis in Section 13.3.3 of Chapter 13), far less than is shown in the EIAR.
- Elevation relative to local receptors: The proposed turbines are situated in a bowl-shaped landscape enclosed by slightly elevated landforms which reduces visual exposure in the wider area. Consequently, the proposed turbines are sited at a slightly lower base elevation relative to many local receptors, reducing their perceived height and visual prominence, as opposed to being sited on an elevated landform.

Verified photomontage visualisations from a total of 15 viewpoints (10 photomontages presented in the Volume 2 booklet and 5 in Photowire Appendix 14-3 of the EIAR) were captured within 3km and all informed the ultimate determination of residual visual effects from residential visual amenity. A specific impact assessment of visual effects from each viewpoint is then comprehensively reported in Appendix 13-3, in line with the LVIA methodology. Overall, as reported in Section 13.7.3.8 of Chapter 13 (and the assessment of viewpoints in Appendix 13-3), the Proposed Project will **not cause any** 'Significant' residual visual effects on the residential amenities in Kilmanagh, Tullaroan and Ballycallan. 'Moderate' residual visual effects were recorded in consideration of the various factors set out previously, the specific design interventions and most notably that the project design has met the mitigation requirements explicitly set out for residential visual amenity (4x tip height set back distance) in benchmark best practice guidance for the design of wind energy developments in Ireland.

Cumulative Landscape and Visual Effects with Other Wind Energy Developments

Refusal Reason 1 concludes by stating:

"notwithstanding the National imperatives on renewable energy it is considered that the proposed development on its own and in combination with other windfarms already constructed and permitted in the area will have a disproportionate undue and unreasonable impact on the visual landscape amenity."

This text cited above from within Refusal Reason 1 relates to cumulative landscape and visual interactions with other wind energy developments, and not the in combination interactions of effects related to visual intrusion, noise, shadow flicker and road access on residential amenity, which is addressed above. A full comprehensive assessment of cumulative landscape and visual effects is included in Chapter 13 of the EIAR – See both Section 13.7.3.3 (cumulative landscape effects) and Section 13.7.3.10 (Cumulative Visual Effects). The cumulative assessments were informed by ZTV mapping and photomontages with specific detailed discussion around cumulative effects in relation to LCAs in Appendix 13-2 and in relation to specific photomontages in the viewpoint assessment tables in Appendix 13-3.

In addressing the topic of cumulative effects directly, it is important to recap on some key aspects of site selection and the receiving landscape which demonstrate its capacity to accommodate wind energy development. Several factors were considered and factored into the overall assessments of the Proposed Project from a landscape and visual perspective, and in mind of potential cumulative landscape and visual effects. These attributes are discussed in detail throughout Chapter 13 of the EIAR, they include but are not limited to the following:

- **Landform Characteristics:** The proposed turbines are located within a bowl-shaped landscape. This landform provides visual containment, limiting the visual exposure of the proposed turbines and the overall visual impact of the Proposed Wind Farm within the wider landscape. Whilst 'Moderate' residual visual effects may occur from a small number of local residential properties in close proximity, the elevated landforms surrounding the Proposed Wind Farm site effectively obscure views of the turbines from vast areas of the landscape, especially from the west and south, reducing the number of receptors experiencing visual effects.

- **Landcover Characteristics:** Agricultural fields, mature hedgerows, and treelines are highly prevalent around the Proposed Wind Farm site and within the wider landscape setting and provide visual screening of the proposed turbines. Field structures, vegetation, and other landscape elements seen throughout landscape view act as a physical landscape buffer and provide a sense of scale in relation to the setback distance of the proposed turbines, with proposed turbines being generally viewed as sited beyond multiple fields or behind a treeline.
- **Setback, and no significant impact from designations and high sensitivity landscape and visual receptors:** As demonstrated throughout the LVIA, the Proposed Project does not significantly impact any landscape or visual amenities of national, regional or county level importance or sensitivity. In this regard, it is in alignment with local planning policy and designations pertaining to landscape and visual amenities whilst balancing the requirement to facilitate renewable wind energy development in this area of the country.
- **Supportive Landscape Policy and Zoning:** The proposed turbines are strategically sited within a modified working landscape of low sensitivity. The Proposed Wind Farm site and surrounds are located within LCA-A the Slieveardagh Hills South. In Appendix C (LACK) of the KCDP this LCA is described as *'having no significant landscape value'* and is also perceived as having *'development potential'*. In relation to landscape sensitivity, the LACK outlines that *"areas where enclosing topography, screening vegetation and/or existing development are present should have a high potential to absorb new development"* while Section 8 of Document 2 of the LACK notes that the *"Slieveardagh Hills were generally perceived as being most suitable"* for various development including wind energy. This is an LCA where wind energy development has previously been considered acceptable by the local planning authority, as evidenced by other existing and permitted developments in the Slieveardagh Hills to the west of the Proposed Project.

The cumulative assessments in Chapter 13 of the ELAR addresses all potential cumulative scenarios with other existing, permitted and proposed wind energy developments in an LVIA Study Area out to 20km from the proposed turbine locations. The key potential for cumulative effects occurred in relation to several existing and permitted developments within 10km to the west, in the marginal uplands of the Slieveardagh Hills. As reported in the LVIA there is physical and visual separation between the Proposed Wind Farm and these other developments. Due to landform characteristics and set back distances the LVIA determined that no significant and unacceptable surrounding effects will occur for receptors located between these developments and the Proposed Project. The greatest cumulative visual effects occur from receptors located at elevated vantage points immediately east of the Proposed Wind Farm site where in combination views occur, as shown in Photomontage Viewpoints – 8, 9 and 10. The cumulative effects shown in these photomontages, are not a common occurrence in the local area and wider LVIA Study Area in general and will only occur for a small spatial area to the east of the proposed turbines, representative of a small number of residential receptors.

In conclusion, the assertion that the Proposed Project, in combination with existing and permitted developments, will result in a *"disproportionate undue and unreasonable impact"* on the visual landscape amenity and will *"severely impact negatively"* on residential amenity is not substantiated by the assessment findings in the LVIA Chapter.

Shadow Flicker

Shadow flicker is an effect that occurs when rotating wind turbine blades cast shadows over a window in a nearby property. Shadow flicker is an indoor phenomenon, which may be experienced by an occupant sitting in an enclosed room when sunlight reaching the window is momentarily interrupted by a shadow of a wind turbine's blade. Shadow flicker lasts only for a short period of time and occurs only during certain specific combined circumstances. The DEHLG's Wind Energy Development Guidelines, 2006 (the Guidelines) recommend that shadow flicker at neighbouring dwellings within 500 metres of a proposed turbine location should not exceed a total of 30 hours per year or 30 minutes per day. It is further noted that at distances greater than 10 rotor diameters from a turbine, the potential for shadow

flicker is very low, and therefore the shadow flicker study area is set at 1.63km (10 x rotor diameter 163m). There are 164 no. properties located within 1.63 km of the proposed turbine locations

The WindPRO computer software was used to model the predicted daily and annual shadow flicker levels in significant detail, identifying the predicted daily start and end times, maximum daily duration and the individual turbines predicted to give rise to shadow flicker. The maximum shadow flicker model assumes that daylight hours consist of 100% sunshine. This is a conservative assumption which represents a worst-case scenario. Following the detail provided on sunshine hours, a sunshine factor of 29.44% was applied to the annual shadow flicker prediction. Of the 164 no. properties modelled; it is predicted that 41 no. Sensitive Properties may experience shadow flicker levels that exceeds the 2006 WEDGs thresholds of 30 minutes per day or 30 hours per year. However, this prediction does not consider wind direction or screening provided by intervening vegetation and local topography.

Where shadow flicker exceedances are experienced, suitable mitigation measures as outlined in Chapter 5, Section 5.10.3.2.7, of the EIAR will be employed at the potentially affected properties to ensure that the limits set out in the Guidelines are not exceeded at any dwelling within the Shadow Flicker Study Area. These mitigation measures include the installation of screening measures (e.g. window blinds, screening vegetation) following agreement with the relevant property owner or the implementation of wind turbine control measures (Supervisory Control and Data Acquisition (SCADA) system). The wind turbine control measures would be implemented at times where shadow flicker is predicted to occur at any given property and if weather conditions are suitable for shadow flicker to occur.

Noise

The background noise environment was established through noise monitoring surveys undertaken at 6 no. noise sensitive locations (NSLs) surrounding the Proposed Wind Farm site. All NSLs considered as part of the noise impact assessment are shown on a figure in **Appendix 3** of this document. Typical background noise levels for day and night periods at various wind speeds have been measured in accordance with best practice guidance contained in the Institute of Acoustics document 'A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise' (IOA GPG). The results of the background noise survey have been used to derive appropriate noise criteria for the development in line with the guidance contained in 'Wind Energy Development Guidelines for Planning Authorities 2006.

When considering a development of this nature, the potential noise and vibration effects on the surroundings must be considered for three stages: the short-term construction and decommissioning phases and the long-term operational phase.

The assessment of construction and decommissioning noise and vibration and has been conducted in accordance with best practice guidance contained in BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise and BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Vibration. Subject to good working practice and mitigation measures as recommended in the EIAR Chapter 12, it is not expected that there will be any significant noise and vibration impacts associated with the construction phase and the likely noise effects from construction activity at the nearest NSLs will be brief to short-term in duration. The Proposed Project associated construction noise and vibration impacts are not expected to cause any significant effects.

A turbine noise prediction model was prepared for the Proposed Wind Farm. The predicted turbine noise levels have been calculated in accordance with the IOA GPG recommendations. The assessment has confirmed that, once the appropriate mitigation measures are implemented, the residual turbine noise levels associated with the Proposed Wind Farm will be within the best practice noise criteria curves recommended in Irish guidance document 'Wind Energy Development Guidelines for Planning Authorities 2006. Therefore, it is considered that no significant effect is associated with the Proposed Project.

Disturbance of Access

An assessment of the traffic effects on the local public road network was undertaken for the Proposed Project and included in Chapter 15, Section 15.1, of the EIAR. The assessment considers the likely impacts on the transport delivery route to the site resulting from the additional traffic movements that will be generated by the Proposed Project during the construction, operational and decommissioning phases.

Proposed Wind Farm

It is proposed to access the Proposed Wind Farm site during the construction and operational phases via a proposed new site entrance off the L-5024 local road. This entrance will be used as the main entrance for construction traffic throughout the construction phase. On completion of the construction phase, this Site entrance will be reduced in size and gated for security, and will be used as an operational Site entrance.

A temporary access road will be constructed on the L-1009 in the south of the Site. This will facilitate the delivery of abnormal loads (large turbine components) and concrete deliveries for the turbine foundations. This temporary access road will not be used for general construction traffic, or HGV deliveries (except concrete deliveries which will occur across 7 days in total).

It is acknowledged in Chapter 15 that there will be a temporary, slight to moderate negative effect on local traffic during the construction phase of the Proposed Wind Farm due to the increase in traffic volumes utilising the local road network around the Site.

It is not anticipated that any section of the public road network will be closed during transport of turbine components, although there will be some delays to local traffic at pinch points. During these periods it may be necessary to operate local diversions for through traffic. All deliveries comprising abnormally large loads where required will be made outside the normal peak traffic periods, usually at night, to avoid disruption to work and school-related traffic.

Furthermore, no road closures are anticipated at any other stage associated with the construction phase of the Proposed Wind Farm.

Proposed Grid Connection

A detailed assessment of the effects of the construction of the Proposed Grid Connection underground cabling route is provided in Chapter 15, Section 15.1.7 of the EIAR. Construction of the underground cabling route along the public road network will require a combination of traffic management measures including single-lane and full road closures.

The Proposed Grid Connection underground cabling route will take a total of approximately 230 days to construct during which road closures will be required at various points along the route on approximately 201 of these days. The longest diversion incurred by any of these road closures will be a maximum of 6.9kms. It is noted that the diversions will be incurred by relatively few trips on the sections of the route on the local road network as these sections are relatively lightly trafficked. For a further 11 days a stop & go facility will require to be operated on the N77.

It is anticipated that on any single day during the construction of the Proposed Grid Connection underground cabling route, where a road closure is required, only a very short section of the public road network be inaccessible to local road users. Access for local residents and landowners into and out of the sections of the public road network that are subject to full road closures will be maintained at all times.

A **Traffic Management Plan (TMP)**, incorporating all the mitigation measures is included as Appendix 15-2 of the EIAR, and 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 on Site.

Grounds of Appeal for Refusal Reason 2

KCC have raised concerns regarding the quantity and adequacy of the data presented within the EIAR, the assessment of cumulative effects, the assessment of residential amenity the EIAR's compliance with the relevant statutory requirements. They state that because of these perceived deficiencies, they could not conclude that the Proposed Project would on its own or in combination with other existing, permitted or proposed projects not have a significant effect on the environment. Therefore, KCC feel that the Proposed Project would be contrary to the proper planning and sustainable development of the area.

MKO absolutely refute this reason for refusal and it is respectfully submitted that:

- The EIAR, as a whole, does comply with statutory EIA requirements
- There are no significant deficiencies in the quantum and quality of data provided in the following assessments within the EIAR:
 - Landscape and Visual
 - Material Assets
 - Noise
 - Ecology (Biodiversity and Ornithology)
 - Hydrology
- Sufficient detail has been provided on the matter of cumulative effects within the EIAR
- Sufficient detail has been provided in relation to the potential for effects on residential amenity EIAR

The above points are discussed in further detail below.

Compliance with EIA Requirements

Part 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended, identifies classes and scales of development that require Environmental Impact Assessment (EIA). The relevant class of development in the case of the Proposed Project relates to *"installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts"*, as per Item 3(i) of the Schedule. The Proposed Project exceeds 5 Megawatts in scale and proposes more than 5 turbines, and therefore is subject to EIA.

The EIAR submitted with the planning application complies with and was prepared in accordance with the EIA Directive 2011/92/EU as amended by Directive 2014/52/EU.

Article 5 of the EIA Directive 2011/92/EU, as amended by Directive 2014/52/EU, provides where an EIA is required, the developer shall prepare and submit an environmental impact assessment report (EIAR). The information to be provided by the developer shall include at least:

- a description of the project comprising information on the site, design, size and other relevant features of the project;*
- a) a description of the likely significant effects of the project on the environment;*
- b) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;*
- c) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;*
- d) a non-technical summary of the information referred to in points (a) to (d); and*

- e) *any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.*

The EIAR's compliance with the above points is outlined below

A detailed and comprehensive description of the Proposed Project components and design (the Proposed Wind Farm and the Proposed Grid Connection), site activities, process and methodologies during the construction, operation and decommissioning are included in Chapter 4 of the EIAR and its associated appendices, namely:

- Appendix 4-1 – Proposed Project Layout and Detail Drawings
- Appendix 4-2 – Construction and Environmental Management Plan
- Appendix 4-3 – Site Drainage Drawings and Details
- Appendix 4-4 – Harvest Management Plan
- Appendix 4-5 – Decommissioning Plan

A comprehensive and robust assessment, quantification and description of the likely, significant effects of the Proposed Project is included across Chapters 5 to 16 of the EIAR. As stated in the 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (EPA, 2022), an assessment of the likely impacts of a development is a statutory requirement of the EIA process. The statutory criteria for the presentation of the characteristics of potential impacts requires that potential significant impacts are described with reference to the extent, magnitude, complexity, probability, duration, frequency, reversibility and trans-boundary nature (if applicable) of the impact. The classification of impacts in this EIAR follows the definitions provided in the Glossary of Impacts contained in the EPA Guidelines (EPA, 2022) document (refer to Table 1-2 of Chapter 1 of the EIAR). The European Commission published a number of guidance documents in December 2017 in relation to Environmental Impact Assessment of Projects (Directive 2011/92/EU as amended by 2014/52/EU) including 'Guidance on Screening', 'Guidance on Scoping' and 'Guidance on the preparation of the Environmental Impact Assessment Report', which have also been consulted. In addition, the potential interactions between the effects of the Proposed Project that are described throughout the EIAR are identified and discussed in Chapter 17 of the EIAR.

A detailed description of the design features of the Proposed Project and other measures proposed in order to monitor for and mitigate any potential, likely significant adverse effects on the environment are included across Chapters 5 to 16 of the EIAR. These mitigation and monitoring measures are collated in Chapter 18 of the EIAR, for ease of reference. The mitigation measures have been grouped together according to their EIAR Chapter and project phases (Pre-commencement, Construction, Operational and Decommissioning Phases). The monitoring measures, grouped in the same way, are presented in terms of the monitoring requirement, frequency of monitoring and the mechanism for reporting results where applicable.

Chapter 3 of the EIAR introduces the reasonable alternatives studied by the applicant which are relevant to the Proposed Project and its specific characteristics and an indication of the main reasons for the option chosen, taking into account the environmental effects. The consideration of alternatives typically refers to alternative design, technology, location, size and scale. A 'Do-Nothing Alternative' i.e., an outline of what is likely to happen to the environment should the Proposed Project not be implemented, has also be considered. Consequently, taking consideration of the legislative and guidance requirements into account, this chapter addresses alternatives under the following headings:

- 'Do Nothing' Alternative
- Alternative Site Locations
- Alternative Renewable Energy Technologies
- Alternative Proposed Wind Farm Design Options:
 - Alternative Turbine Numbers and Model

- Alternative Turbine Layout and Development Design
- Alternative Road Layout
- Alternative Construction Compound Option
- Alternative Borrow Pit Option
- Alternative Site Access Points
- Alternative Turbine Component Delivery Option
 - Alternative Port of Entry
 - Alternative Component Delivery Route
- Alternative Design of Ancillary Structures
 - Alternative Meteorological Mast Location
- Alternative Proposed Grid Connection Design Options
 - Alternative Substation Location
 - Alternative Grid Connection Cabling Route Options
- Alternative Mitigation Measures

Volume 1 of the EIAR also includes a Non-Technical Summary, which is a condensed and easily comprehensible version of the EIAR document. The non-technical summary is laid out in a similar format to the main EIAR document and comprises a description of the Proposed Project followed by the existing environment, impacts and mitigation measures presented in the grouped format.

It can also be confirmed that all of the information required in Annex IV of Directive 2014/52/EU, where it is relevant to the characteristics of the Proposed Project (a renewable energy development), is provided in the EIAR.

Quantum and Quality of Data Provided in the EIAR

KCC have determined that there are a number of significant deficiencies in the quality and quantum of data provided in the EIAR, particularly in the areas of landscape and visual effects, material assets, noise, ecology and hydrology. However, MKO submit that this is not the case.

Each of the impact assessment chapters within the EIAR (Chapters 5 to 16) have been prepared in accordance with EIA legislation and guidance, as well as the relevant best-practice legislation and guidance relevant to each particular discipline. Each of these chapters includes a section dedicated to listing the relevant legislation and guidance followed in the preparation and undertaking of the desktop study, field survey and baseline data collection methodologies, modelling and impact assessment methodologies.

The quality and quantum of data provided in the EIAR prepared for the proposed Briskalagh Renewable Energy Development is in accordance with the best-practice legislation and guidance. It should also be noted that it is commensurate with the data provided in EIARs that have been reviewed and accepted by the Board in recent grants of planning permission for other renewable energy developments (i.e. Borrisbeg Renewable Energy Development (ABP Ref. 318704), Sheskin South Wind Farm (ABP Ref. 315933), Ballivor Wind Farm (ABP Ref. 316212) and Glenard Wind Farm (ABP Ref. 312659)).

Cumulative Effects

KCC have concluded that the detail provided in respect of cumulative effects is not sufficient. This conclusion is rebutted by the fact that a comprehensive and robust assessment of the potential cumulative effects, when considering the Proposed Briskalagh Renewable Energy Development collectively with all other existing, permitted and proposed developments and other land uses, within defined study areas has been included in Chapters 5 to 15 of the EIAR.

A detailed description of the cumulative impact assessment methodology is included in Chapter 2, Section 2.8 of the EIAR. A long list of projects (including all other existing, permitted and proposed wind farm

developments) considered across all disciplines in their cumulative impact assessment is included in Appendix 2-3 of the EIAR. In addition, the cumulative impact assessments carried out in each of the impact assessment chapters of this EIAR consider all potential significant cumulative effects arising from all land uses in the vicinity of the Proposed Project. These include proposed, permitted and existing wind farms in the area, solar farms, energy storage, ongoing agricultural practices/forestry practices, quarries and extractive industries, intensive production/ processing industries, large infrastructure projects and other EIAR projects.

As stated above in relation to the quality and quantum of data provided in the EIAR, similarly, the level of detail provided in relation to potential cumulative effects is commensurate with the detail provided in EIARs that have been reviewed and accepted by the Board in recent grants of planning permission for other renewable energy developments.

Effects on Residential Amenity

KCC conclude in this reason for refusal that insufficient detail has been submitted in relation to potential effects on residential amenity of the residential areas adjacent to site. A rebuttal of this assertion has been proved in Section 3.1 above.

3.3

Grounds of Appeal for Refusal Reason 3

MKO refutes the assertion that there is a significant lack of supporting information for certain ecological receptors (such as birds) in both the Stage 1 Screening and Stage 2 Natura Impact Statement (NIS), and certain elements of the mitigation measures.

As outlined in Section 3.3 of the NIS submitted with the planning application, comprehensive surveys of the Site, including the Proposed Wind Farm and the Proposed Grid Connection, were undertaken by qualified ecologists across a range of dates in 2023 and 2024 covering February, March, April, June, July and August. During these surveys, comprehensive information on the baseline environment was collected. The data collected is considered to be more than adequate to inform the NIS and undertake a robust assessment of all potential adverse effects on European Sites.

The Stage 1 Appropriate Assessment Screening prepared by MKO identified a potential pathway for likely significant effects, in the absence of mitigation, on the following European Designated Sites:

- > River Barrow and River Nore SAC
- > River Nore SPA

As a result a Natura Impact Statement (NIS) was prepared to provide the competent authority with the information required to undertake an Appropriate Assessment of the Proposed Project.

Sections 5.1.1 and 5.1.2 of the NIS identified the potential for adverse effects on the River Barrow and River Nore SAC and the River Nore SPA due to deterioration of water quality. Section 5.1.1 also identified the potential for adverse effects on the River Barrow and River Nore SAC due to disturbance of otter.

Section 6.2.1 of the NIS provides an assessment of the potential adverse effects on the above European Designated Sites due to deterioration of water quality during construction, operation and decommissioning of the Proposed Project. It then prescribes detailed mitigation measures in Sections 6.2.1.2, 6.2.1.3 and 6.2.1.4 to block any pathways for deterioration of water quality and any potential for adverse effects in this regard. Similarly, Section 6.2.2 provides an assessment of the potential adverse effects on the River Barrow and River Nore SAC due to disturbance of otter and prescribes mitigation within this section of the report to ensure that there will be no significant effect on this species. Section 8 of the NIS addresses the potential for the Proposed Project to contribute to any cumulative adverse effects on any European Site when considered in-combination with other plans and projects and no potential for it to contribute to cumulative effects was identified.

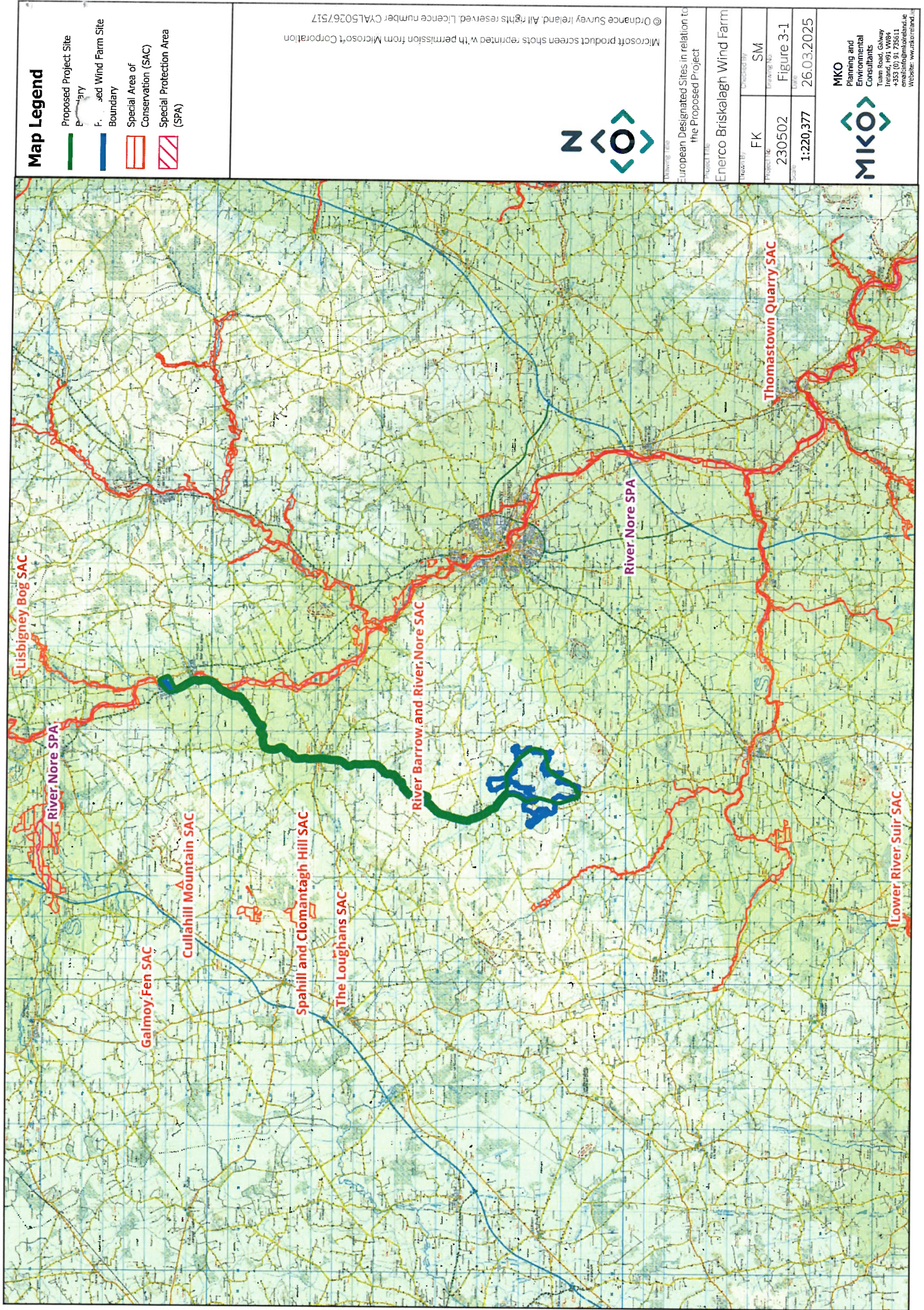


The NIS concluded as follows:

‘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.

Therefore, it can be objectively concluded that the Proposed Project, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site’.

A map showing the location of European Designated Sites in the vicinity of the Proposed Project is included as Figure 3-1 below.



MKO's response to each of the points raised in Refusal Reason No. 3, is detailed in the sections below.

(a) Otter surveys carried out outside of the optimum season,

The otter surveys undertaken throughout 2023 and 2024 to inform the NIS (and Chapter 6, Biodiversity, of the EIAR) were undertaken in full accordance with best practice guidance (NRA 2009 and CIEEM best practice competencies for species surveys⁴). As outlined in NRA (2009), otter surveys can be undertaken at any time of the year. Otter surveys for the Proposed Project were undertaken at multiple times throughout 2023 and 2024 spanning the months of February, March, April, June, July and August. While it is acknowledged (as per NRA 2009) that surveys undertaken during the mid-late summer period are less likely to provide reliable results due to the presence of dense vegetation, it should be noted that during all otter surveys undertaken by MKO, a very thorough search for all signs of otter was carried out. Additionally, the surveys undertaken in February, March and April fall outside the mid-late summer period when dense vegetation cover can pose a survey constraint. The comprehensive surveys undertaken allowed for a thorough and complete assessment of all potential effects on otter as a result of the Proposed Project.

As stated within Section 3.3.1.2 of the NIS, all watercourses within the Proposed Wind Farm site and along the Proposed Grid Connection underground cabling route were identified as providing potential habitat for otter. Therefore, these watercourses were subject to targeted surveys for this species. This involved a thorough search for all otter signs (e.g. spraints, scat, prints, slides, trails, couches and holts) within 150m of proposed works areas crossing watercourses within the Proposed Wind Farm site and along the Proposed Grid Connection underground cabling route. Where otter signs were observed these were mapped and where potential holts were identified, camera traps were set up at these locations to determine if these were in use.

As outlined in Section 6.2.2 of the NIS, a single otter spraint was recorded in the west of the site adjacent to the Tullaroan stream within the Proposed Wind Farm site, in proximity to where the Proposed Grid Connection underground cabling route commences. The spraint was recorded adjacent to an existing farm track proposed to be upgraded. No other evidence of otter was recorded within 150m of any Proposed Wind Farm infrastructure. While a potential holt site was identified within the Proposed Wind Farm site on the banks of the Tullaroan stream, this was located approximately 6.9km upstream of the River Barrow and River Nore Special Area of Conservation (SAC) and in excess of 200m from any Proposed Wind Farm infrastructure and will not be affected by the Proposed Project.

While evidence of otter in the form of spraints and tracks was recorded along the Proposed Grid Connection underground cabling route, no otter breeding sites were recorded. A potential otter couch was also recorded 240m to the south of the location of the crossing of the River Nore by Horizontal Directional Drilling (HDD). However, given the distance between this potential couch and the works associated with the HDD crossing, there is no potential for significant effects thereon as a result of disturbance.

Section 5.1.1.1 of the NIS identified the potential for adverse effects on otter as a result of a) deterioration of water quality during construction, operation and decommissioning of the Proposed Project due to run-off of pollutants, potentially leading to habitat degradation and reduced prey resource availability for otter and b) disturbance during construction.

The potential for deterioration of water quality (and as a result potential for adverse effects on otter and other aquatic QIs of the River Barrow and River Nore SAC) as a result of the Proposed Project is

⁴ CIEEM, 2013, Technical Guidance Series – Competencies for Species Survey: Otter, Online, Available at: <https://cieem.net/wp-content/uploads/2019/02/CSSE-URASLAN-OTTER-April-2013.pdf>

considered and fully assessed in Section 6.2.1 (Hydrological Impacts – Water Quality/Habitat Degradation) of the NIS and the potential for adverse effects on otter due to disturbance is assessed in Section 6.2.2 of the NIS submitted with the planning application. Robust mitigation is prescribed within these sections to ensure that there will be no adverse effects on this species.

In relation to the protection of water quality during construction, operation and decommissioning of the Proposed Project, a suite of mitigation measures are prescribed in Sections 6.2.1.2, 6.2.1.3 and 6.2.1.4 of the NIS and also within Sections 9.5.2 and 9.5.3 of Chapter 9 ‘Hydrology and Hydrogeology’, of the EIAR which was included as Appendix 4 to the NIS. The key mitigation measure for the protection of water quality during the construction phase is the avoidance of sensitive hydrological features where possible, by the application of suitable buffer zones (i.e. 50m to main watercourses). All of the key Proposed Project infrastructure areas are located significantly away from the delineated 50m watercourse buffer zones with the exception of the proposed 38kV substation, the upgrading of an existing watercourse crossing, new watercourse crossing and upgrades to existing site access tracks.

The specific mitigation measures for protection of water quality during the proposed crossing of the River Nore by Horizontal Direction Drilling (which crosses underneath the River Barrow and River Nore SAC and River Nore SPA) are set out in Section 6.2.1.2.8 of the NIS (and Section 9.5.2.13 of Chapter 9 of the EIAR).

In relation to disturbance, there will be no loss of otter breeding or resting sites as a result of the Proposed Project. Nonetheless, while no otter resting or breeding sites were recorded in close proximity to any Proposed Wind Farm or Proposed Grid Connection infrastructure, Section 6.2.2 of the NIS provides for a pre-commencement otter survey to be carried out to determine if there are any changes to the baseline prior to construction and to determine if otters are utilizing the area. Further mitigation measures to ensure that there will be no adverse effects on otter due to disturbance are also prescribed in Section 6.2.2 of the NIS.

As outlined above, comprehensive otter surveys were undertaken throughout 2023 and 2024 and were undertaken in full accordance with best practice guidance (NRA, 2009, CIEEM 2013) by professional ecologists. The comprehensive survey effort, which spanned a range of months, was more than adequate to inform a robust NIS, identifying all potential effects on otter. As a result, the NIS included appropriate mitigation measures for the protection of otter and to ensure that there will be no residual effects on this species and no potential for adverse effects on the River Barrow and River Nore SAC in light of its conservation objectives.

(b) botanical surveys results accuracy and completeness,

The habitat and botanical surveys undertaken to inform the NIS were comprehensive, complete and fully sufficient to undertake a complete assessment of all potential effects on Qualifying Interest (QI) habitats associated with the River Barrow and River Nore SAC.

As outlined in Section 3.3.1.1 of the NIS, multidisciplinary walkover surveys of the Site (including the Proposed Wind Farm and along the Proposed Grid Connection) were undertaken by suitably qualified ecologists on the following dates.

- 27th July 2023
- 28th July 2023
- 24th August 2023
- 21st February 2024
- 22nd February 2024
- 12th March 2024
- 2nd April 2024
- 16th April 2024
- 27th June 2024

- 29th July 2024

The multidisciplinary walkover surveys were undertaken in line with best practice guidelines, i.e. *Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes* (NRA, 2009).

In addition, as outlined in Section 3.3.1.4 of the NIS, detailed botanical assessments and habitat classification were undertaken by MKO at Proposed Project infrastructure locations within the Site, with relevés undertaken within representative habitats at each turbine base, associated Proposed Wind Farm infrastructure and the Proposed Grid Connection 38kV substation. The habitat and botanical surveys were undertaken within the recognised optimum period for vegetation surveys/habitat mapping, i.e. April to September (Smith et al., 2011) and were undertaken by qualified ecologists. All habitats recorded within the Proposed Wind Farm site and along the Proposed Grid Connection underground cabling route and described in the NIS submitted with the planning application were classified in accordance with 'A guide to Habitats in Ireland (Fossitt, 2000). Habitat mapping was undertaken with regard to guidance set out in 'Best Practice Guidance for Habitat Survey and Mapping' (Smith et al., 2011).

MKO is satisfied that all habitats recorded were accurately identified. The majority of the Proposed Wind Farm infrastructure and the Proposed Grid Connection 38kV substation is located within grassland habitats classified as Improved agricultural grassland (GA1) and Wet grassland (GS4). The majority of the Proposed Grid Connection underground cabling route will be laid within the existing road infrastructure classified as Buildings and artificial surfaces (BL3).

During the botanical surveys undertaken, no Annex I habitats which are QIs for the River Barrow and River Nore SAC were recorded within or adjacent to the Proposed Project infrastructure. There is no potential for direct loss of any of the QI habitats associated with the SAC as these habitats were not recorded within or adjacent to the Proposed Project development footprint. While the launch and receptor pits associated with the proposed crossing of the River Nore by HDD along the Proposed Grid Connection underground cabling route are located within the boundaries of the River Barrow and River Nore SAC, these are located within Improved agricultural grassland (GA1) and within the existing road corridor and will not impact on any Annex I habitats associated with the SAC.

Any potential for indirect effects on QI habitats associated with the SAC due to deterioration of water quality are fully assessed in Section 6.2.1 (Hydrological Impacts – Water Quality/Habitat Degradation) of the NIS submitted with the planning application and robust mitigation to ensure that there will be no deterioration of water quality and therefore no significant effects on any QI (or other) habitats in this regard were prescribed within Sections 6.2.1.2, 6.2.1.3 and 6.2.1.4 of the NIS and also within Sections 9.5.2 and 9.5.3 of the EIAR Chapter 9: Hydrology and Hydrogeology, which was included as Appendix 4 to the NIS. The key mitigation measures prescribed for the protection of water quality (and which will ensure that there are no indirect effects on aquatic QI habitats associated with the River Barrow and River Nore SAC due to deterioration of water quality) as set out in the EIAR and NIS are referenced in Section 3.3(a) above and not repeated here.

As outlined above and within the NIS submitted with the planning application, complete and comprehensive botanical surveys were undertaken to inform the NIS. The habitats within the Site were accurately identified and the data collected allowed for a thorough assessment of the potential for adverse effects on the integrity of the River Barrow and River Nore SAC in light of its conservation objectives.

(c) comprehensive information on all watercourses within the Proposed Project site that have hydrological connectivity to downstream European sites, and assessment of potential effects with particular regard to cumulative effects and interactions with various construction stages and works areas across the proposed site,

A full aquatic baseline report was provided as Appendix 5 of the NIS (and included as Appendix 6-3 of the EIAR) submitted with the planning application. The report describes the extensive aquatic assessments, including river habitat and fisheries habitat appraisals, electrofishing surveys, macroinvertebrate surveys and eDNA surveys, that were undertaken to inform the NIS. The report

comprehensively describes the baseline aquatic condition of the lands within and in the vicinity of the Site, including the watercourses with downstream connectivity to European Sites.

The aquatic surveys were specifically designed to provide the information required to fully inform the NIS and Chapter 6 (Biodiversity) of the EIAR which accompanied the planning application for the Proposed Project. The watercourses within the Proposed Wind Farm site and along the Proposed Grid Connection underground cabling route were assessed in terms of water quality and for their suitability to support aquatic species, including aquatic QI species associated with the River Barrow and River Nore SAC.

The NIS provides a detailed assessment of the potential for adverse effects on the River Barrow and Nore SAC and used the data collected during the extensive aquatic surveys to inform this assessment. There will be no instream works as part of the Proposed Project. Proposed new watercourse crossings within the Proposed Wind Farm site will use clear-span structures. Watercourse crossings along the Proposed Grid Connection underground cabling route will be via Horizontal Directional Drilling (at the crossing of the River Nore) or crossing methods using trefoil arrangements and flatbed formations over or under existing culverts (refer to Section 4.8.2.8 in Chapter 4 the EIAR included as Appendix 1 of the NIS) eliminating the requirement for instream works. Therefore, there will be no loss of supporting habitat for aquatic QI species either within or outside of the SAC.

A full assessment of the potential for adverse effects on the River Barrow and River Nore SAC and the River Nore SPA during all stages of the Proposed Project (i.e. all elements of construction, operation and decommissioning) due to deterioration of water quality, was undertaken and is outlined in Section 6.2.1 of the NIS. Where potential pathways for effect were identified, robust mitigation measures for the protection of water quality are prescribed (refer to Sections 6.2.1.2 and 6.2.1.3 and 6.2.1.4 of the NIS and also Sections 9.5.2 and 9.5.3 of the EIAR Chapter 9: Hydrology and Hydrogeology, which was included as Appendix 4 to the NIS).

A comprehensive assessment of potential cumulative effects on European Sites was undertaken in Section 8 of the NIS which focused on the potential for cumulative hydrological effects in combination with other agricultural, forestry, renewable energy and grid connection developments in the vicinity as well as in combination with licenced waste water treatment facilities and other developments. No potential for significant cumulative effects on any European Site was identified, with Section 8.2 of the NIS concluding:

“In the review of the projects that was undertaken, no connection, that could potentially result in additional or cumulative impacts was identified. Neither was any potential for different (new) impacts resulting from the combination of the various projects and plans in association with the Proposed Project.

Taking into consideration the reported residual impacts from other plans and projects in the area and the predicted impacts with the current proposal, no residual cumulative impacts have been identified with regard to any European Site.”

As evidenced above, comprehensive information on the watercourses within the Proposed Project site that have hydrological connectivity to downstream European Sites was provided in the NIS and its appendices. A comprehensive assessment of the potential for adverse effects, including cumulative effects, on European Sites during all stages of the Proposed Project was undertaken as fully detailed in the NIS which accompanied the planning application and allowed for the prescription of appropriate mitigation for the protection of water quality.

(d) full data sets of all SCI species recorded during surveys (including non “target species”),

The term “SCI species” refers to species which are listed as a Special Conservation Interest of an SPA. In relation to the Proposed Project, and as detailed in Section 4.1 of the NIS and Section 7.3.1 of Chapter 7 (Birds) of the EIAR (included as Appendix 3 of the NIS), the only SPA for which potential, likely, significant effects were identified was the River Nore SPA, situated approximately 9km east of the Proposed Wind Farm site. The only SCI species for this SPA is kingfisher. A description of all kingfisher sightings during surveys is provided in Section 7.3.6.1 of Chapter 7, including from dedicated breeding kingfisher surveys undertaken at the Proposed Wind Farm site. Bird surveys were undertaken during the survey period April 2021 – May 2023, in full accordance with the guidance document ‘*Recommended bird survey methods to inform impact assessment of onshore wind farms*’ (SNH, 2017). The breeding kingfisher survey methodology followed Cummins *et al.* (2010).

Section 4.1. of the Stage 1 AASR states that, while other European Sites (including SPAs) that were further away from the Site were also considered, no complete source-pathway-receptor chain for significant effect on these SPAs was identified. As detailed in Section 7.3.1 of Chapter 7 Birds of the EIAR: “*The next closest SPA is situated over 27km distant from the Site, and over 39km from the Proposed Wind Farm site – the Slieve Bloom Mountains SPA listed for breeding hen harrier. This distance is significantly beyond the foraging range of hen harrier (i.e. max range of 10km – SNH (2016)) and there were no observations of hen harrier at the Proposed Wind Farm site over the two years of surveying*”.

As such, the only “SCI species” relevant to the Proposed Project is kingfisher. The full Chapter 7 of the EIAR was appended to the Natura Impact Statement (NIS) as Appendix 3. The full data set for kingfisher is presented in Chapter 7 of the EIAR and its appendices including tabular data and mapped flightlines for all observations. In addition, there are also a few observations of kingfisher reported in Chapter 6 appendices, i.e. Appendix 6-3.

In relation to the reference to ‘non-target species’ these are typically the more common species encountered during surveys. Such species and all others recorded during surveys are listed in EIAR Appendix 7-1 and a summary of occurrence is provided in Appendix 7-3.

(e) clear rationale for the selection for “target” bird species and exclusion of other SCI species that were recorded within the Proposed Project site,

Following a comprehensive desk study, initial site visits and consultation, a list of “target species” likely to occur in the ZOI of the Proposed Project was compiled. The rationale for “target” bird species is detailed in Section 7.2.3 of Chapter 7 of the EIAR, included as Appendix 3 of the NIS, i.e.:

- “Species listed on Annex I of the EU Birds Directive.
- Special Conservation Interests (SCI) of Special Protection Areas (SPA) within the zone of likely significant effects.
- Red listed Birds of Conservation Concern in Ireland (BoCCI).
- Raptors and species that are particularly sensitive to wind farm developments.”

Although all species were recorded, particular attention was paid during surveying to species of conservation concern that are particularly susceptible to impact from this type of development. Following this approach ensures those species with the greatest potential to be impacted are given their due consideration. These are the target species. This practice follows the recommendations of NatureScot (SNH, 2017). As detailed above, for the purposes of Appropriate Assessment, the only relevant SCI species is kingfisher (River Nore SPA). Clear rationale for the inclusion of the River Nore SPA and the exclusion of any other SPAs is provided in the NIS and appended Chapter 7 (Birds) of the EIAR. As outlined above, and copied below, Section 7.3.1 of Chapter 7 (Birds) details the rationale for the exclusion of the next closest SPA:

“The next closest SPA is situated over 27km distant from the Site, and over 39km from the Proposed Wind Farm site – the Slieve Bloom Mountains SPA listed for breeding hen harrier. This distance is significantly beyond the foraging range of hen harrier (i.e. max range of 10km – SNH (2016)) and there were no observations of hen harrier at the Proposed Wind Farm site over the two years of surveying”.

(f) consideration of SCI species considered for assessment of potential effects in the NIS,

As detailed above, the only SCI species relevant to the Proposed Project is kingfisher, listed as an SCI species for the River Nore SPA. A thorough and complete assessment of all potential effects on kingfisher was undertaken within the NIS and is detailed in Sections 4.1, 5.1.2 and Section 6.2.1 of the NIS.

(g) inadequate collision risk assessment for SCI species,

Kingfisher, the only SCI species of SPAs for which potential for likely significant effects was identified, was not recorded flying at the potential collision height during the two years of vantage point surveying, and therefore no collision risk assessment was required for this species. While kingfisher was recorded infrequently within the Proposed Wind Farm site during the surveys undertaken, it was recorded travelling along watercourse corridors (Tullaroan stream) rather than across open terrestrial habitats when moving across the landscape. The closest proposed turbine to the Tullaroan Stream is over 250m distant (T6), and no turbine blades will overhang the stream. Furthermore, the Proposed Wind Farm is located >9km from the River Nore SPA.

No significant collision risk effect on the kingfisher population associated with the SPA are predicted

A collision risk assessment was undertaken for all target species recorded flying at the potential collision height during vantage point surveys, the results and methodology of which are presented in Appendix 7-5 Collision Risk Assessment (Chapter 7 of the EIAR which was included as Appendix 3 of the NIS). No significant effects were identified.

(h) insufficient assessment for birds in the NIS supplemented with relevant scientific literature regarding the migratory pathways of species recorded,

As detailed above, the only SPA for which potential for likely significant effects was identified was the River Nore SPA, for which kingfisher is the only SCI species. Kingfisher is not a migratory species. A thorough assessment of all potential effects on kingfisher, including reference to scientific literature, is provided in the NIS and Chapter 7 (Sections 7.4.1.1, 7.4.3, 7.5.2.1) of the EIAR. No potential for adverse effects on this species were identified and the conclusions of both the NIS and EIAR in relation to kingfisher are robust and accurate.

(i) insufficient information regarding the relationship between required works for the proposed grid connection and intersecting European sites to support statements made regarding absence of potential for direct effects, and

The Proposed Grid Connection works are located outside of any European Site, apart from where the Proposed Grid Connection underground cabling route intersects with the River Barrow and River Nore SAC and the River Nore SPA at the location of the proposed crossing of the River Nore. This crossing will be undertaken via Horizontal Direction Drilling (HDD) beneath the river. A full description of all works involved in the laying of the Proposed Grid Connection underground cabling, including the crossing of the River Nore by HDD, is included in Section 4.8.2.8.4 of Chapter 4 of the EIAR (included as Appendix 1 of the NIS). All works were considered in full when assessing the potential for direct effects on the above European Sites.

As detailed within the AASR and NIS (Table 4.1 and Section 6.1), there is no potential for direct effects on either the River Barrow and River Nore SAC or the River Nore SPA as a result of the crossing of the

River Nore via HDD. The launch and receptor pits for the proposed HDD crossing of the River Nore, while located within the mapped boundaries of the River Barrow and River Nore SAC, are situated within the existing road corridor and Improved agricultural grassland (GA1) habitat, at a distance of 30m and 40m from the river respectively. There will be no loss of any QI habitat associated with the SAC as a result of these works. While some suitable habitat for salmonids and lamprey were observed within the River Nore at this location, there will be no instream works and therefore there is no potential for any direct effects on the SAC due to direct loss of supporting habitat for aquatic QI species associated with the SAC or due to direct mortality.

In relation to the River Nore SPA, no direct effects on this Designated Site are anticipated. No kingfisher nesting or breeding sites were recorded at or in proximity to the location of the crossing of the River Nore by HDD and the river does not provide suitable breeding habitat, i.e. steep sided earth banks, at this location. While the Proposed Grid Connection underground cabling crosses the SPA via HDD under the River Nore, the launch and receptor pits are located entirely outside of the SPA boundary in the existing road infrastructure and Improved agricultural grassland habitat (GA1). The Proposed Grid Connection underground cabling works are broadly analogous in scale to existing activities in the general area (e.g. farm machinery, road works, vehicle movements). The works involved in the crossing of the River Nore will be short term in nature and will not result in any significant disturbance in the area that could have an adverse effect on the SPA.

Full consideration was given in the NIS for all works associated with the Proposed Project, in particular the works at the crossing of the River Nore by HDD, which intersect with both the River Barrow and River Nore SAC and the River Nore SPA, to result in direct effects on these Designated Sites. As outlined within the NIS and above, given the nature of these works, the absence of instream works, and the absence of kingfisher nesting habitat there is no potential for direct adverse effects on either the River Barrow and River Nore SAC or the River Nore SPA. As such, the conclusion of the NIS submitted with the planning application is entirely valid.

(j) sufficiency and implementation of mitigation.

As demonstrated in the responses above, the assessment undertaken within the NIS was informed by comprehensive surveys, which were undertaken in accordance with best practice guidelines and, along with an extensive desktop study, provided a detailed description of the baseline environment. A comprehensive assessment of the potential for adverse effects on the River Barrow and River Nore SAC and the River Nore SPA was undertaken, taking into account information collected on the baseline environment and the detailed description of the works involved in the Proposed Project. Potential for adverse effects on the above sites was identified in the form of deterioration of water quality for both the River Barrow and River Nore SAC and the River Nore SPA and also due to disturbance of otter for the River Barrow and River Nore SAC. In order to block any pathways for adverse effects appropriate and robust mitigation measures were prescribed within the NIS and will be implemented in full. The mitigation measures in relation to protection of water quality (detailed in Sections 6.2.1.2, 6.2.1.3 and 6.2.1.4 of the NIS and also within Sections 9.5.2 and 9.5.3 of Chapter 9 'Hydrology and Hydrogeology', of the EIAR which was included as Appendix 4 to the NIS) and in relation to disturbance of otter (detailed in Section 6.2.2 of the NIS) are considered more than sufficient to ensure that there will be no adverse effects on the integrity of any European Site in light of its conservation objectives. The assessment, undertaken by qualified ecologists, and the subsequent prescription of mitigation measures was based on best scientific knowledge was fully in line with best practice guidelines.

The mitigation measures included within the NIS include measures for the protection of water quality within both the Proposed Wind Farm and along the Proposed Grid Connection underground cabling route, including at the crossing of the River Nore by HDD. As outlined in Section 3.3(a) above, the key mitigation measure for the protection of water quality during the construction phase is the avoidance of sensitive hydrological features where possible, by the application of suitable buffer zones (i.e. 50m to main watercourses). All of the key Proposed Project infrastructure areas are located significantly away from the delineated 50m watercourse buffer zones with the exception of the proposed 38kV substation, the upgrading of an existing watercourse crossing, new watercourse crossing and upgrades to existing site

access tracks. Full details of all mitigation measures prescribed for the protection of water quality are included in Sections 6.2.1.2, 6.2.1.3 and 6.2.1.4 of the NIS and also within Sections 9.5.2 and 9.5.3 of Chapter 9 'Hydrology and Hydrogeology', of the ELAR which was included as Appendix 4 to the NIS.

Mitigation measures to prevent adverse effects on otter due to disturbance are detailed in Section 6.2.2 of the NIS and include for a pre-commencement otter survey to be undertaken prior to the commencement of construction to ensure that there have been no changes to the baseline since the undertaking of the otter surveys which informed the NIS and ELAR submitted with the planning application.

The Construction and Environmental Management Plan (CEMP) which was included as Appendix 4-2 of the ELAR submitted with the planning application for the Proposed Project identifies the key environmental considerations (including those outlined within the NIS and ELAR) that must be adhered to and delivered during construction of the Proposed Project. The Contractor, appointed by the Project Developer, will be required to implement all of the requirements set out within the CEMP, NIS and ELAR and the CEMP sets out a detailed implementation plan for the environmental management of the Proposed Project to ensure that all mitigation measures contained within the CEMP, NIS and ELAR are implemented in full.

Section 4.1 of the CEMP sets out the key roles and responsibilities for the implementation of environmental management measures. Section 4.1.2 specifies that an Environmental Clerk of Works (ECOW) will be appointed by the Project Developer to oversee the Project Contractor's effective implementation of the Proposed Project's environmental requirements and obligations detailed in the CEMP, NIS and ELAR. The ECOW will be responsible for monitoring the works of the Project Contractor from an environmental perspective on behalf of the Project Developer. The ECOW will report their ongoing audit findings, monitoring results and site observations to both the Project Developer and the Project Contractor. The ECOW will have the power to halt the works, should the need arise and will be supported by the developer to ensure the contractor adheres to such an instruction. As outlined in Section 4.1.3 of the CEMP, a Project Ecologist will be available to support the ECOW on matters relating to the protection of sensitive habitats and species encountered prior to or during construction of the Proposed Project. The Project Ecologist will be responsible for undertaking pre-commencement surveys and providing guidance to the contractor to ensure compliance with respect to protected species and habitats onsite. In addition, as outlined in Section 4.1.4 of the CEMP, a Project Hydrologist will also be appointed to support the ECOW in monitoring and auditing the effective implementation of the detailed drainage design to ensure that there will be no significant effects on water quality.

3.3.1 Conclusion

To conclude, it is considered that the information provided by MKO in the combined Stage 1 Screening and Stage 2 NIS is entirely sufficient to support a thorough assessment of all potential effects on European Sites arising from the Proposed Project. The assessment undertaken within the NIS submitted with the planning application is based on best scientific knowledge and was undertaken in accordance with best practice guidelines. The information contained within was based on comprehensive ecological surveys undertaken by professional ecologists. MKO disagrees with the statement that *'there is a significant lack of supporting information for ecological receptors in both the Stage 1 Screening and Stage 2 Natura Impact Assessment'*.

This response to the refusal reason points above detail the comprehensive survey effort that was undertaken to collect accurate information on the baseline environment and to inform a robust assessment. The assessment considered all potential for adverse effects on the River Barrow and River Nore SAC and the River Nore SPA, including potential for cumulative effects on European Sites. The mitigation measures prescribed within the NIS are considered robust to ensure that there is no potential for adverse effects on the integrity of any European Sites and furthermore their implementation will be carefully managed within the CEMP that was included as Appendix 4-2 of the ELAR submitted with the planning application for the Proposed Project. .

RESPONSE TO SUBMISSIONS

This GOA directly addresses and refutes the three reasons for refusal cited by KCC, demonstrating that the Proposed Project aligns with proper planning and sustainable development principles. To ensure a comprehensive approach, the GOA also responds to all Third-Party and Statutory Consultee submissions related to the project.

The following section seeks to resolve any concerns raised while emphasising the thorough and robust nature of the EIAR, NIS, and supporting documentation. It first provides a structured response to Third-Party observations, grouped by theme, followed by an analysis of individual submissions received from Statutory Bodies.

Response to Third-Party Observations

A total of 202 third-party submissions were submitted to KCC in relation to the planning application for the Proposed Project. **Table 1** below outlines the common themes identified within the Third-Party submissions and specifies who in the project team is responsible for the corresponding response.

Table 1 Key Themes from Third-Party Submissions and Lead Authors for Response

Theme	Lead Author for Response
Landscape and Visual Impact	MKO
Impact on Water and Flood Risk	MKO/HES
Human Health	MKO
Noise	AWN
Cumulative effect	MKO
Construction Traffic	MKO
Biodiversity	MKO
Birds	MKO
Impact on Property Prices	MKO
Lack of Community Engagement	MKO
Impact on Sensitive Receptors	MKO
Built Heritage and Archaeology	MKO
Land, Soils and Geology	HES
Insufficient Turbine Spacing	MKO
Multiple Applications	MKO

Concern about Applicant's Company Structure and Agent	MKO
Policy and Legislation	MKO

4.1.1 Visual Impact

The subsequent sections address the third-party submissions in relation to landscape and visual effects, as well as the submission from CASS Ltd. who were engaged by KCC to review the EIAR. Many submissions relate to effects on residential visual amenity and visual impacts in general, and are addressed thematically. As set out previously in Section 3.1 of this GOA, Chapter 13 of the EIAR (the 'LVIA Chapter') and its accompanying visualisations and appendices comprehensively appraises the Landscape and Visual effects of the Proposed Project, and the LVIA Chapter followed methods and processes fully adhering to best practice guidance. As set out in the LVIA Chapter, the Proposed Project is fully compliant with local planning policy. As such, it remains in full alignment with local planning policies and designations, ensuring a balanced approach between landscape protection and the facilitation of renewable wind energy development. The LVIA Chapter reports that the greatest landscape and visual effects are localised to receptors in the immediate vicinity of the Proposed Wind Farm with acceptable levels of impact on local residential visual amenity considering adherence to the four times tip height set back distance and other factors set out in response to Refusal Reason 1 in Section 3.1 of this GOA.

4.1.1.1 Response to CASS Ltd. Submission

CAAS Ltd. was engaged by KCC to review the EIAR, including Chapter 13. The Planners Report was evidently informed by the report produced by CAAS Ltd which is included as Appendix 3 to the Planners Report. Appendix 3 and the Planners Report presents a high-level critique of the LVIA Chapter's approach, methodology, and assessment. This section addresses both the Planners Report and the Appendix produced by CASS as they essentially cover the same topics.

Chapter 13 of the submitted EIAR contains the comprehensive LVIA of the Proposed Project conducted in 2022-2024 by MKO (hereafter, 'the LVIA Chapter'), and comprises eight documents:

- EIAR Ch.13 Landscape & Visual (main chapter);
- Volume 2: Photomontage Booklet, presenting existing and cumulative visualisations of the proposed turbines from 16 No. representative viewpoints in the LVIA Study Area;
- Volume 3: Blue-Sky Photomontage Booklet, a duplicate photomontage booklet including graphic alterations of the sky, as requested by the local planning authority;
- Appendix 13-1: LVIA Methodology, outlining the detailed methodology and guidance used for the assessments reported in Chapter 13;
- Appendix 13-2: LCA Assessment Tables, assessing effects on designated Landscape Character Areas (LCAs);
- Appendix 13-3: Photomontage Viewpoint Assessment Tables, a visual impact assessment of the 16 No. representative viewpoints presented in the Photomontage Booklet, including assessment of cumulative effects;
- Appendix 13-4: LVIA Baseline Map, a large A0 map showing all baseline landscape features, visual receptors, ZTV and viewpoints;
- Appendix 13-5: Photowire Booklet, presenting draft photomontage visualisations from 21 No. viewpoint locations in the LVIA Study Area which were not selected for the final Photomontage Booklet;

It is reiterated throughout this GOA that the methods and processes followed during the LVIA and preparation of the materials and documents listed above were produced in accordance with the frameworks, specifications and standards set out by best practice guidance for the LVIA of Wind Energy Developments in Ireland. These include the following industry-standard, benchmark best practice guidance documents:

Best Practice Guidance for LVIA of Wind Energy Development in Ireland:

- Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3) published by Landscape Institute & Institute of Environmental Management and Assessment (2013) *and* Clarifications in LI TGN 24/01 (LI, 2024).
- ‘Guidelines on the Information to be Contained in Environmental Impact Assessment Reports’ (Environmental Protection Agency of Ireland [EPA], 2022);
- ‘Guidance: Assessing the Cumulative Impact of Onshore Wind Energy Developments’ (Nature Scot, 2021; includes methodology published in 2012);
- ‘Wind Energy Development Guidelines (The Guidelines) for Planning Authorities’ (DoEHLG, 2006) and the ‘Draft Revised Wind Energy Development Guidelines (Draft Guidelines)’ (Department of Housing, Local Government and Heritage [DoHPLG], 2019);
- ‘Visual Representation of Development Proposals’ (Landscape Institute Technical Guidance Note 06/19, 2019) (hereafter, LI TGN 06/19);
- ‘Siting and Designing Wind Farms in the Landscape, Version 3a’ (Scottish Natural Heritage [SNH], 2017) (hereafter, SNH Guidance v.3a);
- ‘Visual Representation of Wind Farms, Version 2.2’ (SNH, 2017) (hereafter, SNH Guidance v.2.2);
- ‘Spatial Planning for Onshore Wind Turbines: Natural Heritage Considerations’ (SNH, 2015);
- ‘Visual Representation of Wind Farms, Version 2’ (SNH, 2014) (hereafter, SNH Guidance v.2)
- ‘Visual Assessment of Wind Farms: Best Practice’ (SNH, 2002).

The Planners Report and CASS Report ultimately critiques the LVIA Chapter under the following topics:

- The validity of the methodology used, and use of ‘non-standard’ classifications criteria and misleading classification of impact significance;
- Illustrations of worst-case visibility in photomontages;
- Cumulative effects on Landscape Character;

With regards to the validity of the LVIA methodology, the appellant will firstly draw the attention of the Board to Appendix 13-1 which sets out, in detail, the Methodology used to conduct the LVIA for the Proposed Project. Section 1.5 of Appendix 13-1 comprises several (>10) pages detailing the classification criteria and definitions used for determination of landscape and visual effects. Section 1.5 also details the process to determine the overall ‘Significance’ of landscape effects. The final outcome of this process includes a landscape or visual effect aligned with the classifications of significance set out in the ‘Guidelines on the Information to be Contained in Environmental Impact Assessment Reports’ (Environmental Protection Agency of Ireland [EPA], 2022). This classification cannot be described as ‘non-standard’.

The LVIA Chapter is supported by as many objective and rigorous LVIA tools as is possible, which would qualify as a ‘large quantum’ of data and information. These include GIS constraints mapping (22 no. A3 Maps in the Chapter), ZTV mapping, a Route Screening Analysis, 16 No Photomontages, 21 No. Photowires. All of the impact assessments are clearly set out with clear logical narrative, particularly the impact assessment tables for LCAs in Appendix 13-2 and the impact assessment tables for the 16 photomontages detailed in Appendix 13-3. Irrespective of the processes, matrices, specific definitions and criteria, all of the judgements in the LVIA are informed by comprehensive descriptions and transparent

written narrative, providing the board with the information needed to make an informed decision. The following is an excerpt from the LVIA methodology (Appendix 13-1):

“The matrices and tables above are excellent tools to aid professional judgement in the determination of the significance of an effect. They are useful in that they provide a transparent, objective, structure to the process of balancing sensitivity and magnitude of change. In the context of the determination of visual effects, the formulaic process created by the use of the matrix above provides an indicative initial assessment, which can be seen clearly in the photomontage assessment tables in Appendix 13-3.

However, over-reliance on the formulaic process, which is heavily influenced by the definitions of sensitivity and magnitude of change contained in Table 1 4 and Table 1 5 above, can lead to a failure to properly account for the full range of circumstances and factors at play in the determination of the significance of a visual effect (see Section 3.35, GLVIA3). A wide range of factors, mitigating or otherwise, can factor into such a determination, and it is not possible to capture the complexity involved in balancing all considerations within the necessarily limited definitions contained in these tables. This then naturally results in circumstances whereby the process of the determination of significance using the formulaic method involved with the matrix shown in Table 1 6 can result in misrepresentations of the significance of visual effects. It is only with professional judgement, and narrative descriptions of effect, that such complexity can be integrated into the determination of significance. Therefore, the formulaic methods based upon the matrix presented above is combined with professional judgement in the determination of significance. This is illustrated in Figure 1 2 below where the professional judgment of the competent expert is used to properly determine the significance of an effect taking all considerations into account.

A focus is placed upon the narrative description of effects (see Section 3.36, GLVIA3) given the naturally subjective nature of the significance determination process, particularly in relation to visual effects, ensuring that the rationale for the overall judgement is clear (see Sections 3.28-3.29, GLVIA3). The comprehensive assessment of photomontages included in Appendix 13-3 aims to provide a transparent and robust determination of residual visual effects utilising the graph in Figure 1 2 in combination with a clear and logical narrative.”

The LVIA Chapter has followed methods and processes, grounded in industry best practice guidance (listed and cited above). MKO has developed extensive expertise and experience over the last 15 years in the LVIA of large-scale wind energy developments for EIAR. The impact assessment methods used for LVIA have evolved and been refined over time to align with the current industry best practice and standards. In the past 4 years (since March 2025), MKO has provided LVIA within the EIAR framework for 12 no. large scale wind energy developments which have been consented by An Bord Pleanála. The current methodology, processes, terminology and classification criteria used for the Proposed Project is the same as those included in the LVIA for the EIARs of those 12 no. consented projects. As well as being informed by best practice guidance, the LVIA criteria and process used by MKO for the Proposed Project is transparent, detailed and has ultimately been accepted by An Bord Pleanála as being robust and sufficient. The accepted, verified and substantiated methods and criteria used in the LVIA of the Proposed Project are recognised by highest planning authority in Ireland as being appropriate and sufficient.

A focal point in the Planner's Report and Appendix 3 addresses viewpoint selection, claiming that the selected viewpoints “do little to illustrate the worst-case exposure and are not typical of the views from many, if not most, of the dwellings likely to be affected” and further asserts that a significant number of dwellings with potential key viewpoints have not been assessed. However, the Planners Report overlooks the comprehensive and methodical approach taken in the LVIA Chapter. While it is not feasible to create photomontages from every location within the LVIA Study Area, the viewpoints selected are consistent

with best practice guidance, ensuring a balanced and representative assessment of the visibility and impact of the Proposed Project on residential visual amenity.

All viewpoints were chosen in accordance with SNH Guidance v.2.2 (2017), which recommends capturing a variety of perspectives from different distances, orientations, and elevations. Typically for LVIA, photomontages are captured from the public realm and areas representative of residential receptors, it would be both impossible and a highly disproportionate measure to produce photomontages to represent every receptor which would experience views of a proposed development. However, a large quantum of visualisations were produced for the EIAR. The LVIA includes a total of 16 No. photomontages and 21 photowires. With 9 photomontages and 11 photowire within a 5km radius alone, specifically designed to illustrate the potential effects on residential receptors, see Section 13.5.3. in the visual baseline scoping exercise within Chapter 13. This ensures that both full and partial visibility of the proposed turbines is accurately represented, providing a clear and evidence-based depiction of the visual impact. The methodology adheres to industry standards and appropriately reflects the likely visual effects on the surrounding area.

At the pre-planning meeting on the 9th of February 2024. KCC requested viewpoints be captured to represent Kilmanagh. Photomontage data was captured from 6 no viewpoints within the environs of Kilmanagh Village, 3 No. viewpoints were produced as full Verified Photomontages in the Volume 2 Booklet and 3 no. viewpoints were included as Photowires in Appendix 13-5, where very limited visibility occurred due to visual screening. During the pre-planning meeting, KCC were presented with a ZTV map including photomontage viewpoint locations. This presentation and map was issued to KCC following the meeting. There was no request for new viewpoints other than Kilmanagh. KCC had ample opportunity to request photomontages be captured from alternative or additional viewpoints during and after the pre-planning meeting and also throughout their response to the EIAR scoping exercise.

The Planners Report states that *“none of the nearest viewpoints show cumulative turbines,”*. As set out in the response to Refusal Reason 1 in Section 3.1 above, the assessment of cumulative landscape and visual effects of the Proposed Project in combination with other wind farms is comprehensively addressed in the LVIA Chapter and accompanying appendices, including cumulative assessment of landscape character (Appendix 13-2). Where possible, all cumulative effects have been addressed using objective tools such as cumulative ZTV mapping and inclusion of all cumulative turbines within verified photomontages. All assessments and analysis have been appropriately supported by written descriptions of cumulative interactions in the visual impact assessment tables in Appendix 13-3 and within the Chapter itself.

Overall, with regard to the LVIA Chapter, The appellant re-iterates that the LVIA and accompanying materials submitted in the EIAR are extensive and comprehensive. They represent a large quantum of data, covering all of the LVIA topics required under EIA regulations and best practice guidance. Crucially, the tried and tested methods and processes used for the LVIA are robust, and have been proven as being of sufficient quality and standard for the impact assessment of wind energy developments in Ireland. The large volume of information in Chapter 13 of the EIAR (and accompanying appendices) in the form of maps, visualisations, tables, written descriptions, logical and transparent impact assessments have given the planning authority and ABP all the information required to make an informed decision.

4.11.2 Residential Visual Amenity

Third-party submissions suggest that the LVIA Chapter does not include sufficient assessment of residential visual amenity and implies that visual impacts on residences in close proximity were understated. Third-party submissions also note that that many surrounding residents will be at a higher elevation than the proposed turbines.

As set out previously in response to Refusal Reason 1 (See Section 3.1), the LVIA Chapter:

- Followed best practice guidance and used a robust and accepted LVIA methodology;

- Was informed by many best practice and objective LVIA tools to demonstrate the nature of effects on residential visual amenity, including:
 - Verified Photomontages and Photowires (9 photomontages and 11 photowire within 5km)
 - A Route Screening Analysis
- Included a comprehensive written analysis of effects on Residential Visual Amenity informed by site visits, visualisations and route screening analysis, including:
 - Section 13.7.3.8 of the LVIA Chapter specifically addressing effects on Residential visual amenity
 - Appendix 13-3 visual impact assessment of viewpoints (9 photomontage viewpoints) within 5km of the proposed turbines specifically representing local residences.

The opening paragraph of Section 13.7.3.8 in the LVIA Chapter states:

“During the site selection process, early stage LVIA appraisals identified local residential receptors as the most sensitive receptors with the greatest potential to be adversely impacted by the proposed turbines with regard to visual impacts. Consequently, residential visual amenity was of key consideration during site selection and throughout the iterative design process for the Proposed Project.”

The LVIA Chapter identified local residential receptors as being the receptors with the greatest potential to be impacted by the Proposed Project. The analysis and assessment in Section 13.7.3.8 considered the spread, layout and orientation of houses throughout the surrounding landscape and the nature of views in the direction of the Proposed Project turbines from residences. As per best practice guidance, it is not in the remit of an LVIA to conduct an impact assessment for every single residence, as this is not feasible and would be disproportionate, in mind of all other visual receptors (See Visual Baseline in Section 13.5 of Chapter 13) requiring assessment. As reported in response to Refusal Reason 1, assessment of overall visual effects on local visual amenity accounted for many factors, not just ‘visibility’, for example:

- Mitigation by Design in response to effects on residential amenity:
 - Adherence to the 4x tip height set back from residential receptors;
 - Removal of a turbine in closest proximity to Kilmanagh during earlier stages in the project design.
- Site Selection and landscape characteristics:
 - A rural landscape of low population density compared to national and county averages;
 - Lower base elevation of turbines relative to receptors, reducing perceived height and visual prominence from proximate receptors;
 - A receiving environment of gently undulating landforms and prevalence of mature boundary vegetation limiting clear and open views of the turbines in large areas of the receiving landscape;
 - Well defined field boundaries as a physical landscape buffer between the turbines and surrounding residences and provide a sense of setback to accommodate turbines;
- Absence and avoidance of key factors:
 - A turbine layout causing no surrounding effects on residences;
 - Limited instances of very wide horizontal extent of turbines visible within open views from residences;
 - No scenarios where turbines are sited upon elevated landforms above local residential receptors in close proximity.

It is reiterated throughout this GOA, that the design of the Proposed Project aligns with industry benchmark best practice guidance and standards. Siting of the proposed turbines adheres to the minimum

500m set back distance from residential receptors as set out in the 'Wind Energy Development Guidelines for Planning Authorities' published by the Department of the Environment, Heritage and Local Government (DoEHLG) in 2006 (hereafter referred to as the Guidelines) and also the recommended 4 times tip height set back distance to third party properties, explicitly set out for residential visual amenity in the 'Draft Revised Wind Energy Development Guidelines' published by the Department of Housing, Planning and Local Government (DoHPLG in 2019), hereafter referred to as the draft Guidelines. Furthermore, the proposed turbine layout has been designed to create a coherent arrangement of turbines, contiguous and connected to each other visually and with consistent spacing in line with the siting and design guidance for wind farms within Hilly and Flat Farmland Landscape Types in the Guidelines and the draft Guidelines (See Section 13.4.3.3.1 in the LVIA Chapter). The design principles and setback distance criteria applied to the Proposed Project are consistent with those used during the design of other wind energy developments consented by An Bord Pleanála, demonstrating that they are sufficient, and that the Proposed Project design aligns with established planning principles in relation to visual impacts on residential visual amenity.

A common topic raised in third-party submissions also state that the site's lower elevation relative to surrounding residences is a negative factor contributing to visual effects. Third-party submissions correctly note that the proposed turbines are sited at a lower elevation compared to surrounding landforms. This is advantageous with regards to overall visibility of the Proposed Wind Farm, as the landform, in which the proposed turbines are sited within serves to contain visibility, limiting visibility in the wider landscape beyond the immediate setting. This is evident in Figure 13-1 of Chapter 13 of the EIAR - ZTV Map of Proposed Wind Farm and LVIA Study Area, where theoretical visibility is very limited in large areas of the LVIA Study Area. Whilst this is positive for reducing visibility from a large number of visual receptors in the wider landscape, these landform characteristics have the potential to increase the likelihood of turbines being visible from the small number of residential receptors located upon elevated vantage points surrounding the site. This is evident in Photomontage Viewpoints 2, 8 and 9 and be also seen in Photowires D, E, G, and Q) where there is the potential for clear and open views towards the proposed turbines due to the elevated location of the receptors relative to the base elevation of the turbines. However, a greater potential for visibility from several vantage points does not necessarily correlate to visual effects of greater significance. A rational and logical interpretation of this scenario is that these characteristics contribute to the proposed turbines appearing less visually prominent and less overbearing than if they were situated at higher elevation relative to residential receptors. Irrespective of this, the proposed turbines are mostly visible as a connected and coherent cluster of turbines and are in alignment with the 4 x tip height set back distance, as set out in the draft Guidelines, for the protection of residential visual amenity.

4.11.1.3 Visual Impact on Local Settlements and Local Rural Landscape

Third-party submissions focussed on the visual impact of the proposed turbines on the settlements of Kilmanagh, Tullaroan and Ballycallan, as well as the rural character of the local area.

As highlighted previously, and as discussed comprehensively in the LVIA Chapter, the change within the local valley introduced by the proposed turbines will be contained within the valley's natural landform, ensuring that visibility is largely confined to this area, enclosed by the surrounding topography and thereby limiting its visual exposure beyond the localised setting. However, this results in potential visibility from local receptors such as residential receptors and the settlements of Kilmanagh, Tullaroan and Ballycallan. This is acknowledged in the impact assessments within the LVIA Chapter. A comprehensive assessment of the rural settlements of Kilmanagh, Tullaroan and Ballycallan are included in Section 13.7.3.7 of the LVIA Chapter. Residual visual impacts are considered to be of 'Moderate' or 'Slight' significance, accounting the design refinements, mitigation measures and other factors relating to actual visibility on the ground which are discussed previously (see Response to Refusal 1 of this GOA).

In LVIA, the 'magnitude of change' is balanced with the 'sensitivity' of the receptor to arrive at an effect in either landscape or visual terms. The LVIA Chapter acknowledges that a 'Substantial' magnitude of

change will occur within the local rural landscape of the Proposed Wind Farm site and its immediate environs. However, this is a 'Low' sensitivity Landscape. Section 13.4.3.2 of the LVIA Chapter comprehensively analyses the landscape values, qualities and sensitivities of the Proposed Wind Farm site and its setting. As set out in the LVIA Chapter, the Proposed Wind Farm site and landscape setting is considered 'Low' sensitivity for the following reasons:

- It is Not designated as a landscape of high sensitivity in local planning policy;
- Appendix C (LACK) of the KCDP states that the LCA in which the proposed Wind Farm site is located in is considered to having "*no significant landscape value*", while also noting that this LCA is perceived as having potential for development.
- It is a rural working landscape, modified by the current and previous land use of agriculture and forestry;
- It is Not a unique or highly distinctive landscape at National, Regional, or County level. Instead, it is a landscape of local sensitivity comprising values and characteristics common to the wider rural landscape of Ireland.

As per the LVIA methodology (see Appendix 13-1 of the LVIA Chapter), the LVIA Chapter reports that the 'Substantial' magnitude of change is balanced with the 'Low' sensitivity to arrive at effects of 'Moderate' significance (EPA, 2022). Ultimately, the Proposed Wind Farm was strategically sited in this local landscape which is of Low sensitivity. This strategic siting is in accordance with the siting and design guidance of the Guidelines which directs the siting of wind energy developments towards landscapes of 'Low' Sensitivity.

As well as being a landscape of Low sensitivity, the Proposed Wind Farm is sited in an area of the landscape mapped as both 'Acceptable in Principle' and 'Open to Consideration' in local planning policy. The Proposed Wind Farm has also been optimally designed for the appropriate landscape character type according to the Guidelines – Hilly and Flat Farmland. The comprehensive site investigations undertaken as part of the EIAR and the LVIA Chapter determined that the land area of the Proposed Wind Farm site itself is suitable for absorbing and accommodating the infrastructure of the Proposed Project 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 in this landscape.

The Proposed Wind Farm will cause an impact on the character of the local landscape setting, the local residential receptors and local settlements. However, these effects are deemed to be acceptable considering all the factors, design refinements and mitigation measures set out in the 'Mitigation by Good Design' in Section 13.1.3 of the LVIA Chapter, 'Likely Landscape and Visual Effects' Section in Section 13.7 of the LVIA Chapter, associated Appendices (Appendix 13-2 and 13-3), the EIAR, as well as the requirement to facilitate onshore renewable energy developments in line with National targets.

4.1.1.4 Other Landscape and Visual Receptors

Third-party submissions note that some visual receptors, such as St. Canice's Tower and Freestone Hill have not been assessed in terms of visual impact. A response in relation to these visual receptors are provided below.

While the ZTV map indicates some partial theoretical visibility from the grounds of St. Canice's Cathedral, in reality, no direct visibility is expected to occur due to the screening effect of surrounding buildings in Kilkenny City. Although distant views of the proposed turbines may occur from the top of the cathedral tower, the turbines will be situated approximately 9.8km away and will appear as small background elements with no significant visual impact anticipated. Photomontage 10, captured from a similar distance (10.6km) and geographical orientation is comprehensively assessed in Appendix 13-3 and has no residual significant effects arising at this viewpoint.

Freestone Hill, located approximately 18.5km from the proposed turbines, is similarly unlikely to experience any significant visual effects. Any visibility that occurs will be minimal, with the turbines appearing as distant background features. Photowire N, captured from a similar distance (19.2km) and geographical orientation, clearly illustrates the negligible visual presence of the turbines at such a range.

Third-party submissions have also addressed the possible visibility and the potential of significant visual impacts that may arise from the proposed turbines on the local sportsground of Tom Ryall Park, at the east of Kilmanagh village. Key guidance for LVIA (GLVIA3) states that sports grounds and associated receptors are classified as low-sensitivity receptors. The sensitivity of visual receptors, as outlined in the GLVIA3, is determined by the nature of the activity and the extent to which individuals focus on views and visual amenity. In the case of Tom Ryall Park, the attention of players and spectators is primarily directed towards the activity on the field, rather than the surrounding landscape. Additionally, as part of the iterative design process undertaken during the project design, the turbine closest to the settlement of Kilmanagh was removed, effectively reducing visual effects on this local sportsground, and the local amenity. Overall, the proposed turbines are unlikely to be a visual distraction during sports events, and are not likely to cause significant impacts.

Third-party submissions indicate that the foothills to the east of County Tipperary encompass scenic areas, with the Slieveardagh Hills designated as an area of Secondary Amenity Area in the local planning policy (note - not an area of Primary Amenity Area in County Tipperary). As detailed throughout the LVIA Chapter and focused on in Section 13.7.3.2, the Proposed Wind Farm will have a limited impact on the Slieveardagh Hills due to topographical screening and the surrounding landscape context. ZTV analysis confirms that large portions of the Secondary Amenity Area will have no theoretical visibility due to landform screening, with visibility primarily occurring from elevated vantage points within 10km, while lower areas are frequently obscured by landform and vegetation. Viewpoint PW L illustrates this, showing that only partial turbine visibility exists due to intervening terrain. Given the separation between the turbines and the designated area, along with existing cumulative wind farms in the region, the LVIA concludes that the overall residual landscape effect is 'Slight,' with the Proposed Wind Farm contributing no significant impact on the character of the Slieveardagh Hills.

4.1.15 Response to Specific Topics relating to methods and processes used in the LVIA Chapter and Production of Photomontages

This section addresses specific topics which were raised by third-party submissions in relation to the assessment of the Proposed Project in the LVIA Chapter including the following:

- Visual Screening from Vegetation
- Photomontage Selection
- Accuracy of Photomontages in the ELAR
- Review and analysis of Third-Party Unverified Photomontages

4.1.15.1 Visual Screening from Vegetation

Section 13.3.2 of the LVIA Chapter comprises - *Visibility in Close Proximity to the Proposed Wind Farm – Route Screening Analysis*. The Route Screening Analysis methodology is included in Appendix 13-1 of the LVIA Chapter. This exercise categorised and mapped the nature of visual screening along the local road network surrounding the site to objectively establish the reality of visibility towards the Proposed Wind Farm compared with ZTV mapping and also inform selection of viewpoints. This Route Screening Analysis was conducted in November 2023. Conducting the Route Screening Analysis in a winter month ensured the analysis reflected real-world conditions in a worst-case scenario during periods of reduced vegetation cover where less foliage on roadside vegetation is present which would show greater potential for visibility.

The Route Screening Analysis is just one tool used to analyse the 'reality' of visibility towards the proposed turbines in the local area. Visibility appraisals were also conducted during the field surveys during the capture of imagery for photomontages, and the abundance and nature of vegetation cover in the local landscape was recorded during these exercises. Many of the images in the LVIA Chapter from field surveys, including drone imagery, provide perspective of the nature of field patterns, landcover and degree of mature boundary vegetation in this relatively sparsely settled rural landscape surrounding the Proposed Wind Farm site. The reality is that the landscape of the local area does comprise a lot of mature boundary vegetation, and this boundary vegetation restricts the general visibility towards the proposed turbines from many receptors in the surrounding area.

Third-party submissions suggest that the LVIA Chapter did not account for natural cycles of vegetation change over a 35-year period, citing factors such as seasonal hedgerow maintenance, dieback, disease, storm damage, and climate change, which could potentially reduce the effectiveness of visual screening. These factors are true, vegetation, and the landscape is in general inherently dynamic. However, a degree of pragmatism and proportionality must be applied to LVIA. Considering the scale and extent of the analysis conducted for the Proposed Wind Farm (e.g. all roads within 3km of the Proposed Wind Farm site boundary), it would be a very disproportionate and unfeasible measure to include a nuanced analysis of every potential possibility for potential changes to vegetation characteristics in this large area. Therefore, the analysis and assessments were conducted based upon the conditions during fieldwork, as these other 'potential' factors are ultimately unknown and highly nuanced for the purposes of the analysis and assessments in the LVIA. The Route Screening Analysis and nature of vegetation screening is just one element factored into the overall analysis of visibility which then contributes to the overall assessment of landscape and visual effects. Ultimately, the topic of temporal change in the nature of vegetation is a distraction. Irrespective of seasonal variation and potential for temporal change, the characteristics of the landcover in the form of above ground vegetation in the local landscape does reduce visibility of the proposed turbines from many locations and receptors in the local area surrounding the Proposed Wind Farm site, far less than is shown by the ZTV and reduces the visual exposure and visual impact from receptors in the landscape.

4.1.1.5.2 Selection of Photomontages

Third-party submissions raised the topic of photomontage viewpoint selection, suggesting that the views presented are unrepresentative of receptors. One submission included photomontages produced by an independent contractor. An evaluation of these photomontages is included in Section 4.1.1.5.3 below.

As previously noted, (see response to Refusal Reason 1), all viewpoints were selected in accordance with best-practice guidance, SNH Guidance v.2.2 (2017) and GLVIA3 (2013), which recommend capturing a diverse range of perspectives from various distances, orientations, and elevations, for which the selection of locations is informed by a comprehensive desk study, site-surveys and site walkovers. Selection of Photomontage viewpoints is for assessment of a variety of landscape and visual receptors, not just local residential visual amenity. For the Proposed Project, visual receptors were analysed thematically in the visual baseline exercise in the LVIA Chapter, these include:

- Designated Scenic Routes
- Designated Scenic Views
- Settlements
- Recreational Routes
- Recreation Tourist Destinations
- Transport Routes

In LVIA, photomontages are typically captured from public areas and locations representative of residential receptors. Producing visualisations for every individual receptor with a potential view of the proposed turbines is both unfeasible and disproportionate. For the ELAR of the Proposed Project, a total of 37 visualisations were prepared, comprising 16 photomontages and 21 photowires. Of these, 9 photomontage and 11 photowire locations were within a 5km radius of the Proposed Project turbines,

specifically selected to illustrate potential effects on residential receptors (see Section 13.5.3 in Chapter 13). Both full and partial visibility of the proposed turbines was accurately represented, providing a clear, evidence-based assessment of the visual impact.

41.11153 Accuracy of Photomontages in the EIAR

The photomontages produced for the EIAR are included in the *Volume 2: Photomontage Booklet*. Photowires produced for the EIAR are included in *Appendix 13-5: Photowire Booklet*. A comprehensive methodology for the production of photomontages included in the EIAR is set out in Section 1.4 of Appendix 13-1 of the EIAR. The methods used for viewpoint selection, field surveying, data collection, data processing, graphics production and final presentation of photomontages within the booklet follow a rigorous approach utilising best practice guidance for LVIA, photomontage production and benchmark guidance for the production of wind energy photomontages, as follows:

- ‘Visual Representation of Development Proposals’ (Landscape Institute Technical Guidance Note 06/19, 2019) (LI TGN 06/19);
- ‘Visual Representation of Wind Farms, Version 2.2’ (SNH, 2017) (SNH Guidance v.2.2);

In line with best practice guidance for the production of photomontages for wind energy development (SNH Guidance v.2.2, 2017 and LI TGN 06/19, 2019) the photomontages are printed on A1 banner sheets of paper which present the proposed turbines enlarged to fit within a 53.5° horizontal field of view. It is acknowledged that photomontages can be subject to a range of limitations which are set out in Section 1.4.2 of Appendix 13.1 of the LVIA Chapter. However, every attempt has been made to adhere to benchmark best practice standards and specifications for photomontage production and presentation for the EIAR.

The following subsections address the topics raised on in relation to the accuracy of the Verified Photomontages shown in *Volume 2: Photomontage Booklet*.

Turbine Elevation

Third-Party Submissions queried the base elevations used for the proposed turbines within the photomontages relative to the surrounding landform.

WindPro software, a leading industry tool for wind turbine photomontage analysis, was used for the production of photomontages. The software incorporates an accurate Digital Terrain Model (DTM) which allows for precise topographical evaluations, ensuring that turbines are placed in full accordance with the actual landscape as is reasonably possible. The location and height of the camera lens at a viewpoint is also a relevant technical factor, which contributes to the positioning of turbines within a landscape view, as seen in a photomontage. For the Proposed Project, the camera height was fixed between 1.5 to 1.7m above ground level as suggested in best practice guidance. Overall, the modelling and data collection procedures used were thorough, precise, and fully aligned with industry standards.

Panoramic Photomontages, Lens and Guidance

Third-party submissions questioned the accuracy of using panoramic photos, the lens and the guidance utilised in the methodology of the LVIA Chapter.

Capture, modelling, rendering and presentation of the photomontages adheres to the professional standards set out by the LI TGN 06/19 (2019) in their guidance on photomontages and visualisation, as well as SNH Guidance v.2.2 (2017) – which is specific guidance for the presentation of photomontages of wind energy developments and is considered the industry standard and benchmark. Here, the methodology employed for the photomontages is explained in detail.

Under the LI TGN 06/19 Type 4 visualisation standards, photomontages are produced using quantifiable data with procedural transparency and a high level of accuracy. These visualisations involve using a defined camera and lens combination, with the camera location accurately established with a GNSS GPS to enable precise scaling and correct placement of the 3D model within the view. The camera and lens combination specified in the standards is a Full Frame Sensor (FFS) camera with a 50mm focal length prime lens. This approach ensures that the photomontages are survey and scale verifiable, reliable, and meet industry standards for visual accuracy.

The proposed turbines are shown within stitched panoramic imagery. To eliminate parallax errors and ensure image alignment during panorama creation, a Nodal Ninja panoramic tripod head was used. This equipment is specifically designed to minimize parallax (the distortion of panoramic image when multiple individual images are stitched), ensuring that the images are seamlessly stitched together, thus preserving the integrity of the visual representation.

Furthermore, the Type 4 visualisation process involves a carefully defined print presentation size to ensure that the images are scaled correctly. Section 1.4.3 of Appendix 13.1 of the LVIA Chapter sets how and why photomontages and wireline views are presented in the Volume 2: Photomontage Booklet.

“The photomontage visuals contained in the Photomontage Booklet are devised to be viewed at arm’s length. The existing views, photomontages and wireline views are panoramas presented on banner sheets of paper of size ‘A1’. More specifically, the horizontal field of view presented in the visualisations are spread across 84.1cm, the equivalent of the maximum horizontal field of an A1 sheet of paper. In line with best practice guidance for the production of photomontages for wind energy development (SNH Guidance v.2.2, 2017 and LI TGN 06/19, 2019) the A1 banners present the proposed turbines enlarged to fit within a 53.5° horizontal field of view.”

All photomontage viewpoints in the Volume 2: Photomontage Booklet include a 53.5° field of view on a single A1 banner sheet, with an accompanying wireline view on a separate A1 banner sheet. The 53.5° field of view on the A1 banner sheet represents 150% enlargement relative to the reference image captured with a 50mm focal length lens and is the worst-case scenario for presenting visual impacts of wind energy developments in line with best practice guidance.

4.1.1.5.4 **Third-Party Unverified Photomontages**

One third-party submission included photomontages produced by an independent contractor. An evaluation of these photomontages is included in the subsequent subsections.

It is important to note, that while these third-party produced photomontages show the general direction and visibility of the proposed turbines from the selected viewpoint locations, the photomontages themselves are deficient as no methodology is provided for how these photomontages were produced, how data was captured, or how the images are presented. In addition, the images feature technical irregularities, resulting in unverified, inaccurate visualisations that cannot be relied upon to support discussion in relation to landscape and visual impacts. Examples of technical deficiencies of the submitted third-party photomontages are set out below.

Deficient Methodology and Inconsistency – Third Party Photomontages

The following elements are inconsistent with all photomontages:

- **Field of View (Angle):** There is no description of the field of view (angle) used in the photomontages, which is a critical element in ensuring the consistency and accuracy of the images. Without this information, it is impossible to ascertain whether the images accurately represent the Proposed Wind Farm within the landscape.
- **Inconsistent Viewpoints:** The existing view and the proposed view are shown from different angles and heights, which undermines the comparability of the two images for visual impact

assessment purposes. This is clearly evident in Figure 4-1 below, where the existing view focuses more closely on the agricultural fields, while the proposed view adopts a wider angle, incorporating the road and presenting a more zoomed-out, panoramic perspective.

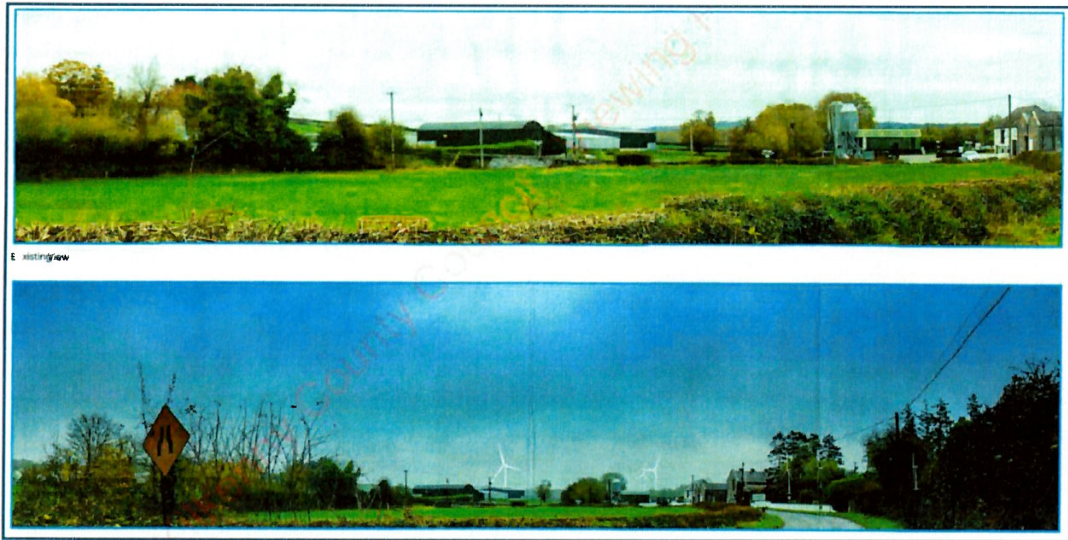


Figure 4-1 Alternative VPI (extracted from third-party submissions) - Lack of Accuracy on Field of View

Warping and Distortion of Panoramic Imagery

The panoramic photos are evidently severely warped and distorted, which undermine their reliability for a visual impact assessment. A notable example is seen in Figure 4-2 where the roof of the house in the foreground is misaligned with the horizon, and other standard landscape features, showing clear distortion. This distortion is caused by poor surveying, inadequate image capture techniques, and inaccurate photo stitching.

These issues result in unreliable visual representations, with severe inaccuracies in the placement of wirelines (further discussed below) and other visual elements. Such distortions prevent a meaningful comparison between the existing and proposed views, compromising the integrity of the visual impact assessment and rendering the photomontages unfit for their intended purpose.



Figure 4-2 Alternative VP3 (extracted from third-party submissions) - Warping and Imagery Distortion

Incorrect Wireline Views

The vertical positioning of turbines within any photomontage relies on accurate alignment and placement of the wireline (i.e. topographic model of the development, including turbines) within the surrounding landscape, with respect to the horizon. The third-party produced photomontages fail to meet this standard,

as demonstrated in the extracts below. In these examples, the wireline view of the turbines produced by the independent contractor, which was taken and overlain onto the third-party produced photomontage image, is positioned lower than the landform that is depicted within the photomontage itself. This misalignment results in clear distortion, where the turbines are improperly scaled and the landform is inaccurately represented; moreover, it results in the turbine elevations not corresponding to what is shown in the photomontage. This is particularly evident in Alternative VP3 (Figure 4-3 below), where, based on the wireline, the turbine should be positioned significantly lower than shown in the photomontage. The overall results are an exaggerated and incorrect portrayal of the visual impact, undermining the credibility of any assessment associated with the third-party submission.



Figure 4-3 Third Party Alternative Viewpoint 3 - Proposed View

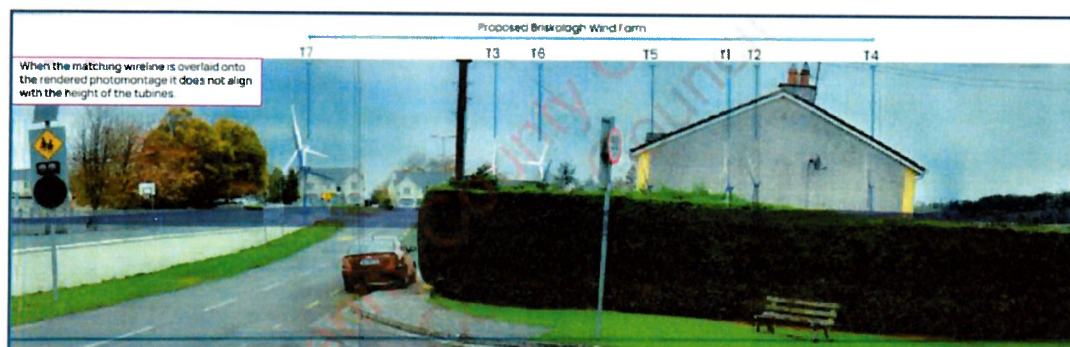


Figure 4-4 Third Party Alternative Viewpoint 3 - Proposed View overlain with the Third-Party Wireline

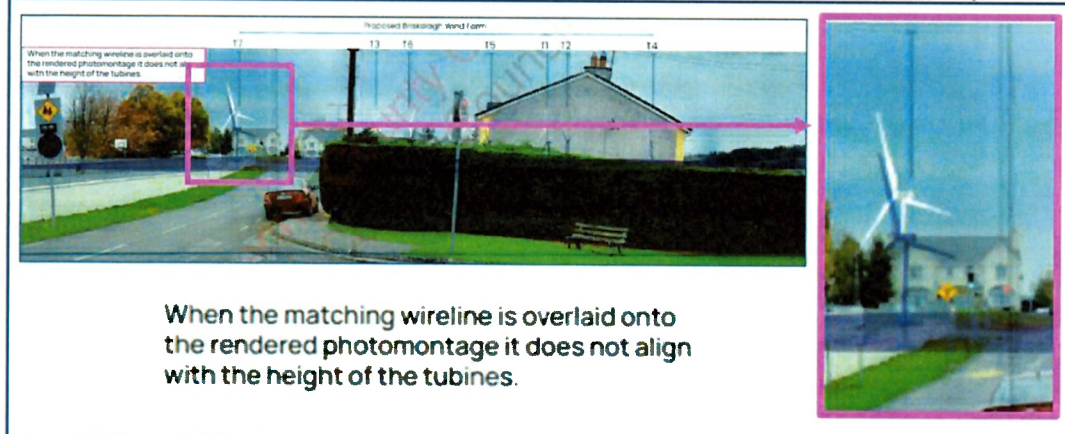


Figure 4-5 Third Party Alternative Viewpoint 3, turbine T7 wireline inconsistency

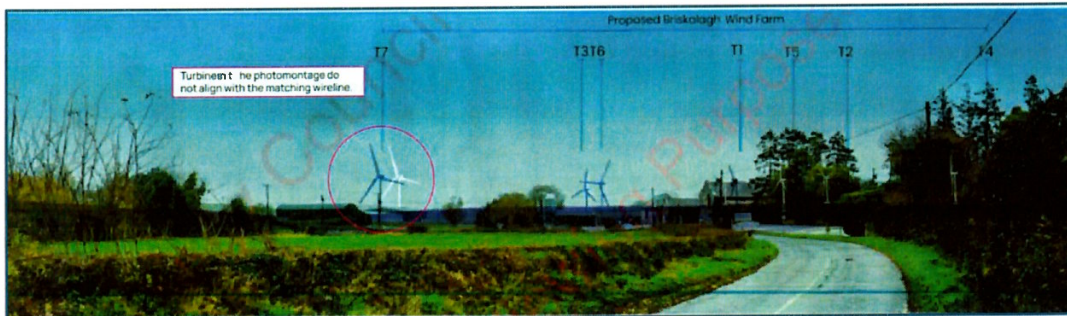


Figure 4-6 Alternative VPI (extracted from third-party submissions) - Wireline Inconsistency

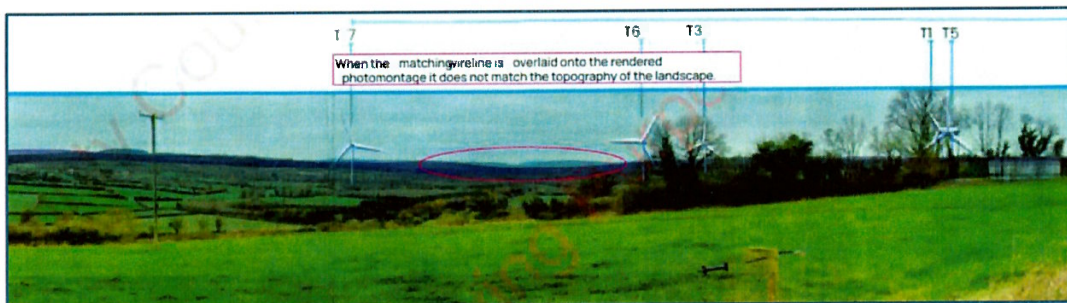


Figure 4-7 Alternative VP7 (extracted from third-party submissions) - Wireline Inconsistency

Lens Specification – Not Specified

The lens used for capturing the third-party photomontage imagery was not specified. Industry standards, such as those outlined by the LI TGN 06/19 and other relevant bodies, recommend the use of specific lens types (e.g., a 50mm fixed focal length lens, as discussed in previous section) to ensure consistency and accuracy across all visual representations. Failure to state the lens type used further undermines the credibility of the images.

Absence of Reference to any Guidance Documents

There was no methodology or reference to any guidance used for the production of the Third-Party Photomontages. Standards within guidance are in place to ensure that photomontages are produced in a methodologically sound manner and ensure consistency within the industry. The lack of adherence to any specific standards or guidance diminishes the reliability of the submitted photomontages as a tool for assessing the visual impact of the Proposed Project.

4.11.6 Impact Assessment of Photomontage Viewpoints and Cumulative Visual Effects

This section responds to specific commentary made by Third Party Submissions in relation to specific photomontage viewpoints presented in the Volume 2 Photomontage Booklet of the EIAR and the cumulative visual impact assessments arising in these viewpoints. Appendix 13-3 is referenced throughout this section. Appendix 13-3 of the LVIA Chapter includes a comprehensive detailed assessment of visual effects arising from each viewpoint, including a description of cumulative and in combination visual interactions of the proposed turbines with other existing, permitted and proposed wind energy developments.

Photomontage Viewpoint 8 - Volume 2 Photomontage Booklet of the EIAR

A third-party submission referenced Viewpoint VP8 as an example, and noted that the foreground is affected by overgrowth and that the conditions were too cloudy to provide a clear representation of other cumulative developments.

A small branch in the foreground of the photomontage is visible. However, as reported in the visual impact assessment of viewpoint 8 in Appendix 13-3, all seven proposed turbines are clearly visible from this viewpoint. The blades and hubs of all turbines extend above the landform and vegetation, with T1, T2, and T4 being the most prominent and fully visible. Furthermore, the wireline view clearly shows the full extent of the proposed and cumulative turbines within the view, and is not ignored for the impact assessment in Appendix 13-3 for viewpoint 8. To provide a clearer representation of the cumulative turbines, Chapter 13 of the EIAR was also accompanied by Volume 3: Blue-Sky Photomontage Booklet, which includes a rendered version of the same viewpoint 8 with a clear blue-sky background. This provides a worst-case scenario, where the cumulative turbines are distinctly visible. The colour of the sky, or minor obstructions in the foreground of the photomontage are not material to the visual impact assessment from viewpoint 8 in Appendix 13-3, including cumulative assessments.

It is acknowledged that cumulative visual effects arise from Viewpoint 8, located at an elevated vantage point, to the east of the site, where greatest cumulative visual effects arise. The proposed turbines add to the number and density of turbines visible in this part of the landscape from this specific viewpoint. The proposed turbines are visually separated from other wind energy developments due to the different set back distances from the view and are viewed at a lower elevation within the landscape. The proposed turbines do not extend the horizontal extent of wind energy developments within this field of view. They are horizontally contained within the view, between the other existing, permitted and proposed turbines in the Slieveardagh Hills. The expansive nature of the landscape allows it to effectively absorb the scale of the Proposed Wind Farm, as well as the other developments. No residual Significant effects were deemed to arise at this viewpoint.

Photomontage Viewpoint 9 - Volume 2 Photomontage Booklet of the EIAR

Photomontage Viewpoint 9 represented a protected view. The visual effects from this protected view is comprehensively assessed in Section 13.7.3.7 of the LVIA Chapter. This section of the LVIA Chapter discusses how the proposed turbines do not impact the key scenic sensitivities of the protected view, which are directed to the east, in the opposite direction from Viewpoint 9. The protected view (orientated in the opposite direction than the proposed turbines) remains unobstructed by the proposed turbines, maintaining the integrity of the protected view away from the proposed turbines.

A third-party submission notes that there will be more cumulative turbines visible from this viewpoint, than is shown in the photomontage. The assessment in Appendix 13-3 acknowledges that the proposed Kyleballyoughter and Ballybay turbines will be visible from this viewpoint, although they are viewed within a different part of the landscape and are accounted for in the overall visual impact assessment.

A third-party submission suggests that visual stacking may occur from Viewpoint 9. While there will be some degree of visual overlap between the proposed turbines and the cumulative turbines in the background, visual stacking does not occur with the Proposed Wind Farm.

Photomontage Viewpoint 10 - Volume 2 Photomontage Booklet of the EIAR

Cumulative visual impacts in the Slieveardagh Hills was also mentioned in third-party submissions, as experienced from Viewpoint 10, which represents the N10 National Road to the South of the site and Kilkenny City.

The proposed turbines will contribute to the density of turbines visible in the Slieveardagh Hills from this location. All turbines appear as relatively small features in the background. The rolling topography and multiple ridgelines in the area create a vast open space that can absorb the scale of the Proposed Wind Farm without significant visual impact. Moreover, many of the turbines will be partially visually screened, and none of the proposed turbines are located in the direct line of sight for motorists using the road.

Photomontage Viewpoint 13 - Volume 2 Photomontage Booklet of the EIAR

A third-party submission suggests that the viewpoint for this photomontage was selected from behind a tree, possibly to obscure the visual impacts.

As detailed in Appendix 13-3, the viewpoint is from the L1009 local road in Kilmanagh, overlooking a gap between buildings located adjacent to the road. The photomontage was taken from this location as it was one of the only locations on this road as it passes through Kilmanagh where there is any potential for open visibility in the direction of the proposed turbines. The impact assessments in the LVIA Chapter reports that views are typically more restricted in other areas of the settlement of Kilmanagh, due to visual screening from landform, boundary vegetation and the built environment. The settlement of Kilmanagh is comprehensively assessed in Chapter 13 and is further represented by multiple other viewpoints, and also aided by the route screening analysis, contained in Section 13.3.3 of the LVIA Chapter.

Photomontage Viewpoint 15 - Volume 2 Photomontage Booklet of the EIAR

A third-party submission suggests that the scale of the proposed turbines appear disproportionate to the existing Foyle turbines.

While the proposed turbines are of larger tip height, they are sited at a lower elevation compared to the Foyle turbines, and surrounding landforms. The relative height of the proposed turbines, when compared to the terrain in the background, ensures that they do not exceed the highest point on the skyline, or compared with the highest points of other cumulative developments. From this viewpoint, the landscape has sufficient capacity to absorb both the proposed turbines and the other turbines of the Slieveardagh Hills.

4.1.1.7 LVIA Conclusions

From an LVIA perspective, the Proposed Project is compliant with best practice siting and design guidance for wind energy developments in Ireland, namely, the Guidelines. This includes mandatory set-back distances, and siting in a low-sensitivity landscape and optimisation relative to Hilly and Flat Farmland Landscape Types. Ultimately, any assertion that the LVIA Chapter does not comprise a suitable and sufficient level of information and detail for the planning authority to make an informed decision is unreasonable. The LVIA Chapter reports that the greatest landscape and visual effects are localised to receptors in the immediate vicinity of the Proposed Wind Farm with acceptable levels of impact on local residential visual amenity, including cumulative effects with other wind energy developments. The Proposed Project remains in full alignment with local landscape and visual planning policies and designations, and design standards, ensuring a balanced approach between acceptable levels of landscape and visual effects and the urgent need to facilitate renewable wind energy development in Ireland.

4.1.2 Impact on Water and Flood Risk

A number of third-party submissions make observations in relation to the potential effects of the Proposed Project on water quality (surface and groundwater) water supply schemes and flood risk, the adequacy of mitigation measures and the naming of local watercourses within Chapter 9 of the EIAR.

Chapter 9 of the EIAR (Hydrology & Hydrogeology) robustly and comprehensively assesses the likely significant effects that the Proposed Project may have on hydrology and hydrogeology and sets out the mitigation measures proposed to avoid, reduce or offset any potential significant effects that are identified.

Further clarity is provided on water-related observations within a technical note prepared by HES, included as **Appendix 2** of this document.

4.1.3

Human Health

Some third-part submissions include observations in relation to the potential for negative health effects associated with the Proposed Project due to the scale of the turbines proposed and proximity to local residents and local communities including Kilmanagh and Tullaroan as well as the wide range of organisations, schools clubs and other associated activities. Concern was raised regarding potential for noise pollution, infrasound, health, and shadow flicker and impacts on mental health.

As discussed in Section 5.6.2 of the EIAR, while there are anecdotal reports of negative health effects on people who live very close to wind turbines, peer-reviewed research has not supported these statements. There is currently no published credible scientific evidence to positively link wind turbines with adverse health effects.

Extensive research has been carried out in the US, Canada, UK, Australia, and by the World Health Organisation (2018) and the HSE (2017). All studies conclude that that exposure to wind farms does not trigger adverse health effects.

The Health Service Executive (HSE) 'Position Paper on Wind Turbines and Public Health' was published in February 2017 to address the rise in wind farm development and concerns regarding potential effects on public health. The paper discusses previous observations and case studies which describe a broad range of health effects that are associated with wind turbine noise, shadow flicker and electromagnetic radiation.

A number of comprehensive reviews conducted in recent years to examine whether these health effects are proven has highlighted the lack of published and high-quality scientific evidence to support adverse effects of wind turbines on health.

The HSE position paper determines that current scientific evidence on adverse effects of wind farms on health is weak or absent. Further research and investigative processes are required at a larger scale in order to be more informative for identifying potential health effects of exposure to wind turbine effects. They advise developers on making use of the Guidelines, as a means of setting noise limits and set back distances from the nearest dwellings.

It should be noted that the Proposed Wind Farm complies with the Draft Revised Wind Energy Guidelines 2019 (referred to as the draft Guidelines) of a 4x tip height set back from the nearest non-involved Sensitive Property in order to protect for visual amenity. It should also be noted that in relation to noise and shadow flicker, turbine technology allows for the turbines to be controlled to achieve the necessary guideline limits, including any revised guidance requirements.

Furthermore, specific residential amenity issues relating to wind turbine noise, shadow flicker and electromagnetic radiation have been comprehensively dealt with within Chapter 11, Chapter 5 and Chapter 15 of the EIAR respectively.

Concern has also been raised for depopulation in the area due to the Proposed Project. There has been no credible evidence provided that has shown a positive correlation between Wind Farms and rural depopulation. No peer reviewed studies have proved a link between wind farm sites and depopulation. The predicted effects set out in sections 5.10.2.1.1 and 5.10.3.1.1, outline that both the construction and

operational phases of the Proposed Project will have no impact on the population of the area with regard to changes to trends, population density, household size or age structure.

None of the submissions received in relation to this topic area have set out any clear and credible evidence which in any way alters the findings of the EIAR in this regard. As such, it is concluded that the information contained within the EIAR remains valid and robust.

Please refer to Chapter 5 of the EIAR for further details.

4.1.4

Noise

A number of third-party submissions made observations in relation to noise effects due to the construction and operation of the Proposed Project.

Chapter 12 of the EIAR describes the comprehensive assessment undertaken by AWN Consulting of the potential noise and vibration impacts associated with the Proposed Project and its component parts.

A noise and vibration impact assessment has been prepared for the construction, operational, and decommissioning phases of the Proposed Project on the nearest Noise Sensitive Locations (NSLs). To inform this assessment, baseline noise levels have been surveyed at 6 no. representative NSLs surrounding the Site. Noise predictions to the nearest NSLs have been prepared for all key elements of the Proposed Project with the potential for noise and vibration impacts and effects

Responses to noise related observations are included in **Appendix 3** of this document.

4.1.5

Cumulative effect

Concerns have been raised with regard to the cumulative effects of the multiple wind turbines already operating in the locality which are considered to have not been appropriately assessed with regard to noise, visual impact and environmental effects on human health.

To gather a comprehensive view of cumulative impacts on these environmental considerations and to inform the EIA process being undertaken by the consenting authority, each relevant chapter within the EIAR includes a cumulative impact assessment where appropriate. The potential for cumulative impacts arising from other plans and/or projects has therefore been fully considered within the EIAR.

Assessment material for this cumulative impact assessment was compiled on the relevant plans and/or projects within the various cumulative impact study areas of each discipline for the Proposed Project. The material was gathered through a search of relevant online Planning Registers, reviews of relevant EIAR (or historical EIS) documents, Planning Registers and EIA Portal, planning application details and planning drawings, and served to identify past and future plans and/or projects, their activities and their environmental impacts.

Five potential wind farm developments are referenced in the cumulative long list that are currently at pre-application stage. Three of these wind farms have sufficient information available (approximate turbine locations and tip height) in the public realm to allow them to be considered in the cumulative impact assessments for the topics where the developments fall within the relevant study areas. Details for two of these projects, Killoshulan and Fassa Wind Farms, are not yet available in the public realm and, therefore, they have been excluded from consideration in the cumulative impact assessment for each topic.

It must be clarified that all EIAR chapters have assessed the cumulative effects that have the potential to arise from all wind farms within the cumulative study areas. These include cumulative noise and vibration impacts, cumulative visual impacts, cumulative impacts on biodiversity (including birds), impacts on hydrology and geology, et cetera.

Overall, the Proposed Project has been designed to avoid and mitigate impacts on the environment and a suite of mitigation measures is set out within the EIAR. The mitigation measures set out in this EIAR will ensure that significant cumulative effects do not arise during the construction, operational or decommissioning phases of the Proposed Project. Additional detail in relation to the potential significant cumulative effects arising and, where appropriate, the specific suite of relevant mitigation measures proposed are set out within each of the relevant chapters of this EIAR.

Please refer to Chapter 2 of the EIAR for further details.

4.1.6

Consideration of alternatives and Proposed Project design

An observation has been raised that alternative site locations have not been considered as part of the EIA process. As clearly stated in Chapter 3, Section 3.2.3, of the EIAR,

“The Site has been identified as having potential for a wind energy development as a result of a nationwide search of suitable lands. The site selection process has been constraints and facilitators led. Facilitators are factors that give an advantage to a proposed project, while constraints are restrictions that inform the location and design of a project by highlighting sensitivities. A nationwide constraints analysis was undertaken and included avoidance of environmental designations (Natura 2000 sites), review of national, regional and local policies and objectives, suitable wind speeds, adequate setbacks from sensitive receptors, proximity to national grid nodes, avoidance of direct impacts on known cultural heritage assets, access and constructability.”

The process of identifying a suitable wind farm site is influenced by a number of factors, while wind speeds, the area of suitable or available land, proximity to a grid connection point and planning policy are all very important, a wind farm project must be commercially viable/competitive, as otherwise it will never attract the necessary project finance required to build it.

The Site has been identified as having potential for a wind energy development as a result of a nationwide search of suitable lands. The site selection process has been constraints and facilitators led. Facilitators are factors that give an advantage to a proposed project, while constraints are restrictions that inform the location and design of a project by highlighting sensitivities.

Site selection for the development of a wind farm must be suitable for consideration under a number of criteria, such as:

- **Environmental Sensitivities:** Located outside of EU Natura 2000 sites; locations outside of National designations; located outside of Article 17 Annex I Habitats;
- **Grid Connection:** Access to the national electricity grid possible within a viable distance;
- **Sensitive Receptors:** Capable of complying with required setbacks from sensitive receptors;
- **Site Scale:** Sufficient area of unconstrained land that could potentially accommodate a wind farm development and turbine spacing requirements.

From the review of the criteria set out above, the Site is considered a suitable location for the provision of a renewable energy development of the scale proposed. The Proposed Wind Farm is located on agricultural land which allows the site to take advantage of the existing access roads (some of which will be upgraded) and highlights the suitability of the Proposed Wind Farm as it can make sustainable use of established items of infrastructure.

The Proposed Wind Farm site is not located within or adjacent to EU or National protected areas, nor does it contain any EU designated Annex I Habitat. The Proposed Wind Farm site is located primarily on agri-pastoral lands, of low ecological value, within a rural setting. Required setbacks from sensitive receptors, as set out above are achievable. The Proposed Grid Connection underground cabling route crosses the River Nore SPA, and the River Barrow and River Nore SAC in Ballyragget. At this location, the proposed underground cabling route will cross the river via horizontal direction drilling, with the drilling commencing within a field of improved agricultural grassland located within the SAC, and finishing in agricultural land, outside of the SAC.

An alternative to the above approach would be to propose and develop a project at a site that did not fit the criteria of a suitable site and would therefore have a much greater potential for significant, adverse environmental effects.

In conclusion, the site selection process for the Proposed Wind Farm was guided by a nationwide analysis of suitable lands, balancing key facilitators and constraints. The chosen site meets critical criteria, including environmental sensitivities, grid connectivity, adequate setbacks from sensitive receptors, and sufficient land availability. The site is located on low ecological value agricultural land and benefits from existing infrastructure while avoiding EU and National protected areas. The proposed underground grid connection has been designed to minimise environmental impact through horizontal directional drilling. Overall, this location represents a sustainable and viable choice for renewable energy development.

Please refer to Chapter 3 of the EIAR for further details.

411.77

Construction Traffic

Observations have been made in the third-party submissions relating to the increased levels of traffic associated with the construction of the Proposed Project, citing an unacceptably high volume of traffic through the settlements of Tullaroan and Kilmanagh.

Third-party submissions include observations relating to concerns over the potential significant disruptions to local road users due to the construction of the Proposed Grid Connection underground cabling route. The submissions claim that the impact of these disruptions which will cause additional travel expenses, along with the inconvenience and potential delays, has not been sufficiently addressed.

Other traffic-related observations were made suggesting that the construction traffic would compromise the safety of road users (travelling in vehicles or on foot) in Kilmanagh and Tullaroan, traveling to and from the villages, the schools, GAA grounds and other recreational facilities.

The proposed site entrance in Kilmanagh and its proximity to the local national school was also raised as a concern.

Volumes of Traffic

During the construction of the proposed wind farm, traffic impacts will vary depending on the phase of work. Assuming a 12 month construction period, for 222 days, when general construction works will take place at the same time as the construction of the Proposed Grid Connection, the generated general construction traffic will avoid the Turbine Delivery Route through the settlement of Kilmanagh, with potential routes via Kilkenny identified for general construction traffic (Section 15.1.2.3 of this EIAR). During these days it is forecast that the increase in traffic volumes will range from +3.5% to +13.6% on the regional and local road network around the Proposed Wind Farm site. It is forecast that this will have a temporary, slight negative effect for existing traffic

For 7 days of the 12 months, when the standard HGV delivery of smaller turbine components (not abnormally sized loads) are made to the Proposed Wind Farm site, it is forecast that the increase in traffic

volumes will range from +2.4% to +9.4% on the regional and local road network around the Proposed Wind Farm site. It is forecast that this will have a temporary slight negative effect for existing traffic.

For 7 days when concrete is delivered to the site for the construction of the turbine foundations via the temporary junction on the L1009 west of Kilmanagh, it is forecast that the increase in traffic volumes will range from +44.2% to +64.5% on the regional and local road network around the Proposed Wind Farm site. It is forecast that this will have a temporary moderate negative effect for existing traffic on the delivery route and at the temporary access junction on the L-1009.

On the 19 nights that the abnormal loads carrying the large turbine components travel to the Proposed Wind Farm site, it is forecast that the increase in traffic volumes will range from +3% to +11.6% on the regional and local road network around the Proposed Wind Farm site. Travelling north toward the site it is forecast that there will be a 11.6% increase on the R695 approaching Kilmanagh (Link 4) and an 8.0% increase on the L-1009 just west of Kilmanagh (Link 5). It is forecast that this will have a temporary moderate negative effect for existing traffic. Again, it should be noted that abnormal loads will be delivered at night, under Garda escort, in order to minimise disruption to general traffic.

As shown above, during the majority of the construction phase, the effects on existing traffic on the road network surrounding the Proposed Wind Farm site will be slight. This will increase to a moderate effect on just 26 days (19 nights) or 9.8% of the construction phase.

It is acknowledged in Chapter 15 that there will be a temporary, slight to moderate negative effect on local traffic during the construction phase of the Proposed Wind Farm due to the increase in traffic volumes utilising the local road network around the Site. Following the implementation of all the management measures outlined in the Traffic Management Plan (Appendix 15-2 of the EIAR), this level of effect over the short-term duration of the construction phase is deemed acceptable.

Proposed Grid Connection Traffic Disruption

Third-party submissions include observations relating to concerns over the potential significant disruptions to local road users due to the construction of the Proposed Grid Connection underground cabling route and the impact associated with road closures, delays and diversion routes of these additional travel expenses, along with the inconvenience and potential delays, has not been sufficiently addressed

In response, it is reiterated that the effects of the construction of the Proposed Grid Connection underground cabling route on the public road network (and the road users) has been assessed in Chapter 15, Section 15.1.7, of the EIAR. Short term diversions (the longest proposed diversion being approximately 13.1km) are required for local traffic, as discussed in Section 15.1.7, although the traffic volumes that will be impacted on the local road network are low due to low background traffic volumes. The construction of the underground cabling route will necessitate a rolling works area. Therefore, by its nature the effects of these additional trips and diversions on the network will be transient and any potential negative effects, including inconveniences or perceived additional expenses, will be temporary and will be slight.

Traffic Management

A Traffic Management Plan (TMP), 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.

The TMP includes measures related to ensuring the safety of all road users during the construction phase of the Proposed Project. These measures include:

- Installation of appropriate traffic safety signage in accordance with “Traffic Signs Manual, Section 8 – Temporary Traffic Measures and Signs for Road Works” (DoT now DoTT&S) and “Guidance for the Control and Management of Traffic at Roadworks” (DoTT&S).
- Locals in the area will be informed of any upcoming traffic related matters e.g. delivery of turbine components at night, via letter drops and posters in public places.
- Construction staff (flagman) will be present at key junctions during peak delivery times.
- Liaison with the relevant local authorities including the roads sections of local authorities that the delivery routes traverse, and An Garda Síochána, during the delivery phase of the large turbine vehicles, when an escort for all convoys will be required.
- Diversion routes during the construction of the underground cabling route, as per Section 15.1.7 of the EIAR.

Proposed Wind Farm Site Entrances

A general construction entrance will be constructed on the L-5024 at the north of the Site. This entrance will be used as the main entrance for construction traffic throughout the construction phase. Appropriate sightlines will be established at the proposed Site entrance for the safe egress of traffic during the construction phase. On completion of the construction phase, this Site entrance will be reduced in size and gated for security, and will be used as an operational Site entrance.

A temporary access road will be constructed off the L-1009 in the south of the Site. This is the access point located near Kilmanagh (and the local national school) as referenced in the third-party submissions. This will facilitate the delivery of abnormal loads and concrete deliveries for the turbine foundations only. Appropriate sightlines will be established to the east and west of the temporary access road for the safe egress of traffic. Following the turbine commissioning, this entrance will be reinstated. This temporary access road will not be used for general construction traffic, or HGV deliveries (except concrete deliveries). This temporary access will only be used for 7 days and 19 nights over the course of the construction phase of the Proposed Project. On the seven days that concrete deliveries will be scheduled to take place, advance consultation will be carried out with the local community to ensure minimal disruption during times of peak local traffic volume. The restricted use of the turbine delivery access to the south of the Site was provisioned in direct response to feedback received from the community during discussions with the project CLO.

In conclusion, while construction traffic will result in temporary disruptions, the overall impact on the local road network has been carefully assessed and is expected to be slight to moderate for a limited duration. Mitigation measures outlined in the Traffic Management Plan, including scheduled night-time deliveries, clear signage, community notifications, and coordination with local authorities, will help minimise inconvenience and ensure road safety. Additionally, the restricted use of the southern site entrance was implemented in direct response to community concerns, demonstrating a commitment to addressing local feedback and reducing disruption where possible.

Please refer to Chapter 15 of the EIAR for further details.

4.18 Biodiversity

4.18.1 Botanical Data

4.18.1.1 Botanical Data, Habitat Loss & Associated Mitigation

A submission was made in relation to the botanical data within the ecology reports submitted with the planning application.

MKO is satisfied that all habitats within the Site were accurately identified, that a thorough and robust assessment of potential impacts there-on was undertaken, and that the conclusions of the EIAR and the NIS submitted with the planning application remain valid. The vast majority of the Proposed Wind Farm infrastructure will be located within areas of Improved agricultural grassland (GA1) and relatively species-poor Wet grassland (GS4), with a single turbine being located in Conifer plantation (WD4). None of the grassland habitats correspond to habitats listed under Annex I of the EU Habitats Directive.

In relation to the mention of the FPO (Flora Protection Order) species orange foxtail (*Alopecurus aequalis*), this was a typographical error and the actual species recorded was marsh foxtail (*Alopecurus geniculatus*). This does not alter the conclusions of the assessment undertaken which remain entirely valid. There will be no loss of protected habitats or protected plant species as a result of the Proposed Project.

A number of concerns were raised relating to habitat loss, in particular hedgerow and treeline habitat, the level of detail provided regarding the proposed replanting measures to mitigate any losses, and the success of any planting measures. The Proposed Project will result in the loss of Hedgerow (WL1), Treeline (WL2) and Scrub (WS1) habitats as assessed in Section 6.7.2.1.2 of the EIAR. Mitigation has been prescribed in Section 6.7.2.1.2 of the EIAR in the form of enhancement of approximately 3640m of currently heavily managed hedgerow by planting of additional native species, including a number of native tree species. In addition to this it is proposed to plant an additional 270m of new hedgerow within the north and south of the Proposed Wind Farm site. It is also proposed to create a new native riparian woodland buffer zone adjacent to the Tullaroan stream within the Proposed Wind Farm site by planting of approximately 1.7ha of riparian woodland on both banks. The details of the proposed planting are contained within the Biodiversity Management and Enhancement Plan (BMEP) included as Appendix 6-4 of the EIAR. The locations of the proposed hedgerow enhancement planting, planting of new native hedgerow and location of the proposed riparian buffer is shown in Figure 2.1 of the BMEP.

To address concerns raised relating to the monitoring of the success of the additional planting, this will be monitored by a qualified ecologist as outlined in Sections 2.2 and 3.2 of the BMEP. During this period any requirement for replacement planting will be assessed. Monitoring will be an ongoing process with further recommendations for ongoing or remedial management following the initial monitoring period to be specified within an Environmental and Ecological Report. As stated in Section 2.2 of the BMEP, '*At the end of the 3-year monitoring plan as outlined above, the Project Ecologist will assess the need for and frequency of further monitoring of the woodland replanting area in agreement with the wind farm operator*'. This measure will also apply to hedgerow habitat.

4.1.8.2 Black poplar

A submission was made relating to the recording of black poplar and the requirement for further investigation. To clarify, this species was recorded outside of the Proposed Project infrastructure footprint and will not be lost to the Proposed Project and therefore no further surveys are required for this species.

4.1.8.3 Aquatic Environment

4.1.8.3.1 Alterations to Riverbank

A submission was made in relation to the validity of MKO's electrofishing surveys due to alterations to the river banks and river bed of the Kilmanagh/Tullaroan River that were undertaken prior to MKO's electrofishing surveys in 2023. The submission stated that fish could have been interfered with by the alterations and would have been more abundant before. Submissions also raise concerns in relation to the assessment of potential effects on water quality and aquatic receptors, stating that '*Potential impacts on water quality and effects on SAC and annexed species such as otter, salmon and lamprey arising from construction have not been adequately addressed*'.

In response to the concerns relating to the validity of electrofishing results, MKO is satisfied that an accurate description of the baseline aquatic environment at the time of the surveys undertaken was provided within the EIAR and NIS submitted with the planning application. As per CIEEM (2018), ecological baseline conditions are those which exist in the absence of proposed activities. The alterations to the river mentioned in the submission were acknowledged within the Aquatic Baseline Report prepared by MKO which was included as Appendix 6-3 of the EIAR.

As outlined in the Aquatic Baseline Report, all Fisheries Habitat Appraisals and Electrofishing surveys were undertaken in line with best practice guidance, optimal survey timing and in consultation with IFI. Surveys were undertaken by fully qualified and experienced ecologists.

4.1.8.4 Water Quality Impacts

A submission was also made relating to the adequacy of the assessment of potential effects on water quality and annexed species such as otter, salmon and lamprey arising from construction. In relation to the assessment of potential effects on water and effects on SAC and annexed species, both the NIS and Chapter 6 of the EIAR submitted with the planning application provide a thorough assessment of the potential for effects on water quality and aquatic receptors, including the River Barrow and River Nore SAC and the River Nore SPA and their Qualifying Interest species (refer to Section 9.5.2, Section 9.5.3, Section 9.5.4, Section 6.7.2.1.1, Section 6.7.3.1.1 and Section 6.7.4 of the EIAR and Section 6.2.1 of the NIS). No instream works will be required as part of the Proposed Project and therefore there will be no direct loss of supporting habitat for aquatic species. Mitigation measures for the protection of the aquatic environment, including aquatic species, are detailed in Sections 6.7.2.1.1 and 6.7.3.1.1 of the EIAR and in Section 6.2.1.2 of the NIS and will ensure that there is no potential for significant effects on the aquatic environment or aquatic species due to deterioration of water quality.

The data collected during the surveys allowed for a thorough assessment of all potential impacts on the aquatic environment and the conclusions of both the EIAR and the NIS in this regard are entirely valid.

4.1.8.5 Felling along the Proposed Grid Connection

A submission was made stating that there is no mention of trees to be felled as part of the proposed grid route and substation where many mature oak trees older than 50-100 years stand.

It should be noted that no trees are proposed for felling as part of the Proposed Grid Connection underground cabling route or to facilitate the proposed substation.

4.1.8.6 Bats

A submission was made stating that *"There is no guarantee that bat species will survive the construction activities on site. The destruction of habitats and changing local landscape will have a detrimental effect on the currently occurring bat individuals."*

As outlined in Appendix 6-2 Bat Report of the EIAR, structures with identified roosts or potential roost features (PRFs) have been avoided by proposed infrastructure and will be retained. Therefore, no loss of roosting habitat or potential for bat mortality as a result of construction activities exists.

It is acknowledged in the assessments that while the majority of trees within the site will be retained, some habitat loss will be necessary to facilitate the Proposed Wind Farm footprint and to establish the necessary separation between the proposed turbine blades and nearby vegetation (50m Bat buffer).

Trees/tree groups associated with the proposed bat buffers are assessed in Appendix 6-2 Bat Report Sections 4.3.2.1.5 and 5.3. No roosts or evidence of roosting bats were identified in trees present within the bat buffers during the surveys. However, a number of trees presented Low to Moderate roosting

potential. Therefore, on a precautionary basis and as outlined in Section 6.1.4, a pre-construction bat survey is proposed on any trees proposed for removal which were identified as having potential for roosting bats. The requirement for a pre-construction survey does not represent a lacuna in the survey assessment but is fully in line with industry best practice. The function of this survey will be to assess any changes in baseline environment since the time of undertaking the surveys in 2023. Additionally, a bat box monitoring scheme is proposed in Appendix 6-4 BMEP of the EIAR to provide additional roosting opportunities throughout the site.

No roosts or evidence of roosting bats were identified at any watercourse crossings associated with the Proposed Grid Connection underground cabling route during the surveys undertaken. It is acknowledged that while some crossings presented some potential for roosting bats, the works will be largely confined to the existing road network, no works are proposed for the underside of any bridges and no trees are proposed for removal along the route. Therefore, no potential for bat mortality as a result of the construction of the Proposed Grid Connection underground cabling route exists.

MKO considers the proposed mitigation and monitoring plan outlined in Sections 6.1 and 6.2 of Appendix 6-2 of the EIAR to be appropriate and in line with best practice guidance to ensure no significant impacts on local bat populations occurs during the construction phase. No significant effects in relation to loss of roosting habitat or bat mortality are anticipated as a result of the construction phase of the proposed development.

4.1.8.7 Marsh Fritillary

A submission was made in relation to the potential presence of marsh fritillary within the site stating that the applicant has not proven that the plant or butterfly colony do not exist in the development area.

As outlined in Section 6.4.3.3.3. of the EIAR, 'a search for Marsh Fritillary (*Euphydryas aurinia*) records was carried out on the NBDC biodiversity map online viewer on the 05.07.2024. No records of this species were found within hectads S35 and S45 or adjacent to the Site boundary'.

During the multi-disciplinary walkover surveys of the site undertaken throughout 2023 and 2024, a thorough search for suitable supporting habitat for marsh fritillary was undertaken. No suitable habitat for marsh fritillary was recorded within the Proposed Wind Farm site. As no suitable supporting habitat for the species was recorded, dedicated marsh fritillary larval web surveys were not undertaken.

Given the absence of suitable habitat for this species at the Site, no potential for impacts on this species was identified. As such the conclusions of the EIAR remain valid.

4.1.8.8 Compliance with CJEU Case 258/11

A submission noted that 'the conclusions in the NIS at pg 109 that the development will not have an impact on European Sites. There are, however, multiple references to spill kits, silt fencing, etc. in the NIS. The development therefore appears to have the potential to significantly impact on watercourses if impacts are not mitigated. Notwithstanding the mitigation outlined in the application, our Client remains highly concerned that the development has the potential to affect water quality and fish stocks downstream and requests that the planning authority thoroughly address these potential impacts in its decision, in particular having regard to Case CJEU 258/11 where it was stated that:

"...the assessment carried out under... the Habitats Directive... cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works.... Article 9(6) Must be interpreted as meaning that a plan or project not directly connected with or necessary to the management of a site will adversely affect the integrity of that site if it is liable to prevent the lasting preservation of the constitutive characteristics of the site that

are connect to the presence of a priority natural habitat.... The precautionary principle should be applied for the purposes of that appraisal..."

The submission claims that a grant of permission would not comply with CJEU Case 258/11. In response to the above submission, the precautionary principal was clearly applied by MKO when preparing the Appropriate Assessment Screening Report (AASR) and Natura Impact Statement (NIS).

A Stage 1 Article 6(3) Appropriate Assessment Screening was prepared by MKO which concluded as follows:

'It cannot be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the Proposed Project, would be likely to have a significant effect on the following European Sites:

- River Barrow and River Nore SAC
- River Nore SPA

As a result, an Appropriate Assessment (AA) of the Proposed Project is required. Information to enable the competent authority to carry out an AA of the Proposed Project is presented in Sections 5 – 9 of this report'.

As potential for significant effects on two European Sites could not be ruled out, MKO therefore went on to complete a Stage 2 NIS to examine the potential for adverse effects on the integrity of these European Sites in light of their conservation objectives. In relation to water quality deterioration, the NIS identified a potential pathway for adverse effects on both European Sites.

The following is an extract from Section 6.2.1 of the NIS.

River Barrow and River Nore SAC

A potential for indirect effect on the following QI species/habitats of River Barrow and River Nore SAC in the form of water quality deterioration and habitat degradation via surface and ground water pathways during construction, operation and decommissioning of the Proposed Project.

Species:

- Nore freshwater pearl mussel (*Margaritifera durrovensis*)
- Freshwater Pearl Mussel (*Margaritifera margaritifera*)
- White-clawed Crayfish (*Austropotamobius pallipes*)
- Atlantic salmon (*Salmo salar*) (only in fresh water)
- Sea Lamprey (*Petromyzon marinus*)
- Brook Lamprey (*Lampetra planeri*)
- River Lamprey (*Lampetra fluviatilis*)
- Twait Shad (*Alosa fallax fallax*)
- Otter (*Lutra lutra*)

Habitats:

- Water courses of plain to montane levels with the *Ranunculum fluitantis* and *Callitriche-Batrachion* vegetation
- Petrifying springs with tufa formation (*Cratoneurion*)

River Nore SPA

- Kingfisher (*Alcedo atthis*)

Consequently a range of mitigation measure to ensure that there will be no adverse effects on water quality or the aquatic environment, including the aquatic QI habitats and species for which the above European Sites are designated, were detailed in Sections 6.2.1.2 and 6.2.1.3 of the NIS.

Having regard to case CJEU 258/11, the assessment undertaken does not contain lacunae. A comprehensive range of dedicated aquatic surveys were undertaken to inform the NIS, the methodologies and results of which are detailed in Sections 3.3 and 3.5 of the NIS and associated Appendices 3 and 5. The assessment contained complete, precise and definitive findings, i.e. it identified a pathway for effects on water quality and as a result, aquatic QI habitats and species of the River Barrow and River Nore SAC and River Nore SPA, during both construction and operation in the absence of mitigation and therefore prescribed precise and robust mitigation measures to block any pathways for such effects.

4.1.9 Birds

Issues relating to birds raised in third party submissions are dealt with in the following sections.

Owls and night-time bird surveys

A submission stated the following:

“we observe that no owls were seen nor night-time assessments for owls”.

Dusk breeding woodcock surveys were undertaken within the Proposed Wind Farm site in May and June 2021 and 2022. As noted in Section 7.2.4.2.4 of the EIAR – *“This survey method also allowed the observer to survey for owls, i.e. barn owls and long-eared owls”*. The methodology involved the surveyor walking set transects during the period of one hour before sunset until one hour after sunset (or last light). This methodology covers the period in which owls would be active should they be present within the Proposed Wind Farm site. In addition, vantage point surveys covering the Proposed Wind Farm site were carried out at dawn and dusk (i.e. starting one hour before sunrise, or finishing one hour before sunset) during migratory/wintering periods throughout the two years of surveying. During breeding and winter walkover surveys, suitable accessible buildings within the Proposed Wind Farm site were investigated for evidence of barn owl presence, however no signs of barn owl were recorded.

In relation to the submitted record of “owls” 1km from the Proposed Wind Farm site, it is noted that this is beyond the recommended surveying distance for owls as outlined in SNH (2017), i.e. within a 1km radius. Furthermore, this submitted owl site would be beyond the distance for potential effects from the Proposed Project. As per Ruddock & Whitfield (2007), barn owl have a limit of disturbance at 50-100m, with many nest sites not being disturbed until a human was within 10m during the study. The Forestry Commission of Scotland (2006)⁵ recommends a 250m disturbance buffer around a known nest site where operations should be limited. The submitted record is significantly beyond this distance from the Proposed Wind Farm site. Such a separation distance thus limits the potential for significant impacts.

Kingfisher survey

A number of submissions states the following in relation to kingfisher surveys:

“That no kingfisher burrows were observed near the Kilmanagh/Tullaroan River during the fish survey is hardly surprising considering the destruction of riverbanks in 2023, just before the survey was conducted”.

⁵ <https://forestry.gov.scot/images/corporate/pdf/Guidancenote32Birddisturbance.pdf>

It is noted that dedicated breeding kingfisher surveys were carried out in April and May in 2021 and 2022, as detailed in Section 7.2.4.2.5 of Chapter 7 Birds of the EIAR. Results of these surveys are given in Section 7.3.6.1 and raw data is presented in Appendix 7-4 Survey Data. The summary provided in Section 7.3.6.1 of the EIAR is provided below for clarity:

“No confirmed breeding territory was recorded within the Proposed Wind Farm site or within the surrounding area. Of the eight total observations of kingfisher along the Tullaroan stream, two involved birds calling and the remaining comprised birds travelling and perching. There were some suitable nesting banks observed along this watercourse within the Proposed Wind Farm site, where bank collapse has created vertical exposed soil banks. Numerous burrows were recorded, however these were confirmed to be sand martin nests. However, given the number of observations of kingfisher along the Tullaroan Stream, and the presence of suitable nesting banks and following a precautionary approach, it is considered that a possible breeding territory was present along this watercourse within the Proposed Wind Farm site in 2021 and 2022.”
(EIAR - Chapter 7 Birds – Section 7.3.6.1)

No potential for significant effects were identified following mitigation.

Adverse effects

A submission included the following statement:

“Kestrel and other raptor species, Cormorant, Curlew, Kingfisher are all observed onsite and as the applicant states, “Important migratory and recolonising species were also observed on site including Golden Plover, Greylag goose, Lapwings, Little Egret and even a Great Spotted Woodpecker was spotted once on site.”

It is noted that the quote attributed to the applicant is false and does not appear in any of the documents submitted with the planning application. In addition, cormorant, curlew, lapwing and greylag goose were not recorded within the Proposed Wind Farm site during the two years of surveying.

Golden plover avoidance rate

A submission included the following:

“We note that the developer commissioned a report to adjust the vulnerability factor considered for the golden plover (Collision avoidance rates of wintering golden plover, Gittings 2022)”.
(page 28)

As detailed in Chapter 7 Birds, there were only three observations of golden plover during vantage point surveys over the two years of surveying. The study of *Golden Plover Avoidance Rates* completed by Tom Gittings and appended to Appendix 7-6 Collision Risk Assessment was not commissioned directly for the Proposed Project. As outlined in the study, the previous 98% avoidance rate typically used for golden plover is a default avoidance rate not based on any published empirical evidence. The study, which looks at evidence from four UK wind farms, recommends recommend that collision risk modelling for wintering Golden Plover populations use two avoidance rate values: 99.6% and 99.8%. These are now the standard avoidance rates applied to golden plover for all collision risk assessments undertaken by MKO.

The collision risk assessment for the Proposed Project predicted 0.082 collision per year for golden plover using the recommended 99.6% avoidance rate. Even when applying a 98% avoidance rate, which is a default rate not based on any published empirical evidence and as such no longer used in such assessments, the predicted collisions per year would be 0.42, i.e. less than one bird per year. There is no potential for significant effects.

Passerines

Concerns were raised in submissions in relation to the passerine population of the Proposed Wind Farm

As outlined in Section 7.4.2 of the EIAR, the passerine population of the Proposed Wind Farm were classified as of no greater than Locally Important (Lower Value). Locally Important (Lower Value) receptors are habitats and species that are widespread and of low ecological significance and important only in the local area. As per NRA (2009) criteria, receptors of Local Importance (Lower Value) do not typically require details impact assessment consideration. Furthermore, as per NatureScot guidance, it is generally considered that passerine bird species are not significantly impacted by wind farms due to their ecology and large (relative) populations. As such, the potential for direct habitat loss, disturbance/displacement and collision risk are limited and there is no evidence to suggest that the Proposed Project will have a significant population-level effect on passerine species.

Peregrine falcon

Concerns were raised in submissions in relation to the Peregrine Falcon.

No potential for significant effects was identified for this species based on the following rationale. As outlined in Section 7.2.6.1, the surveys undertaken provide the information necessary to allow a complete, comprehensive and robust assessment of the potential impacts of the Proposed Project on avian receptors. In undertaking a comprehensive suite of surveys confidence can be placed in the accuracy of the resulting data that informs the assessments of the chapter. As outlined in EIAR Section 7.3.6.4 this species was recorded very infrequently, i.e. only twice within the Proposed Wind Farm site. The species was observed on average once every 75 hours of vantage point surveys, this is a very low rate of occurrence. Peregrine was recorded on two occasions during vantage point surveys, in February and August, i.e. outside the core breeding season months. This very low rate of occurrence limits the potential for significant effects to result from the Proposed Wind Farm site.

In conclusion, the Proposed Project will not result in any significant effects on any identified KORs. No significant effects on receptors of International, National or County Importance were identified. Provided that the Proposed Development is constructed, operated and decommissioned in accordance with the design and best practice mitigation measures that are described within this application, significant individual or cumulative effects on the identified KORs are not anticipated.

Please refer to Chapter 7 of the EIAR for further details.

4.1.10 Impact on Property Prices

Concerns have been raised about the potential for the Proposed Project to have adverse effects on the value of properties of local residents. This issue has been thoroughly addressed in Section 5.7 of Chapter 5 of the EIAR

As outlined in the EIAR, the only Irish study, a 2023 working paper by the Centre for Economic Research on Inclusivity and Sustainability (CERIS), suggests a potential 14.7% decrease in property values within 1km of a turbine. However, the study is based on a small sample of 225 houses and acknowledges that no significant price reductions were found beyond 1km, with any observed effects diminishing over time. Given its limited dataset and working paper status, further research is needed before drawing firm conclusions.

Extensive research in the United States provides a broader perspective. The 2009 and 2013 studies by the Lawrence Berkeley National Laboratory (LBNL) analysed thousands of home sales near wind farms

and found no measurable, consistent impact on property values. A 2023 study published in *Energy Policy* reported temporary value decreases post-announcement but found these effects faded once the wind farms became operational.

In the UK, studies commissioned by RenewableUK (2014) and Climate Exchange (2016) concluded that wind farms do not have a consistent negative impact on property prices. Instead, county-wide market trends drive local house prices rather than the presence of wind farms.

Overall, the existing body of research, particularly large-scale, peer-reviewed studies, does not support claims that wind farms significantly devalue nearby properties in the long term. While localized impacts may occur in specific cases, the evidence suggests these effects are not widespread or long-lasting, with house prices instead reacting negatively to the expectation of likely impacts and construction, but these prices recover during the operational phase.

Furthermore, the placement of wind turbines near residential dwellings is not a new occurrence. The project design fully complies with the recommendations outlined in best practice guidance for wind energy developments in Ireland, specifically meeting the 4x tip height setback distance for the protection of residential visual amenity. Additionally, there is clear precedent for An Bord Pleanála granting permission for wind farm developments with dwellings located at the 4x tip height boundary, as seen in cases such as Borrisbeg Wind Farm in Co. Tipperary (Case No. ABP-318704-23) and Seven Hills Wind Farm in Co. Roscommon (Case No. ABP-313750-22).

Please refer to Section 5.7 of Chapter 5 of the EIAR for further details.

Lack of Community Engagement

Concerns have been raised regarding the impact of the Proposed Project on the community and the lack of community consultation process undertaken as part of this project. Submissions have claimed that there was a lack of meaningful public engagement, with misleading visuals, withheld information, and ineffective communication, violating the Aarhus Convention's principle of effective public participation. Chapter 2 and Appendix 2-1 of the EIAR provide comprehensive detail on the extensive community consultation that occurred and on the substantial community benefit fund associated with the proposal.

To inform local residents about the Proposed Project, a project Community Liaison Officer (CLO) was appointed and an introductory information pack was delivered via door-door consultation to all householders within a c.2km radius of the area of the site, in November 2022. The information distributed to each household consisted of:

- A company brochure, which provided an overview on Enerco Energy and some general
- information about wind energy;
- A site location map;
- An overview map which divided the properties surrounding the site into 2 zones;
- A map highlighting the potential developable area which was under review at that time and the properties within each zone;
- Dedicated contact details (name, phone and email) for the CLO in relation to the project, along with a web address for the dedicated project website.
- All of the information sent to the local community was also made available for public viewing on the project information website.

Following the initial notification of the proposal to the local community, the CLO liaised with interested parties in helping them to understand the proposal and respond to any queries or concerns raised. As more project information became available, further consultations were organised, with the CLO attending in-person meetings with individuals to answer queries relating to the Proposed Project. The consultation effort comprised of the following:

- In **November 2022** the first round of public consultation was carried out, via door-to-door visits by the CLO (assisted by colleagues). The information pack delivered included a map of the developable area, an introductory letter and a brochure with some information about Enerco Energy and some general information about wind energy.
- In **May 2023** a project update was circulated. This included a letter and 13 Frequently Asked Questions (FAQs) from the CLOs interactions with the community, this was circulated to the original mailing list, which was updated accordingly following the initial consultation with the community, and updated throughout the entire consultation period.
- In **August 2023** correspondence was circulated, notifying the community about the dates and times of the first Public Information Exhibition to be held August 24th, in the Ballycallan Community Hall.
- In **September 2023**, following the feedback from the first PIE, an updated set of FAQs was circulated with 14 additional FAQs which addressed the main concerns raised at the PIE.
- In **April 2024** an updated information pack was circulated, this included an updated site layout map and two zone maps showing the dwellings within 2km of the proposed turbines. This round of consultation also notified the community about the dates and times of the second Public Information Exhibition to be held May 23rd, in the Ballycallan Community Hall.
- In **July 2024**, following feedback from the community and Kilkenny County Council, T08 was removed from the proposal, reducing the overall number of turbines to 7. The removal of T08 increased the setback between Kilmanagh and the nearest proposed turbines thereby significantly reducing any potential impacts on residential visual amenity. An updated information pack was circulated to the updated mailing list showing the proposed 7 turbine layout and dwellings within 2km of the proposed turbines.
- In **September 2024**, a further project update was provided to the community with a letter circulated notifying the community that the planning application for the Proposed Project would be submitted to Kilkenny County Council within two weeks, and a copy of the press notice text was enclosed. A leaflet was delivered by the CLO to all properties directly accessed off the Proposed Grid Connection underground cabling route notifying them about the project and providing some information of the proposed works associated with the underground cabling installation. The leaflet included an overview map of the Proposed Grid Connection underground cabling route and contact details for the CLO should any interested parties wish to discuss the proposal further.

Throughout the lengthy consultation period the CLO has continued to liaise with any interested parties and answer any questions as promptly as possible.

In conclusion, active engagement and consultation with the local community has taken place from an early stage during the pre-application phase of the Proposed Project. The consultation process has been an extremely valuable exercise and has provided a detailed, and enhanced understanding of the key issues and concerns of the local community, which have ultimately shaped the final project proposal.

There is currently on-going consultation with the local community, and it is the intention of the applicant to continue with the consultation for the entire lifespan of the Proposed Project. The development of the proposed Briskalagh Renewable Energy Development will provide an enduring economic benefit to the communities surrounding the Proposed Project as outlined in Chapter 2 of the EIAR, through the potential community benefit package for residents and community groups, employment during the construction and operation of the Proposed Project and through the annual rates payable to the local authority.

Please refer to Chapter 2 and Appendix 2-1 of the EIAR for further details.

Impact on Sensitive Receptors

Local Schools

It is claimed within the third-party submissions that the EIAR failed to adequately assess direct and indirect impacts on the local National Schools and Montessori School (St. Aidan's NS, Kilmanagh and Scoil Ruadháin NS, Tullaroan and Giant Steps Montessori, Ballagh) as sensitive receptors.

It can be confirmed that both St. Aidan's NS (Sensitive Receptor ID – H081) and Giant Steps Montessori (Sensitive Receptor ID – H093) were considered in both the shadow flicker and noise impact assessments within the EIAR.

St. Aidan's NS, due to its distance and direction from the nearest proposed turbine (approx. 1.4km south of T07) will not experience any shadow flicker due to the operation of the Proposed Wind Farm. In addition, there are no predicted exceedances of the turbine noise limits (as set out in Section 12.4.2 of Chapter 12 of the EIAR) at this location. The proximity of this national school to the proposed temporary site access road off the L-1009 Local Road is discussed in Section 4.1.7 above.

It is predicted that the location of Giant Steps Montessori School, H093, on days when weather conditions are such that shadow flicker can occur, will experience a maximum daily shadow flicker duration of 37 minutes. The mitigation measures outlined in Chapter 5, Section 5.10.3.2.7 of the EIAR (screening or turbine control measures) will ensure that shadow flicker will not exceed the Guidelines threshold of 30 minutes per day. Similar to St. Aidan's NS, the Montessori school is not predicted to experience noise levels that exceed the turbine noise limits (as set out in Section 12.4.2 of Chapter 12 of the EIAR). The Montessori School is located on the L1008 local and, as shown on Figure 15-1a in Chapter 15 of the EIAR, the section of the L1008 along which it is located is not proposed to be used as a construction haul route..

Scoil Ruadháin NS, Tullaroan, is located 2.9km north of the nearest proposed turbine, as referenced in Chapter 5, Section 5.3.8.1 of the EIAR. At this distance, it is located significantly outside the Shadow Flicker study area (1.69km) therefore shadow flicker is not a concern at this property. The school is located outside of the predicted cumulative 35db noise contour, as shown in Appendix 12-8 of the EIAR and, therefore was not included in the operational phase noise impact assessment as noise impacts are not anticipated during the operation of the Proposed Wind Farm. This school is located along the Proposed Grid Connection underground cabling route. The potential construction phase noise effects on sensitive receptors along the route is assessed in Chapter 12, Section 12.5.2.3 of the EIAR. Due to the rolling nature of the works area during the construction of the cabling route, the potential noise construction effect at sensitive receptors located adjacent to the route is considered to be brief, negative but not significant.

The potential for effects during the construction of the cabling route on the local road network (and consequently road users, including those travelling to/from the school) has been considered in Chapter 15, Section 15.1.7 of the EIAR. Due to the rolling nature of the works area along the cabling route, any potential negative effects will be brief to temporary in duration. The traffic management and health and safety measures that will be implemented during the construction phase to ensure the safety of local road users (those travelling by car or on foot) are set out in Appendix 15-2 and Chapter 5, Section 5.10.2.2.1 of the EIAR. It should be noted that the school is not located along any of the proposed construction material haul routes or the proposed turbine delivery route.

Equine Facilities

It has been highlighted within third-party submissions that stud farms and other equine facilities within the vicinity of the Proposed Wind Farm were not considered within the EIAR. It is acknowledged that

an incorrect reference, in Chapter 5 of the EIAR, to the closest stud farm being Whytemount Stud, located in Kells, Co. Kilkenny, approximately 14.5km south of the nearest proposed turbine.

The closest registered stud farm is Bluegate Stud. The facility is located approximately 2.65km south of T07. At this distance, it is located significantly outside the Shadow Flicker study area (1.69km), therefore shadow flicker is not a concern at this property.. The facility is located outside of the predicted cumulative 35db noise contour, as shown in Appendix 12-8 of the EIAR and, therefore was not included in the operational phase noise impact assessment and noise impacts are not anticipated during the operation of the Proposed Wind Farm.

There have been no known studies carried out in Ireland on the impacts of wind farms on the equine industry. In 2014 Marshall Day Acoustics published a document entitled '*Summary of research of noise effects on Animals*'⁶ The Marshall Day study specifically assessed the impacts of varying levels of noise on horses in three differing behavioural settings. The three behavioural settings studied included horses in stables, breeding mares and racing horses.

Horses in Stables

The study by Marshall Day Acoustics found that horses, stabled at the Flemington Racecourse Australia at the same time as a music concert on the site, when exposed to $L_{Aeq,15min}$ of 54-70 dB showed little response to the music noise unless the noise was particularly impulsive. The horses stabled at Flemington Racecourse were thoroughbreds, and stables were located 200 metres from the concert.

Breeding Mares

A study by Le Blanc et al (1991) and summarised by Marshall Day studied the effects of simulated aircraft noise over 100 dB and visual stimuli on pregnant mares. The study focused on pregnancy success, behaviour, cardiac function, hormonal production, and rate of habitation. Le Blanc concluded the following:

'Le Blanc et al (1991) found that birth success of pregnant mares was not affected by F-14 jet aircraft noise. While the 'fright-flight' reaction was initially observed, the mares did adapt to the noise.'

Racehorses

Marshall Day Acoustics concluded the following in relation to their study on the impacts of noise on racehorses:

'Marshall Day Acoustics have observed horses grazing in paddocks directly under the main approach path of the Christchurch International Airport where noise levels are in excess of 90 dB (L_{Amax}) during an aircraft flyover. Although these horses are arguably "used to" the noise, there was generally little recognition by them of an aircraft passing, let alone any sign of disturbance. This tends to support the conclusions by Le Blanc et al (1991).'

British Horse Society's 'Advice on Wind Turbines and Horses – Guidance for Planners and Developers'

⁶ Marshall Day Acoustics (2014) Summary of Research of Noise Effects on Animals
<https://www.cpa.govt.nz/assets/FileAPI/proposal/NSP000033/Hearings/3a009a795c/BoD-Volume-4-31-Siiri-Wilkenning-10-March-2014-Summary-of-research-of-noise-effects-on-animals.pdf>

In the absence of national policy or guidance in relation to the development of wind farms near stud farms/equestrian centres, MKO have reviewed the British Horse Society's 'Advice on Wind Turbines and Horses – Guidance for Planners and Developers'⁷.

The British Horse Society policy statement states the following in relating to the siting of wind turbines in the vicinity of equine businesses:

'The British Horse Society strongly recommends that the views and concerns of local equestrians should be recognised and taken into account when determining separation distances and that normally a minimum separation distance of 200m or three times blade tip height (whichever is greater) will be required between a turbine and any route used by horses or a business with horses.'

As mentioned above, the closest stud farm/equestrian facility is located approximately 2.65km from the nearest Proposed Wind Farm turbine (T07). Horses on lands within the townland of Knockeenglass are also referenced within the submissions. Landholdings within this townland, owned by landowners that are not involved in the Proposed Project, are located in excess of 570m from the closest proposed turbine (T07). Therefore, in both instances, the proposed turbines are at a distance beyond that of the British Horse Society's recommended minimum separation distance of 555 metres separation distance (based on three times the proposed turbine blade tip height of 185 metres) between a turbine and any equine facility.

4.11.13

Built Heritage and Archaeology

Concerns have been raised about the impact of the development on local vernacular architectural heritage, particularly historic bridges. There are also concerns that the turbines will significantly affect the visual setting of St. Aidan's Church of Ireland. It is claimed that the assessment of indirect effects is inadequate.

Tobar Archaeological Services Ltd. undertook and prepared an archaeological, architectural and cultural heritage impact assessment of the Proposed Project, included as Chapter 14 of the EIAR. They also undertook a comprehensive and robust review of all the Third-Party submissions as part of this GOA, they are satisfied that all the issues raised have been comprehensively covered and addressed in the EIAR and clarified throughout this GOA.

No significant direct or indirect effects to the recorded cultural heritage resource as a result of the Proposed Project have been identified. Where potential direct effects to sub-surface archaeology have been identified appropriate mitigation measures are proposed in order to ameliorate this potential effect.

A standardised approach was utilised for the assessment of effects of visual setting (indirect effects), within which St. Aidan's Church of Ireland was considered, (refer to Table 14.17 of Chapter 14 (RPS ID C196)), according to types of monuments and cultural heritage assets which may have varying degrees of sensitivity. While direct physical effects to a site or monument can easily be assessed in quantitative terms, the assessment of effects on setting can be subjective and as such is a matter of qualitative, professional judgement and experience. This approach has been utilised in numerous archaeological, architectural and cultural heritage impact assessments in wind farm EIARs that have been reviewed and accepted by local authorities and the Board.

It has been acknowledged in Chapter 14, Section 14.4.7 of the EIAR that the potential indirect effect on the setting of St. Aidan's Church of Ireland is considerate to be moderate based on the proximity of the church to the closest proposed turbine and the number of turbines that will be theoretically visible from that location. However, in reality the effect will be less severe since the ZTV model does not take natural

⁷ British Horse Society's 'Advice on Wind Turbines and Horses – Guidance for Planners and Developers'

<https://www.bhs.org.uk/media/acsplgswind-turbines-planners-0324.pdf>

screening from vegetation and screening from other buildings into consideration which will alleviate the effect on setting.

Overall, no significant direct or indirect effects to the recorded cultural heritage resource as a result of the Proposed Project have been identified. Where potential direct effects to sub-surface archaeology have been identified appropriate mitigation measures are proposed in order to ameliorate this potential effect.

Please refer to Chapter 14 of the EIAR for further details.

4.1.14 Land, Soils and Geology

Concerns have been raised in third-party submissions relating to the reliance on trial pits during the site investigation effort and that there are no site investigation boreholes to the actual depths below the proposed invert elevations for the foundations. These concerns have been responded in in **Appendix 2** of this document.

It has also been suggested that the use of the term “Borrow Pit” is misleading and contrary to EPA (2022) Guidelines on accessibility of EIAR to the public. The purpose and function of the proposed borrow pit has been clearly described in detail in Chapter 4, Section 4.3.1.8 of the EIAR. It is a term that has been used in dozens of renewable energy development applications that have been granted by both local authorities and the Board.

A robust and comprehensive assessment of the likely significant effects that the Proposed Project may have on land, soils and geology and the mitigation measures prescribed to avoid, reduce or offset any potential significant effects that are identified is included in Chapter 8 of the EIAR.

4.1.15 Insufficient Turbine Spacing

One third-party submission made an observation relating to the spacing between the proposed turbine locations stating that it does not comply with the separation distances recommended within the Guidelines (i.e. 3 rotor diameters in the cross wind direction and 7 rotor diameters in the prevailing wind direction).

The design of the Proposed Wind Farm has been an informed and collaborative process from the outset, involving the designers, developers, engineers, landowners, environmental, hydrological and geotechnical, archaeological specialists and traffic consultants. The aim being to reduce potential for environmental effects while designing a project capable of being constructed and viable.

The reference to 3 and 7 rotor diameters from the Guidelines relates to the required separation from any existing wind turbines rather than the required separation between the proposed turbines. As stated in Chapter 4, Section 4.3.1.1 of the EIAR, the proposed wind turbine layout has been optimised using wind farm design software (WindPro) to maximise the energy yield from the Proposed Wind Farm, while maintaining sufficient distances between the proposed turbines to ensure turbulence and wake effects do not compromise turbine performance.

In conclusion, the proposed turbine layout has been carefully designed using industry-standard software to optimise energy yield while maintaining appropriate separation distances. The referenced guideline distances apply to existing turbines rather than those within a new development. The design process has been a collaborative effort, ensuring technical feasibility while minimising environmental impact.

Please refer to Chapter 3 and Chapter 4 of the EIAR for further details in relation to the locations of the Proposed Wind Farm turbines.

Multiple Applications

Concerns were raised about this planning application being the third application for the Proposed Project since October 2024 and the accessibility of documentation, particularly detailed maps, which were difficult to view and interpret, leading to calls for invalidation due to limited public access.

Regarding the multiple planning applications, the first submission for the Proposed Project was made to KCC on October 9, 2024, and validated under Planning Ref No. 24/60478. However, KCC later invalidated the application due to missing site notices during their inspection, determining that it did not meet the requirements of articles 19(1)(c), 20, and 26(4) of the Planning and Development Regulations 2001, as amended (the Regulations).

The second application was submitted on November 15, 2024, and validated under Planning Ref No. 24/60548. However, a clerical error was identified in the electronic copy of Chapter 3 of the EIAR, where pages and figures were inadvertently omitted. To rectify this, the application was withdrawn and resubmitted with the necessary documentation corrected.

The third and final application, which is the subject of this GOA, was submitted and validated on January 3, 2025, under Planning Ref No. 25/60003, ensuring all required documentation was included.

While it is unfortunate that three applications were necessary, this process ensured that the final submission met all regulatory requirements and was fully available for assessment by Kilkenny County Council and public review. Throughout the process, the CLO continued to communicate the situation to the local community, and each time the planning application was re-submitted this was communicated to the community with clarification that there were no material changes to the proposal, and that the new applications were only dealing with the identified administration issues on each occasion.

Regarding concerns about the Planning Drawings, the submitted drawing pack was confirmed by KCC to be fully compliant with the Regulations, as evidenced by the validation of all three applications. In addition to the online submission, MKO provided KCC with two full hard copies of the application, thereby fulfilling all statutory obligations for ensuring appropriate public access to the application. Whilst it is acknowledged that large planning drawings can be difficult to view on some devices, the hard copy of the file at the office of the Planning Authority was available for public viewing. Furthermore, the CLO continuously reiterated that they remained available to the community to assist with any concerns in relation to the application (including difficulty in accessing information).

In conclusion, while there were multiple submissions of the planning application, each step was taken to ensure compliance with regulatory requirements and transparency in the process. The issues that led to the withdrawal and resubmission of applications were administrative in nature, with no material changes to the Proposed Project. Efforts were made to maintain clear communication with the local community, and appropriate measures were taken to ensure public access to the application documents. The validation of all three applications by KCC confirms that the planning drawings and submission process met the necessary standards, reaffirming the integrity and thoroughness of the application process.

Concern about Applicant's Company Structure and Agent

Concerns were raised about the applicant company and whether it has the necessary backing to deliver the Proposed Project, questions were also raised about MKO's credentials, and reference was made to issues at the Meenbog Windfarm.

To clarify, the applicant for the Proposed Project, Briskalagh Ltd, is an associated company of Enerco Energy Ltd., an Irish-owned company based in Cork. It is common practice for a Special Purpose Vehicle

(SPV) company to be set up for each Renewable Energy development. Enerco has extensive experience in the design, construction, and operation of wind energy developments across Ireland, with ongoing or completed projects in Counties Cork, Kerry, Limerick, Clare, Galway, Mayo, and Donegal. It is noted that all these operational wind farms are operating under standalone companies. Enerco are a long-term player in the Irish Renewable Energy Sector, with the first wind farm being delivered into commercial operation in 2007. Since then, the company has continued to grow its portfolio of operational wind farms year on year, and at present Enerco associated companies are responsible for approximately 15% of the entire national wind energy generating capacity. The portfolio includes the successful construction of 282 turbines in total, with the operation of every installed turbine continuing to be managed at its base in Lissarda, Co. Cork. This clearly demonstrates that there is no question to be answered regarding the ability of the applicant to deliver the Proposed Project successfully.

Regarding questions about MKO's credentials, the company has been a leading planning consultancy in Ireland for nearly two decades. Established in 2008, MKO has over 17 years of experience across various sectors, particularly in Planning and Environmental services for renewable energy projects. With a proven track record across projects of all scales—from high-profile national developments to smaller, individual appointments—MKO brings significant expertise in delivering environmental and planning services for renewable energy projects. MKO's longstanding reputation in the industry speaks for itself.

The Board is also reminded that each planning application must be assessed independently, considering the specific needs and impacts of the proposed development at hand. In this case, the application relates solely to the Briskalagh Renewable Energy Development and is entirely unrelated to Meenbog Wind Farm (an upland peatland site), which is entirely irrelevant to the outcome of this application. It is acknowledged that the developer of Meenbog Wind Farm, Planree Ltd, is an associate company of Enerco Energy Ltd. A peat slide occurred during the construction of the Meenbog Wind Farm in November 2020, which was not attributed to any negligence by the developer. Planree Ltd continue to work with the relevant Authorities to resolve the issues at that development, which is a clear indication of Enerco's commitment to follow through on the delivery of all their projects.

4.1.18 Policy and Legislation

Concerns have been raised that the 2021-2027 Kilkenny City and County Development Plan is subject to a Ministerial Direction, which means certain provisions of the previous 2014-2020 Development Plan may still apply.

As outlined in the Planning Report submitted with the Application in Section 6.4, as the parts of the KCCDP which are subject to a ministerial direction are taken not to have come in effect, the Wind Energy Strategy Areas and its associated policies cannot be taken into account.

Despite the absence of a Wind Energy Strategy, as set out in detail in Chapter 3 of the EIAR, a detailed environmental constraints assessment was conducted which led to the siting of turbines wholly within the Acceptable in Principle (AIP) and Open To Consideration (OTC) Areas. The inclusion of the constraints on a map of the study area allowed for a viable area to be identified. An initial turbine layout was then developed to take account of all the constraints and their associated buffer zones and the separation distance required between the turbines. Following the mapping of all known constraints, detailed site investigations were carried out by the project team. Where specific areas were deemed as being unsuitable for the siting of turbines or roads, etc., alternative locations were proposed and assessed, taking into account the areas that were already ruled out of consideration. The turbine layout for the Proposed Wind Farm has also been informed by the results of noise, landscape and visual and shadow flicker assessments as they became available.

Locally, despite the absence of a local Wind Energy Strategy for Kilkenny the KCCDP is supportive of renewable energy developments, such as the Proposed Project, as it sets out the need for Kilkenny to transition to a low carbon and climate resilient County with a focus on renewable energy to increase the

County's energy sustainability and security. Specifically a strategic aim of the KCCDP is to generate 100% of the County's electricity demand through renewable energy by 2030, the Proposed Project will support the KCCDP in this aim.

In spite of the absence of a local Wind Energy Strategy for Kilkenny, it is considered that due to the comprehensive suite of international, national, regional and local policy support for wind energy, the principle of the Proposed Project at this location is acceptable.

In conclusion, the Proposed Project is strongly supported by European and national policy and legislation. At a European Union level the Proposed Project is supported by the EU Renewable Energy Directive and REPowerEU. At a national level, the Proposed Wind Farm is supported by the National Planning Framework, Climate Action Plan 2024, the National Energy Security Framework, among other national climate and energy policies. The local planning policy framework is also supportive with the Kilkenny City and County Development Plan 2021-2027 provides for the development of indigenous energy resources, with an emphasis on renewable energy supplies and setting ambitious target for the deployment of renewable energy including a target of 100% of electricity demand for the County through renewables by 2030 by promoting and facilitating all forms of renewable energies and energy efficiency improvements.

A full breakdown of the compliance of the Proposed Project against relevant Policies and Objectives and Development Management Guidance of the KCCDP is set out in Chapter 2 of the EIAR and Section 6.4 of the Planning Report which accompanied this planning application to KCC.

4.2

Response to Statutory Consultees Observations

A total of 7 submissions were submitted to KCC from Statutory Consultees in relation to the Proposed Project. **Table 2** below identifies the Statutory Consultees who lodged a submission to KCC in relation to the Proposed Project and who in the project team is responsible for the corresponding response.

Table 2 List of Statutory Consultees and Lead Authors for Response

Theme	Lead Author for Response
Department of Housing, Local Government and Heritage	MKO
Inland Fisheries Ireland	MKO/HES
Transport Infrastructure Ireland	MKO
Irish Aviation Authority	MKO
Gas Networks Ireland	MKO
Uisce Éireann	MKO /HES
Health Service Executive	MKO

4.2.1

Department of Housing, Local Government and Heritage

4.2.1.1

Archaeology

The Department of Housing, Local Government and Heritage (Department) made a submission on the application in relation to archaeology.

The Department note the potential for effects on previously unrecorded sub-surface archaeology, especially features which may be associated with some of the recorded monuments along the Proposed Grid Connection underground cabling route, namely the historic town of Freshford (KK013-023—) and the graveyard at Freshford Lots (KK013-023002).

The Department recommended that an Archaeological Impact Assessment, including Archaeological Geophysical Surveys and Archaeological Test Excavation be carried out as part of a response to a request for further information from the local authority prior to any decision being made on the planning application.

While the Department acknowledge the majority of mitigation measures outlined in Chapter 14, Section 14.4.3, of the EIAR, the commitment to pre-construction archaeological testing in order to identify sub-surface archaeological features appears to have been missed. The specific mitigation steps, from Chapter 14, Section 14.4.3.4 (Sub-Surface Archaeological Potential), of the EIAR are reproduced below for clarity:

- Pre-development archaeological testing of the proposed infrastructure in previously undisturbed greenfield areas of the Site will be carried out under licence from the National Monuments Service. This is to identify any archaeological features at the earliest stage possible in the project to allow time to deal with any requirements such as preservation in situ (redesign / avoidance) or preservation by record (archaeological excavation).
- A report on the testing will be compiled on completion of the work and submitted to the NMS and the Planning Authority.
- Further mitigation such as preservation in situ (avoidance), preservation by record (excavation) or buffer zones may be required depending on the results of the testing.
- Should archaeological remains be uncovered during the testing consultation with the NMS will be required regarding the best course of action and further mitigation.

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

4.2.1.2

Natural Heritage

A submission was received from the Department of Housing, Local Government and Heritage (Department). A number of observations relating to nature conservation were made in the submission to assist the planning authority in meeting obligations that may arise in relation to European Sites and Biodiversity in the context of the Proposed Project. Below are the observations made by the Department and MKO's response to each observation.

4.2.1.2.1 Matters Relating to Appropriate Assessment

The Department state that *'In relation to European sites (Special Areas of Conservation (SAC); Special Protection Areas (SPA)), the Department places particular emphasis in its observations on the level of detail contained in the screening for Appropriate Assessment (AA) and Natura Impact Statement (NIS).*

An AA determination must contain complete, precise and definitive findings and conclusions with regard to the implications of a proposal for the conservation objectives and integrity of a European site’.

In response to submissions from the Department in relation to Appropriate Assessment, a number of clarifications of text contained within the NIS submitted with the planning application are provided in the sections below.

Otter

Department Observation

Conflicting information is included within the NIS and the Biodiversity Chapter relating to otter holts. The following text is included in Section 6.2.2 of the NIS: “Although no other signs of otter, holts, slides or prints were recorded within the Proposed Wind Farm site, there is potential for otters to utilise the Tullaroan stream and its associated tributaries for foraging and commuting purposes”. The following text is included in Table 6-10 of the Biodiversity Chapter “Evidence of otter such as couches, spraints and a potential otter holt was recorded within the Proposed Wind Farm adjacent to the Tullaroan Stream”, and is also noted in Section 6.6.4.2 that two “potential” otter holts were identified. Although it is specified further in the NIS that no active otter holts were identified, further surveys should have taken place to determine the status of the holts in question. Discussion on camera trap usage is included within the Biodiversity Chapter, and not included in the NIS. Otter are a QI species of European sites within the ZoI of the Proposed Project, all details regarding this species should be discussed within the NIS. Furthermore, the AA must contain complete, precise, and definitive findings; the lack of clarification on the status of the otter holts raises questions on the validity of the surveys. Furthermore, the mitigation in the Biodiversity Chapter for otter is quite comprehensive and includes pre-construction surveys, this should also be included in the NIS to prevent disturbance and displacement impacts on the QI species. The Department recommends that further surveys are undertaken to determine the status of the ‘potential’ otter holts, and a pre-construction check of any watercourses within 150 metres of works should also be included in the NIS.

MKO response

To clarify, and as outlined above in MKO’s response to KCC’s Refusal reason No. 3 (Section 3.3), MKO confirm that no otter holts were recorded within 200m of any Proposed Project infrastructure. A single otter spraint was recorded in the west of the Proposed Wind Farm site adjacent to the Tullaroan stream, in proximity to where the Proposed Grid Connection underground cabling route commences. The spraint was recorded adjacent to an existing farm track proposed to be upgraded. No other evidence of otter was recorded within 150m of any Proposed Wind Farm infrastructure.

While a potential holt site was identified within the Proposed Wind Farm site on the banks of the Tullaroan stream, and is discussed in Section 6.6.4.2 of Chapter 6 ‘Biodiversity’ of the EIAR, this was located approximately 6.9km upstream of the River Barrow and River Nore SAC and in excess of 200m from any proposed infrastructure. It will therefore not be directly or indirectly affected by the Proposed Project given its distance from any works. Camera trap footage was also deployed at a second potential holt site within the Proposed Wind Farm site (as mentioned in Section 6.6.4.2 of the EIAR) on a precautionary basis. However, no evidence of otter was recorded at this location and upon further investigation it was determined not to be a holt and was not considered further in the assessment. While the potential holt site and deployment of camera traps were not specifically discussed within the NIS given the large distance between the potential holt and the River Barrow and River Nore SAC (approximately 6.9km hydrological distance), this does not change the findings or conclusions of the NIS. The distance between the potential holt and the SAC means that any otter populations associated with the SAC will not be significantly affected by the proposed infrastructure within the Proposed Wind Farm site. Furthermore, there will be no direct or indirect effects whatsoever on the potential holt which is located in excess of 200m from any proposed infrastructure. There will be no loss of otter resting or

breeding sites and there is no potential for adverse effects on otter population associated with the SAC due to disturbance. There is no potential for adverse effects on the SAC in this regard.

While evidence of otter in the form of spraints and tracks was recorded along the Proposed Grid Connection underground cabling route, no otter breeding sites were recorded. A potential otter couch was also recorded 240m to the south of the location of the crossing of the River Nore by Horizontal Directional Drilling (HDD). However, given the distance between this potential couch and the works associated with the HDD crossing, there is no potential for significant effects thereon as a result of disturbance.

There will be no loss of otter breeding or resting sites as a result of the Proposed Project. The potential for adverse effects on otter due to disturbance and deterioration of water quality is fully assessed in Sections 6.2.1 and 6.2.2 of the NIS submitted with the planning application and robust mitigation is prescribed within these sections to ensure that there will be no adverse effects on this species.

The comprehensive otter surveys undertaken throughout 2023 and 2024 were undertaken in full accordance with best practice guidance (NRA, 2009). The survey effort was more than adequate to inform a robust NIS, identifying all potential effects on otter. As a result, the NIS included appropriate mitigation measures to ensure that there will be no residual effects on this species and no potential for adverse effects on the River Barrow and River Nore SAC in light of its conservation objectives. While no otter resting or breeding sites were recorded within 200m of any Proposed Wind Farm infrastructure during the surveys undertaken, the mitigation measures prescribed in Section 6.2.2 of the NIS include for a pre-commencement otter survey to be undertaken on a precautionary basis to determine if there have been any changes to the baseline since the undertaking of the surveys to inform the NIS and to ensure that there will be no disturbance related impacts on otter.

Kingfisher

Department Observation

The Proposed Grid Connection includes underground cabling works which will cross beneath the River Nore SPA, which is designated for Kingfisher. The following text is included in Table 5-13 of the NIS: "The crossing will be done via Horizontal Directional Drilling (HDD) and has been designed to pass cabling beneath the River Nore, thus avoiding works within the SPA boundary. The Proposed Grid Connection underground cabling works are broadly analogous in scale to existing activities in the general area (e.g. farm machinery, road works, vehicle movements). The proposed works are not significant in the context of the baseline conditions". Significant impacts on kingfisher as a result of disturbance are, therefore, ruled out within the NIS. However, no information on the baseline conditions and associated noise levels with the HDD in this location are included in the NIS. Therefore, the NIS is not based on best scientific information relevant to the likely effect on the conservation objective of the River Nore SPA.

MKO response

No kingfisher nesting sites were recorded within or in proximity to the location of the proposed crossing of the Proposed Grid Connection underground cabling route beneath the River Nore by HDD. Therefore there will be no significant effects on breeding kingfisher due to disturbance. While the river at this location provides suitable habitat for commuting and foraging Kingfisher, the HDD works will be temporary in nature, approximately 5 days therefore are unlikely to result in adverse effects on the species as a result of disturbance.

While no kingfisher nest sites were recorded at the location of the crossing of the River Nore, the mitigation measures prescribed in Section 7.6.2.1 of Appendix 3 of the NIS shall apply to the works

involved in the crossing of the River Nore by HDD. As outlined in Section 7.6.2.1 of Appendix 3 of the NIS:

- Works will commence outside the bird nesting season (1st of March to 31st of August inclusive) where possible. Any requirement for construction works to commence during or run into the breeding season following commencement will be informed by pre-construction bird surveys.

Surface water protection measures

Department Observation

The following mitigation measure is included in Section 6.2.1.2.7 in relation to Morphological Changes to Surface Watercourses along the Proposed Grid Connection: "Silt fencing will be erected on ground sloping towards watercourses at the stream crossings if required." It is recognised that the provision of silt fencing is repeated throughout the mitigation measures, however, the Department recommends that the phrasing "if required" is removed, as this infers that this measure is only required in some circumstances. Silt fencing should be utilised at all works adjacent or close to water crossings.

MKO response

Following the submission from the Department in relation to silt fencing and water quality at watercourse crossings along the Proposed Grid Route, the Applicant agrees with and is happy to comply with the Department's recommendation and can confirm that silt fences will be utilised downgradient of works areas adjacent or close to water crossings.

4211.2.2 Matters Relating to Ecological Impact Assessment

In response to submissions from the Department relating to Ecological Impact Assessment, the Applicant agrees with and is happy to comply with a number of the Department's recommendations. A number of clarifications, justifications and/or updates to text contained within the ELAR are outlined below addressing the issues raised. The contractor will be required to adhere to the measures outlined below during construction of the Proposed Project.

Birds

Department Observation

The Department recommends that all vegetation removal works will be scheduled outside of nesting bird season, i.e. between 1 March and 31 August

MKO Response

The Applicant agrees with the recommendation made by the Department in relation to vegetation removal. As outlined in Section 7.6.2.1.1 of Chapter 7 'Birds' of the ELAR submitted with the planning application:

- Works will commence outside the bird nesting season (1st of March to 31st of August inclusive) where possible. Any requirement for construction works to commence during or run into the breeding season following commencement will be informed by pre-construction bird surveys.
- The removal of woody vegetation will be undertaken in full compliance with Section 40 of the Wildlife Act 1976 – 2022.

Bats

Department Observation

Three farm complexes of various sizes and distances from the proposed works are described in the Biodiversity Chapter and the associated Appendix 6-2 Bat Survey Report. Each of the farm complexes have a number of buildings varying in bat roosting potential from “Negligible” to “Moderate”, with bat roosting evidence identified in Farm Complex 1. Three bat emergence surveys were carried out, with two surveyors in May, four surveyors in July and two surveyors in October. However, it appears that two bat surveys were completed at Farm Complex 1 (where bats were identified roosting) in May and July 2023, whilst only one survey was carried out in Farm Complex 2 in October; Farm Complex 3 had no emergence surveys undertaken. Complex 2 contains a number of buildings, ranging from Negligible – Moderate and a roost was identified in the survey in October. By only completing one survey in October on this complex, the peak activity season (i.e. breeding and mating) has been missed and, therefore, does not potentially represent the baseline information for this complex in relation to roosting bats. Likewise for Complex 3; no bat surveys were carried out at all, despite one of the buildings within the complex being valued as having moderate suitability and another valued as low suitability. This does not follow best practice guidance (Collins et al., 2023)¹, and, therefore, the Department recommends that further bat surveys are undertaken at the buildings within the proposed development, to fully assess all potential impacts on roosting bats and mitigate appropriately.

Daytime bat inspections were completed at all of the bridge crossings within the proposed development. A number of these bridges were valued as “low potential”, however, no bat activity surveys were completed at these bridges. Potential roosting features present should also have been inspected with a torch or endoscope, to determine any evidence of bats roosting. It is acknowledged that during the transect surveys these crossings were included in the transect routes but this would not have determined if bats were roosting within the structures themselves. Flatbed formation and horizontal directional drilling are proposed at these bridges, but it is not made clear the level of noise and vibration that will occur here as a result of these works. The Department, therefore, recommends that data should be provided on this and bat activity surveys following best practice guidance should be carried out.

MKO Response

Proposed Wind Farm

As described in the dedicated Bat Report submitted as Appendix 6-2 to the EIAR, the bat survey methodology and assessment followed the most recent recognised industry best practice i.e. Bats and Onshore Wind Turbines: Survey, Assessment and Mitigation (NatureScot 2021). This allowed for a robust approach to the surveys and baseline assessment undertaken in the bat impact assessment and the collision risk was fully assessed in accordance with best practice guidance.

Ground-level static detector surveys provide the core dataset for which the bat impact assessment is informed. As outlined in NatureScot, other additional survey methods (e.g. walked transect or vantage point surveys) can be used to “complement” the information gathered from static detectors, but their applicability is “discretionary and site-specific”.

The Proposed Wind Farm site was surveyed and appraised in terms of the suitability of habitats to support roosting, commuting and foraging bats. As part of this, the potential for structures to support bats was assessed. Four structures and their associated outbuildings were identified as having some potential for roosting bats. The structures were subject to additional internal and external inspections with emergence surveys carried out based on the results of the daytime inspections. No evidence of large maternity roosts or Nationally Important bat roosts were identified during the surveys; however, three roosts containing small numbers (ranging from 1-10 individuals) of soprano pipistrelles, *Myotis spp.* and brown long-eared bats were identified. While bat roosts have been confirmed within the site, as outlined in Appendix 6-2 Bat Report “All structures will be avoided as part of the Proposed Project, and thus no significant loss or damage to the identified or potential roosts within buildings/structures is anticipated.” Therefore, no further surveys are deemed necessary at this stage. Habitat connectivity will remain and no significant impact on roosting, commuting or foraging bats is anticipated as a result of the Proposed Project. A

mitigation and monitoring plan, including bat buffers, pre-construction surveys and habitat enhancement areas, has also been devised for the Proposed Project in line with NatureScot guidance to continue to monitor bat activity within the site. This adaptive operational monitoring plan to assess potential changes in bat activity post-construction can be adjusted as deemed necessary to ensure bats are safeguarded accordingly.

Proposed Grid Connection

A total of 9no. bridge crossings, 2no. culverts and 1no. concrete pipe will be traversed for the Proposed Grid Connection underground cabling route. Three crossings will require horizontal directional drilling (HDD) including beneath the River Nore and all other works will be confined to the road structure. It should be noted that an incorrect reference was included in Table 4-5 of the Bat Survey Report included as Appendix 6-2 of the EIAR in relation to Water Crossing no. 10 (WC10). Whereas Table 4-5 stated this watercourse will be crossed using HDD, the proposed crossing methodology at this location is a flatbed formation over bridge/culvert. Nonetheless the conclusions of the assessment contained within the bat survey report and EIAR remain unchanged.

Of the three crossings requiring HDD, one had no structure associated with it (WC1), one was assessed as having Negligible roosting potential (WC2) and one had Low potential (WC13) for opportunistic roosting. No evidence of bat roosts was found at any of the structures during the inspections and no significant impacts on bats as a result of the grid connection cabling is anticipated. However, on a precautionary basis, as some potential is present at WC13, the Applicant can confirm that a pre-commencement inspection survey will be carried out prior to commencement of works to determine if any bats are present, including any further recommendations to safeguard bats if required.

The recommendation for a pre-commencement survey does not represent a lacuna in the survey assessment but is fully in line with industry best practice. The function of this survey will be to assess any changes in baseline environment since the time of undertaking the survey in March 2024.

Flatbed formation is proposed for nine crossings. These crossings varied in suitability and were assessed as Negligible (3no.) to Low (6no.). No evidence of roosting bats was identified during the inspections. As outlined in the EIAR, the proposed works will be confined to the existing road corridor and no works are proposed on the underside of the structures. These crossings are subject to existing traffic conditions and it's likely that any potential roosting bats are accustomed to some level of noise and vibration disturbance. No significant impact on potential roosting bats is anticipated.

However, on a precautionary basis, as low potential is present at 6 no. crossings with flatbed formation proposed, the Applicant can confirm that a pre-commencement inspection survey will be carried out prior to works to determine if any bats are present, including any further recommendations to safeguard bats if required.

As outlined in Section 3.7 of Appendix 6-2 (Chapter 6: Biodiversity), *“A comprehensive suite of bat surveys has been undertaken at the Proposed Wind Farm site in 2023 and at the Proposed Grid Connection in 2024. The surveys undertaken at the Proposed Wind Farm site, in accordance with NatureScot Guidance, provide the information necessary to allow a complete, comprehensive and robust assessment of the potential impacts of the Proposed Wind Farm site on bats receptors. The information provided in this report accurately and comprehensively describes the baseline environment; provides an accurate prediction of the likely effects of the Proposed Project; prescribes mitigation as necessary; and describes the predicted residual impacts. The specialist studies, analysis and reporting have been undertaken in accordance with the appropriate guidelines. No limitations in the scope, scale or context of the assessment have been identified. Overall, a comprehensive assessment has been achieved.”*

All bat surveys were conducted in line with best practice guidance to inform Chapter 6: Biodiversity for this planning application. Furthermore, the existing structures and identified roosts within the Proposed

Wind Farm site have been entirely avoided through design of the Proposed Project and all existing structures and habitat connectivity will be retained.

Badger

Department Observation

In Section 6.6.4.3 of the Biodiversity Chapter, the following text is included: "A potential badger sett was recorded in the south-west of the Proposed Wind Farm adjacent (within 50m) the existing farm track to be upgraded. The sett is located over 50m from the proposed new road. The sett showed little signs of recent activity. A camera trap was placed at an entrance for a period of two weeks. One badger was recorded exiting the potential sett over the 2-week period (Plate 6-31). It is unlikely this sett is actively used but may be used on occasion by individual local badgers'.

As a badger was recorded using the sett on the camera trap deployed, this is a confirmed badger sett, and the word "potential" should be removed. As the entire site is highly suitable for badger, the Department recommends that a pre-construction badger survey is undertaken within all work areas, and within 150 metres of all work areas.

MKO Response

MKO confirm that the sett identified during the surveys is a confirmed badger sett and that the word 'potential' used in Section 6.6.4.3 of the EIAR was in reference to the identification of the sett prior to deployment of the camera trap to confirm activity and usage of the sett.

Appropriate mitigation measures for the protection of badger were included in Section 6.7.2.2.1 of the EIAR submitted with the planning application. These mitigation measures, including provision for a pre-commencement badger survey of the construction footprint (including the location of the known sett) will ensure that there is no potential for significant residual effects on badger as a result of the Proposed Project. In addition, in relation to badger, all works will be undertaken in line with NRA (2006) Guidelines For The Treatment Of Badgers Prior To The Construction Of National Road Schemes.

Amphibians and Reptiles

Department Observation

No amphibian or reptile surveys were completed as part of the Proposed Project, but it is recognised that suitable habitat exists within the site and, therefore, likely supports these species (Section 6.6.5 of the Biodiversity Chapter). The following text was included in Table 6-10; "No evidence of populations of reptiles and amphibians being significant at more than a local level was recorded. No likely significant effects on these species are anticipated and therefore further survey/ assessment was not deemed necessary. Based on the low number of reptile and amphibian records for the Site reptiles and amphibians have not been included as KER". However, as surveys for these species were not carried out, this conclusion cannot be reached and they cannot be ruled out as a KER, particularly given suitable habitat is present within the site. Amphibians are sensitive to changes in water quality and, therefore, a potential pollution event could result in impacts on these species and they should not be ruled out.

MKO response

The multi-disciplinary walkover surveys undertaken throughout 2023 and 2024 were designed to detect the presence, or likely presence, of a range of protected species, including reptiles and amphibians. As outlined in Section 6.6.5 of Chapter 6: Biodiversity of the EIAR submitted with the planning application, 'no amphibians or reptiles were identified during the surveys conducted'. It was acknowledged that suitable habitat for these species was present within the site, however, as outlined in Section 6.6.7 of the

ElAR, 'It is considered that the Proposed Project will not result in a significant loss of suitable habitat (watercourses and drainage ditches) for reptiles and amphibians. No evidence of populations of reptiles and amphibians being significant at more than a local level was recorded. No likely significant effects on these species are anticipated and therefore further survey/assessment was not deemed necessary'.

In relation to potential for water quality impacts, a range of mitigation measures for the protection of water quality are outlined in Sections 6.7.2.1.1 and 6.7.3.1.1 of the ElAR to ensure that there will be no deterioration of water quality as a result of the Proposed Project. Therefore there will be no significant effects on amphibians in this regard.

Habitats

Department Observation

There will be a loss of 1.3 kilometres of linear habitat within the Proposed Project, the majority being hedgerows. It is not clear whether these hedgerows are heavily managed, or unmanaged. This should be clarified and all efforts should be made to avoid the removal of hedgerows of significance, according to the Hedgerow Appraisal System.

The Department welcomes the proposal to enhance 3640 metres of managed hedgerow with native species, the addition of 270 metres of hedgerow habitat and 1.7 hectares of riparian planting. The Department further recommends that the proposed planting is completed at the outset of construction to allow the vegetation to mature and develop, and prior to any removal of habitat.

The following text is included in Section 6-15 of the Biodiversity Chapter "The locations in which the proposed planting will take place will be subject to final landowner agreement." The details of the planting plan and location of same should be finalised prior to planning permission (should permission be granted), to ensure that this mitigation measure is adhered to in full.

MKO response

The hedgerow habitat which will be lost to the Proposed Project consists of a mix of managed and unmanaged hedgerow. As outlined in Section 6.6.7, hedgerow habitat within the site (as well as treeline and scrub habitat) has been assigned Local importance (higher value) in line with the *Guidelines for Assessment of Ecological Impacts of National Road Schemes* (NRA, 2009a) as they are important in maintaining connectivity to the wider landscape as well as providing suitable nesting habitat for birds as well as foraging habitat and shelter.

In order to mitigate the loss of approximately 1,388m of linear habitat, it is proposed to enhance approximately 3640m of heavily managed hedgerow through additional planting with native species and to plant an additional 270m of native hedgerow within the site. The measures are detailed within the Biodiversity Management and Enhancement Plan (BMEP) included as Appendix 6-4 of the ElAR. The locations of the proposed enhancement and new planting is shown in Figure 2-1 of the BMEP. Due to connectivity being maintained across the Site by the existing network of linear vegetation bordering agricultural fields, the proposed enhancement and replanting will be located in the south and north sections of the Proposed Wind Farm, bolstering and patching existing hedgerows and treeline distant from the proposed turbine locations.

In order to comply with the Department's recommendation that planting is completed at the outset of construction, the Applicant can confirm that the proposed new hedgerow planting will be completed at the outset of construction to allow the vegetation to mature and develop, and prior to any removal of hedgerow habitat.

In relation to the text referred to in Section 6-15 of the Biodiversity Chapter 'The locations in which the proposed planting will take place will be subject to final landowner agreement' and the Department

recommendation that the details of the planting and locations of same be finalised prior to planning permission, it should be noted that, the locations of the proposed enhancement and new planting is shown in Figure 2-1 of the BMEP. For clarity, any landowner required deviation from the locations presented in the BMEP, would need to be signed off by the Project Ecologist, to ensure equivalent enhancement measures are achieved.

4.2.2 Inland Fisheries Ireland

A submission was received from Inland Fisheries Ireland (IFI) concerning recommendations for the protection of water quality and the aquatic environment. A response to aspects of this submission is included in **Appendix 2** of this document.

4.2.3 Transport Infrastructure Ireland

Transport Infrastructure Ireland (TII) submitted observations related to the provisions of official policy and to national road network maintenance and safety under the following headings:

- Official Policy
- National Road Network Maintenance and Safety
 - Proposed Turbine Component Haul Route
 - Abnormal Weight Loads
 - Grid Connection Routing
 - Greenways

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

4.2.3.1 Official Policy

TII highlight the Ministerial Guideline, 'Spatial Planning and National Roads - Guidelines for Planning Authorities', Department of Environment, Community and Local Government, 2012, which concerns development management and access to national roads. Specifically, Section 2.5 which sets out policy that endeavours to avoid the creation of new, additional access points for new development or the generation of increased traffic from existing non-public road accesses off the national road network.

It is noted that TII acknowledge that there are no proposed new accesses off the national road network as part of the Proposed Project, as access to the site will be facilitated via the local road network.

4.2.3.2 National Road Network Maintenance and Safety

TII raise a number of operational issues related to the Proposed Project that they wish to be resolved to address their concerns relating to national road network maintenance and safety. These are addressed below.

4.2.3.2.1 Proposed Turbine Haul Route

TII note that while no significant accommodation works are required along the turbine delivery route to facilitate the delivery of large turbine components, the route traverses roads managed by a combination of PPP Concessions, Motorway Maintenance and Renewal Contractors (MmaRC) and local authorities (namely, Kilkenny County Council).

Consultation between the wind farm developer and these companies and authorities will be undertaken prior to the commencement of turbine component delivery to confirm the delivery schedule and to ensure

that the strategic function of the national road network is maintained. A Traffic Management Plan (TMP), incorporating all the mitigation measures is included as Appendix 15-2 of the EIAR, and 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 on Site.

It is noted that only minor temporary works, including temporary overruns and the temporary removal of street furniture, are proposed on the national road network during the abnormal load delivery phase. All construction works on the local road network will be undertaken in accordance with current guidelines including the *"Traffic Signs Manual, Section 8 – Temporary Traffic Measures and Signs for Road Works"* (DoT now DoTT&S) and *"Guidance for the Control and Management of Traffic at Roadworks"* (DoTT&S).

TII also highlight that any damage caused to the surface of the national road network due to the turning of abnormally sized loads (such as turbine blade deliveries) shall be rectified in accordance with TII Pavement Standards. As stated in Chapter 15, Section 15.1.12.5, of the EIAR, a pre-condition survey of roads associated with the Proposed Project will be carried out immediately prior to construction commencement to record an accurate condition of the road at the time. A post construction survey will be carried out after works are completed to ensure that any remediation works are carried out to a satisfactory standard. Where required the timing of these surveys will be agreed with the local authority [or other relevant authority]. All road surfaces and boundaries will be re-instated to pre-development condition, as agreed with the local authority engineers.

4.2.3.2.2 **Abnormal Weight Loads**

It is confirmed that no abnormal weight loads will be associated with the Proposed Project and therefore, a technical load assessment was not deemed necessary as part of the scope of the traffic and transport assessment.

Furthermore, as no abnormal weight loads or loads exceeding those permissible under the Road Traffic Regulations will be required during the construction, operation or decommissioning of the Proposed Project, it is not deemed necessary to undertake a full assessment of all structures on the national road network along the turbine delivery route or other construction material haul routes.

4.2.3.2.3 **Grid Connection Routing**

As acknowledged by TII, the Proposed Grid Connection underground cabling route will traverse a short section of the N77 National Secondary Road (approx. 1.1km or 4.8% of the entire route).

TII highlight an number of implications for themselves and the roads authority in relation to the future management and maintenance of the national road network following the laying of high voltage electricity cabling within the national road corridor, including the potential for additional costs to be incurred from moving high voltage cables to facilitate road improvements.

The construction methodology of providing an underground grid connection cabling route under and along public road networks is well established and accepted nationwide. There are in excess of 300 wind farms currently operational in Ireland and the majority of these are connected to the national grid via underground cable connections predominantly along the public road networks.

As stated in Table 15-2b in Chapter 15 of the EIAR, the Applicant and their Contractor will work with the Road Authority to minimise impacts on construction and maintenance of the road network through the scheduling of construction of sections of the route and agreement with diversion routes where required.

It should be noted that any works within the public road corridor will be subject to a Road Opening Licence. This is a formal process through which the specific requirements of the Road Authority will be agreed. The Road Opening Licence process includes for a long-term impact and reinstatement fees, that are held for a minimum of two years following the completion of works, to cover any road maintenance works that may be required. Also, once the Proposed Grid Connection underground cabling works have been completed, it will become an ESBN asset and be treated no differently to any other existing service or utility within the public road corridor.

TII recommend that a full assessment of alternative grid connection routes be undertaken, including off-road alternatives. An assessment of alternative grid connection options has been undertaken and is included in Chapter 3, Section 3.2.6.2. This assessment included consideration of an overhead line connection and routing of an underground connection through agricultural lands adjacent to the public road network. These options were not chosen due to the potential visual impacts of an overhead line and the need to construct approximately 18.2km of new access road through agricultural lands to accommodate an underground connection. Neither option was determined to be more environmentally prudent or practical when compared against the Proposed Grid Connection underground cabling route.

TII also highlight other proposed grid connection routes utilising the same section of the N77 and state that it is not technically feasible to lay multiple electricity connections in the same section of road given the separation distances required. The Proposed Grid Connection underground cabling trench will measure approximately 600mm in width. Therefore, there will be sufficient space for other utilities, including other grid connections, within the public road corridor. Furthermore, all other permitted and proposed grid connections within the cumulative study area of the Proposed Grid Connection underground cabling route have been considered throughout the EIAR.

4.2.3.2.4 Greenways

There are no known Greenway or Active Travel proposals within the Site. However, should any proposals emerge in the future that use infrastructure corridors pertaining to the Proposed Project, consultation will be undertaken with Kilkenny County Council.

In summary, the matters raised in the TII submission have been carefully considered and answered comprehensively in this section.

4.2.4 Uisce Éireann

Uisce Éireann (UE) request the following, from the Applicant, as part of their submission:

1. *An updated EIAR to include the Kilkenny City (Troyswood) Water Supply as a Surface Water Resource (Section 9.3.14.2 [of the EIAR]). The water supply should also be considered in Section 9.3.15 Receptor Sensitivity and Section 9.5.2 Construction Phase – Likely Significant Effects and Mitigation Measures, where applicable.*
2. *A Confirmation of Feasibility from Uisce Éireann's Diversion team to build near/under or divert the existing Uisce Éireann assets.*

A detailed response to Item 1 above is included in **Appendix 2** of this document.

Prior to the lodgement of the application, information on all existing services along the Proposed Grid Connection underground cabling route was sought (including Uisce Éireann assets). The identified assets have been avoided where possible. The Applicant is experienced in this matter and has successfully installed underground cabling with interaction with Uisce Éireann for several renewable energy projects. The Applicant is committed to ensuring that the underground cabling will be installed to the satisfaction of Uisce Éireann with regards to their existing assets.

4.2.5 Irish Aviation Authority

The Irish Aviation Authority raised no objections to the Proposed Project and requested that conditions related to aeronautical Obstacle warning light scheme and as-constructed coordinates are provided to them under planning condition, should planning permission be granted. It is also requested that the IAA are notified of intentions to commence crane operations with at least 30 days prior notification of their erection.

The applicant confirms its agreement to these conditions should the Board approve planning permission for the Proposed Project.

4.2.6 Gas Networks Ireland

Gas Networks Ireland raised no objection to the Proposed Project but have provided a document detailing their code of practice for working in the vicinity of the Transmission Network.

4.2.7 Health Service Executive

The National Environmental Health Service (NEHS – a section within the Health Service Executive) made a submission on the planning application for the Proposed Project that made observations and recommendations in relation to the following:

- Public Consultation
- Shadow Flicker
- Land, Soils and Geology
- Water
- Air Quality
- Noise and Vibration

The NEHS observations and recommendations in relation to Land, Soils and Geology and Water are considered and responded to in Appendix 2 of this document. All other items listed above are considered and responded to in this section.

Public Consultation

The NEHS acknowledge the public consultation process undertaken by the Applicant and outlined in Chapter 2 and Appendix 2-1 of the EIAR. They state that public consultation and engagement must continue should the Proposed Project receive a grant of planning permission.

It can be confirmed that Applicant has continued to engage with the local community since the application was lodged and will continue the public consultation process through the pre-construction, construction, operational phase.

The Community Liaison Officer for the Proposed Project, appointed in September 2022, will continue to remain available to address any queries or concerns raised by local residents both while this application remains in the planning system and following any grant of planning permission for the Proposed Project, as stated in Section 2.4 of Appendix 2-1 (Community Report).

Shadow Flicker

The NEHS acknowledges that the applicant has proposed mitigation measures in Chapter 5 of the EIAR to ensure compliance with the daily and annual shadow flicker duration thresholds set out in the Guidelines and that it has been stated in Section 5.9.1 of the EIAR that the same mitigation measures

(with stricter implementation of shadow flicker controls) also demonstrate that the proposed turbines can be operated in accordance with the shadow flicker requirements of the draft Guidelines, should they be adopted as currently proposed, while the planning application is being determined.

The NEHS then recommends that the planning authority attaches a condition to any grant of planning permission which specifies that the Proposed Development must comply with the shadow flicker threshold set out in the draft Guidelines (i.e. zero shadow flicker).

The Board is reminded that the Guidelines is still the current, adopted guidance that must be adhered to by both developers and planning authorities. Thus, the inclusion of a condition arising from guidance that is still in draft format would be contrary to any grant of planning permission by local authorities and the Board for wind energy developments where the applicant committed to complying to the shadow flicker thresholds within the Guidelines (i.e. 30 minutes per day or 30 hours per year).

Air Quality

The NEHS recommend that the implementation of the dust control measures outlined in Chapter 10 of the EIAR and the CEMP (Appendix 4-2 of the EIAR) are included as a condition attached to any grant of planning permission for the Proposed Project by the planning authority.

The Applicant confirms that such a condition would be welcomed.

Noise and Vibration

The NEHS notes the comprehensive assessment of noise and vibration undertaken for the Proposed Project and included in Chapter 12 of the EIAR as well as the mitigation measures proposed to ensure that there are no significant noise effects on sensitive receptors during the construction and operation of the Proposed Project. The following recommendations are made:

- The Applicant is to ensure that wind turbines that are selected to be installed at the Proposed Wind Farm site have the necessary control systems to provide the appropriate curtailment, if required.
- Validation of the effectiveness of curtailment through operational phase noise monitoring.
- Notification of the local residents who may be impacted during periods of construction close to their houses including confirmation of the period of time and the level of disruption which may be expected.
- The limiting of work hours to those specified within Chapter 12, Section 12.5.2 of the EIAR.

The Applicant is satisfied with the above recommendations and can commit to the implementation of the same.

CONCLUSION

This First-Party Appeal is being lodged in respect of the decision issued by Kilkenny County Council to refuse planning permission for the Briskalagh Renewable Energy Development proposed under Kilkenny County Council, Planning Ref No. 25/60003.

The GOA Report outlines the project background, the reasons for Kilkenny County Council's refusal, and the Applicant's Grounds of Appeal. It directly addresses and refutes the three refusal reasons, demonstrating that they are fundamentally flawed and that the Proposed Project aligns with proper planning and sustainable development. As such, it argues that Kilkenny County Council's decision should be overturned and planning permission granted by An Bord Pleanála. Additionally, the GOA Report provides a comprehensive response to all Third-Party and Statutory Consultee submissions and highlights An Bord Pleanála's legal obligations under the Climate Action and Low Carbon Development Act 2015 (as amended) and the Planning and Development Act 2000 (as amended) in assessing renewable wind energy projects.

The Proposed Project, if permitted, will contribute towards national wind energy target of 9GW. The importance of this Proposed Project with regards to the climate goals cannot be overlooked.

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

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

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

Regional and Local Level Policy, including:

- g) The Regional Spatial and Economic Strategy,
- h) The policies of the planning authority as set out in the Kilkenny City and County Development Plan 2021-2027 in relation to achieving national climate and renewable energy targets and addressing climate change.

Ultimately, it is considered that this Proposed Project 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 are ruled out, such as the Proposed Project, it is unlikely that any acceleration will be seen.

In response to refusal reason 1, it has been demonstrated that the Proposed Project would not give rise to excessive levels of adverse effects on residential amenity in the area that are incapable of being mitigated. As discussed in Section 4, mitigation in the form of appropriate design, good construction practices, installation of screening measures, use of turbine control measures and traffic management will ensure that there will be no significant adverse effects on residential amenity arising from the Proposed Project.

In response to refusal reason 2, it has been demonstrated that the quality and scope of data within the EIAR are robust, particularly in the assessments of landscape and visual impact, material assets, noise, ecology (biodiversity and ornithology), and hydrology. The report also provides detail on cumulative effects and potential impacts on residential amenity, ensuring a comprehensive evaluation of the project's implications.

In response to refusal reason 3, our response details the comprehensive survey effort that was undertaken to collect accurate information on the baseline environment and to inform a robust assessment. The assessment considered all potential for adverse effects on the River Barrow and River Nore SAC and the River Nore SPA, including potential for cumulative effects on European Sites. The mitigation prescribed within the NIS is considered appropriate to ensure that there is no potential for adverse effects on the integrity of any European Sites.

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 Project.

Therefore, it is respectfully requested that the Board overturn the decision of Kilkenny County Council and grant planning permission for the Proposed Project in accordance with the provisions of proper planning and sustainable development.



APPENDIX 1

**NOTIFICATION OF DECISION TO
REFUSE PLANNING PERMISSION
BY KILKENNY COUNTY COUNCIL.**



KILKENNY COUNTY COUNCIL

PLANNING AND DEVELOPMENT ACTS 2000 (AS AMENDED)

NOTIFICATION OF DECISION TO REFUSE

TO: Briskalagh Ltd.
c/o Mike Amiel Mekell
MKO, 9C Beckett Way
Park West Business Park
Dublin 12
D12 XN9W

Planning Register Number: 25/60003

Valid Application Received: 03/01/2025

Further Information Received Date:

In pursuance of the powers conferred upon them by the above-mentioned Acts, Kilkenny County Council has by Order dated 27/02/2025 decided to REFUSE TO GRANT PERMISSION for development of land, namely:-

for a period of 10 years for a development at this site situated in the townlands of Acragar, Ballyconra, Ballycuddihy, Ballyroe, Ballyroe (Grace), Ballyroe (Maher), Baunaniska, Boherkyle, Briskalagh, Brittas, Clone, Coolnapisha, Curraghduff, Freshford, Freshford Lots, Graigueswood, Grange, Huntstown, Kilmanagh, Knockeenglass, Knockown, Moatpark, Monabrika, Monavadaroe, Moneenaun, Oldtown, Oldtownhill, Parksgrove, Picketstown, Rathealy, Sart, Sweethill, Tobernapeastia, Tullaroan, Upperwood Demesne, Co. Kilkenny. The development will consist of the provision of the following: i. 7 no. wind turbines with an overall turbine tip height of 185 metres; a rotor blade diameter of 163 metres; and hub height of 103.5 metres, and associated foundations and hard-standing areas; ii. A permanent 38kV substation compound (control building with welfare facilities, all associated electrical plant and apparatus, security fencing, underground cabling, storage containers, wastewater holding tank, site drainage and all ancillary works); iii. Permanent underground electrical (38kV) and communications cabling to the existing Ballyragget 110kV substation in the townland of Moatpark (including joint bays, communication and earth sheath link chambers and all ancillary works along the route). This cabling route is primarily located within the public road corridor which includes a Protected Structure (Kilkenny RPS Ref. C886); iv. Underground electrical (33kV) and communications cabling connecting the wind turbines and meteorological mast to the on-site substation; v. 3 no. temporary construction compounds (including site offices and welfare facilities); A meteorological mast with a height of 30 metres, security fencing and associated foundation and hard standing area; vii. A new temporary site entrance on the L1009; viii. A new gated site entrance on the L5024; ix. Upgrade of existing site tracks/ roads and provision of new site access roads, junctions and hardstand areas; x. A borrow pit; xi. Spoil Management; xii. Tree felling and hedgerow removal; xiii. Biodiversity Management and Enhancement Plan measures (including establishment of a riparian buffer and hedgerow enhancement); xiv. Site Drainage; xv. Operational Stage site signage; and xvi. All ancillary works and apparatus. A thirty five-year operational life from the date of full commissioning of the wind turbines and subsequent decommissioning of the wind turbines is being sought. An Environmental

Impact Assessment Report and Natura Impact Statement has been prepared in respect of the proposed development and accompany this application. AT Townlands of Acragar, Ballyconra, Ballycuddihy, Ballyroe, Ballyroe (Grace), Ballyroe (Maher), Baunaniska, Boherkyle, Briskalagh, Brittas, C e, Coolnapisha, Curraghduff, Freshford, Freshford Lots, Graigueswood, Grange, Huntstown, Kilmanagh, Knockeenglass, Knockown, Moatpark, Monabrika, Monavadaroe, Moneenaun, Oldtown, Oldtownhill, Parksgrove, Picketstown, Rathealy, Sart, Sweethill, Tobernapeastia, Tullaroan, Upperwood Demesne, Co. Kilkenny. IN ACCORDANCE WITH THE PLANS SUBMITTED WITH THE APPLICATION.

For the reason and considerations stipulated on the First Schedule hereto.

In deciding the Planning Application the Planning Authority have regard to submissions or observations received in accordance with the Regulations.

Signed on behalf of Kilkenny County Council



for DIRECTOR OF SERVICES

DATE: 27/02/2025

See final page for details of appeal procedures.

Tel no. Planning Section: 056-7794010

Website: www.kilkennycoco.ie



N An applicant for permission and any person who made submissions or observations in writing in relation to the planning application to the planning authority in accordance with the permission regulations and on payment of the appropriate fee, may, at any time before the expiration of the appropriate period – “the appropriate period” means the period of four weeks beginning on the day of the decision of the planning authority – appeal to An Bord Pleanála against a decision of a planning authority under Section 34.

AN APPEAL SHALL BE MADE

- (a) by sending the appeal by prepaid post to An Bord Pleanála, 64 Marlborough Street, Dublin 1, Tel 01.8588100 or LoCall 1890 2751 75
- (b) by leaving the appeal with an employee of An Bord Pleanála at the offices of the Board during office hours (as determined by the Board) or
- (c) by such other means as may be prescribed.

APPEALING A DEVELOPMENT CONTRIBUTION.

- (a) Subject to paragraph (b), no appeal shall lie to the Board in relation to a condition requiring a contribution to be paid in accordance with a scheme made under this section.
- (b) An appeal may be brought to the Board where an applicant for permission under Section 34 considers that the terms of the scheme have not been properly applied in respect of any condition laid down by the planning authority.

AN APPEAL SHALL

- (a) be made in writing
- (b) state the name and address of the appellant and of the person, if any, acting on his or her behalf
- (c) state the subject matter of the appeal
- (d) state in full the grounds of appeal and the reasons, considerations and arguments on which they are based
- (e) in the case of an appeal under Section 37 by a person who made submissions or observations in accordance with the permission regulations, be accompanied by the acknowledgement by the planning authority of receipt of the submissions or observations
- (f) be accompanied by such fee (if any) as may be payable in respect of such appeal in accordance with Section 144 and
- (g) be made within the period specified for making the appeal.

FEES FOR APPEAL

(a)	Appeals against decisions of Planning Authorities	
	Appeal	
(i)	1 st party appeal relating to commercial development where the application included the retention of development	€4,500 or €9,000 if an EIS or NIS involved
(ii)	1 st party appeal relating to commercial development (no retention element in application)	€1,500 or €3,000 if EIS or NIS involved
(iii)	1 st party appeal non-commercial development where the application included the retention of development	€660
(iv)	1 st party appeal solely against contribution conditions (s) – (2000 Act section 48 or 49)	€220
(v)	Appeal following grant of leave to appeal	€110
(vi)	An appeal other than referred to in (i) to (v) above	€220
(b)	Referral	€220
(c)	Reduced fee for appeal or referral (applies to certain specified bodies)	€110
(d)	Application for leave to appeal (section 37(6)(a) of 2000 Act)	€110
(e)	Making submission or observation (specified bodies exempt)	€50
(f)	Request for oral hearing under section 134 of 2000 Act	€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)		

ORAL HEARINGS

The Board may, in its absolute discretion, hold an oral hearing of an appeal. A party to an appeal may request an oral hearing of the appeal. A request for an oral hearing of an appeal shall be made in writing to the Board and shall be accompanied by such fee (if any) as may be payable in respect of the request in accordance with Section 144. A request for an oral hearing of an appeal which is not accompanied by such fee (if any) as may be payable in respect of the request shall not be considered by the Board.

A request by an appellant for an oral hearing of an appeal under Section 37 shall be made within the appropriate period referred to in that section (the period of four weeks beginning on the day of the decision of the Planning Authority) and any request received by the Board after the expiration of that period shall not be considered by the Board. A request by a party to an appeal other than the appellant for an oral hearing of an appeal shall be made within the period referred to in Section 129(2)(a) (within a period of 4 weeks beginning on the day on which a copy of the appeal is sent to that party by the Board) within which the party may make submissions or observations to the Board in relation to the appeal, and any such request received by the Board after the expiration of that period shall not be considered by the Board.

Further details are available on the Board’s website – www.pleanala.ie

First Schedule
3 No. Reasons & Considerations for Decision to Refuse Planning Permission Ref.
P25/60003

1. Having regard to the size and scale of the proposed development, the Planning Authority considers that the proposed seven (7) number turbines with 185metre tip height will, due to the cumulative effects of visual intrusion, combined with noise, flicker and disturbance of access, on a significant number of nearby dwellings in and around the settlements of Tullaroan, Kilmanagh, and Ballycallan, give rise to excessive levels of adverse effects on residential amenity in the area. These effects are integral and incapable of being mitigated because they arise from the extent and scale of the proposed works and their proximity and position relative to dwellings. Therefore, notwithstanding the National imperatives on renewable energy it is considered that the proposed development on its own and in combination with other windfarms already constructed and permitted in the area will have a disproportionate undue and unreasonable impact on the visual landscape amenity of the area and in particular will severely impact negatively on the residential amenity of the community in close proximity. The proposed development would therefore be contrary to the proper planning and sustainable development of the area.
2. The Planning Authority in its assessments of the applicants' specialist chapters of the EIAR finds that there are a number of significant deficiencies in the quality and quantum of data provided, particularly in the areas of landscape and visual effects, material assets, noise, ecology and hydrology. Furthermore, insufficient detail has been provided on the matter of cumulative effects, especially in regards to the likely effect on the residential amenity of the immediately adjacent residential areas. The EIAR was found to not meet the statutory EIA requirements in relation to the following sections contained therein as follows:
 - a. Consideration of Reasonable Alternatives, including cable routes
 - b. Description of the Proposed Project
 - c. Population and Human Health
 - d. Biodiversity (excluding birds)
 - e. Birds
 - f. Land, Soils and Geology
 - g. Hydrology and Hydrogeology
 - h. Air Quality
 - i. Noise and Vibration
 - j. Landscape and Visual
 - k. Cultural Heritage
 - l. Traffic and Transport
 - m. Other Material Assets
 - n. Interaction of Effects.

which has resulted in insufficient information for the Planning Authority to arrive at a reasoned conclusion on the significant effects of the project on the environment. In applying the precautionary principle therefore, the Planning Authority is not satisfied that the environment impacts alone or in combination have been satisfactorily addressed, the development would therefore be contrary to the proper planning and sustainable development of the area if permitted.

3. There is a significant lack of supporting information for certain ecological receptors (such as birds) in both the Stage 1 Screening and Stage 2 Natura impact Statement, and certain elements of the mitigation measures; with particular regard to:
- (a) otter surveys carried out outside of the optimum season,
 - (b) botanical surveys results accuracy and completeness,
 - (c) comprehensive information on all watercourses within the proposed development site that have hydrological connectivity to downstream European sites, and assessment of potential effects with particular regard to cumulative effects and interactions with various construction stages and works areas across the proposed site,
 - (d) full data sets of all SCI species recorded during surveys (including non “target species”),
 - (e) clear rationale for the selection for “target” bird species and exclusion of other SCI species that were recorded within the proposed development site,
 - (f) consideration of SCI species considered for assessment of potential effects in the NIS,
 - (g) inadequate collision risk assessment for SCI species,
 - (h) insufficient assessment for birds in the NIS supplemented with relevant scientific literature regarding the migratory pathways of species recorded,
 - (i) insufficient information regarding the relationship between required works for the proposed grid connection and intersecting European sites to support statements made regarding absence of potential for direct effects, and
 - (j) sufficiency and implementation of mitigation.

As a result, the subsequent assessments of potential effects, the application of mitigation measures and the assessment of residual and cumulative effects are not supported in terms of a complete Appropriate Assessment process. Having regard to the Natura Impact Statement submitted as part of the planning application and the lack of supporting information, the planning authority is not satisfied that there is no risk of adverse effects on the integrity of the associated European Sites (either directly or indirectly), along or in-combination with other plans or projects. The application as submitted contains reasonable scientific doubt which in line with case law precludes the planning authority as the competent authority from concluding a finding of no adverse effects.

Please note that the Site Notice shall be removed by the applicant following the notification of the Planning Authority decision under Article 31.



APPENDIX 2

RESPONSE BY HYDRO-
ENVIRONMENTAL SERVICES

Date: 24th March 2025
Our Ref: P1657-1-0010

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

To whom it may concern,

Re: An Bord Pleanála Appeal Submission

**Geological, Hydrological and Hydrogeological Responses to the Reasons for Refusal
Issued by Kilkenny County Council in Relation to the proposed Briskalagh Wind Farm,
Co. Kilkenny (Planning Reference Number: P25/60003)**

Hydro-Environmental Services (HES) were requested by MKO Ireland (MKO) to respond to the geological, hydrological and hydrogeological issues raised in Kilkenny County Council's decision to refuse permission for the proposed Briskalagh Renewable Energy Development.

In a letter issued by Kilkenny County Council on 27th February 2025, the Planning Authority notified Briskalagh Limited of their decision to refuse permission for the Proposed Project. The schedule accompanying the refusal notice set out 3 no. reasons for refusal.

This appeal response letter responds to the geological, hydrological and hydrogeological issues and concerns raised in Kilkenny County Council's 'Planning Report', statutory submissions and 3rd party submissions.

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 22 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 EIA/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 (Section 9.1.2).

2 KILKENNY COUNTY COUNCILS PLANNING REPORT

2.1 CAAS EIAR REVIEW

CAAS Ltd were engaged by Kilkenny County Council to review the EIAR submitted for the proposed Briskalagh Renewable Energy Development. A brief summary of CAAS's comments and recommendations in relation to Chapter 8: Land, Soils and Geology and Chapter 9: Hydrology and Hydrogeology are detailed below.

2.1.1 Land, Soils and Geology

In the review of Chapter 8: Land, Soils and Geology (LSG) Chapter CAAS state that the "assessment of effects on the land, soils and geology is generally reasonable with well supported findings that significant effects are unlikely to occur".

CAAS state that consideration should be given to the following:

- Clarify the concrete sourcing proposals.
HES Response: Concrete for the Proposed Project will be sourced from offsite locations and will be transported to the Site in concrete lorries from local batching plants.
- Address issues in regard to the adequacy of mitigation and monitoring.
HES Response: Further clarity is provided in the text provided in Section 2.1.1.1 below.
- Addressing issues regarding the cumulative assessment.
HES Response: Refer to text provided below in Section 2.1.1.2 of this letter response.
- Respond to all issues raised in the 3rd party submissions.
HES Response: Refer to Section 4 below.

2.1.1.1 LSG - Adequacy of Mitigation Measures

CAAS state that the specifications regarding silt fence types, mesh sizes and specification are not detailed in the chapter. The silt fences to be used are Terra Stop Premium silt fences. These silt fences have a flow rate of 21L/m²/s in comparison with the 7L/m²/s flow rate of any silt fences – note that low flow rate is the most common reason for silt fence failure. The Terra Stop Premium silt fences have a mesh size of 180µm. Full details regarding the silt fences are available at [Silt Fence – Terra Stop Premium | Silt Fence Ireland](#). Note that silt fences are primarily used to protect the water environment and not the land, soils and geological environment.

The mitigation measures detailed in Chapter 8 of the submitted EIAR are tried and tested, best-practice mitigation measures for the protection of soils and geology. These mitigation measures are used at construction sites across the country and have been successfully used in the construction of the numerous existing wind farms. Furthermore, these best practice mitigation measures have been deemed appropriate in several recent decisions to grant permission for similar development, issued by both An Bord Pleanála and Local Authorities – please refer to recently permitted Glenard Wind Farm (ABP Case No: 312659) and the permitted Seven Hills Wind Farm (ABP Case No. 313750). With the implementation of these best in-class mitigation measures there will be no significant effects on the land, soils and geological environment.

2.1.1.2 LSG Cumulative Assessment

A comprehensive cumulative impact assessment for the Proposed Project and other developments on the Land, Soils and Geological environment is presented in Section 8.6.7 of the submitted EIAR and is summarised below.

Due to the localised nature of the proposed construction works which will be kept within the Site boundary, there is no potential for significant cumulative effects in combination with other local developments on the land, soils and geology environment as all effects are direct within the Site. Other projects outside the Site do not have the potential to reduce or increase the magnitude of effects of the Proposed Project on Land, Soils and Geology.

The potential for cumulative effects along the Proposed Grid Connection underground cabling route are limited given the minor and transient nature of the proposed works. The proposed works are similar to roadworks being completed across the country. The EIAR does highlight the presence of an overlap of ~300m with the grid connection for the Farranrory Wind Farm. However, construction of both grid connections at the same time would not be allowed for a swathe of reasons including road safety, construction health and safety and practicality issues. Furthermore, given that stages that both the Farranrory and Briskalagh projects are at (Farranrory is currently in construction), the grid connections works will not occur at the same time. Therefore, as concluded in the EIAR, the timing of the works will be coordinated to ensure that there are no concurrent works and therefore no potential for cumulative effects. This is not something that if left to contractors, it wouldn't be done, moreover it is just practical common sense. Nevertheless, Briskalagh Ltd are happy to accept a planning condition that directs that there can be no overlap between the construction of these two grid connections installations, should it be considered necessary by the Board.

It is therefore considered that the conclusion reached in the EIAR is accurate, and there is no potential for cumulative effects on the land, soils and geological environment.

2.1.2 Water - Hydrology and Hydrogeology

In the review of Chapter 9: Hydrology and Hydrogeology CAAS state that the "assessment of effects on land, hydrology and hydrogeology is generally reasonable with well supported findings that significant effects are unlikely to occur".

CAAS state that consideration should be given to the following:

- Address issues in regard to the adequacy of mitigation and monitoring.
HES Response: Further clarity is provided in the text below.
- Addressing issues regarding the cumulative assessment.
HES Response: Refer to the text below.
- Respond to all issues raised in the 3rd party submissions.
HES Response: Refer to Section 4.

2.1.2.1 Water - Adequacy of Mitigation

The mitigation measures detailed in Chapter 9 of the submitted EIAR and in the CEMP are tried and tested, best-practice mitigation measures for the protection of the hydrological (surface water) and hydrogeological (groundwater) environment. These mitigation measures are used at construction sites across the country and have been used in the successful construction of countless existing wind farm developments. It is noteworthy that similar mitigation measures for the protection of the receiving water environment were proposed in the EIARs for the recently permitted Glenard Wind Farm (ABP Case No: 312659) and the permitted Seven Hills Wind Farm (ABP Case No. 313750).

In recent years many wind farms have been constructed using similar mitigation measures (as proposed for the Briskalagh WF development) with respect to suspended solids, hydrocarbons, cement-based products, and wastewater during their construction and operational phases.

These mitigation measures, the same of those detailed in the submitted EIAR for the Proposed Project, have proven to be successful in the protection of the hydrological and hydrogeological environment, and are summarised below:

- The key surface water control is that there will be no direct discharge of any infrastructure 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 (for details on the Terra Stop Premium silt fences to be used please see <https://ssienviromental.ie/silt-fence-terra-stop-premium/>) 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):
 - Each individual element of the water 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 brush 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 proposed in Chapter 9 of the EIAR.

The prescribed mitigation measures with respect to suspended solids (refer to Sections 9.5.2.1, 9.5.2.2, 9.5.2.3 and 9.5.2.4 of the EIAR), hydrocarbons (refer to Section 9.5.2.6 of the EIAR), cement-based products (refer to Section 9.5.2.7 of the EIAR) and wastewater (refer to Section 9.5.2.8 of the EIAR) are best in-class and will ensure that there is no potential for significant effects on the receiving water environment.

2.1.2.2 Water - Cumulative Assessment

A comprehensive cumulative impact assessment for the Proposed Project and other developments on the water environment is presented in Section 9.5.7 of the submitted EIAR and is summarised below.

The first step in a cumulative assessment is the delineation of the hydrological/hydrogeological study area. This hydrological/hydrogeological study area identifies the area where there is potential for cumulative effects to occur based on the hydrological and hydrogeological setting of the site. The hydrological/hydrogeological study area was delineated based on a quantitative assessment based on the EPA's Hydrotol flow estimates in the watercourses downstream of the Proposed Wind Farm site. This assessment concluded that due to increasing flow volumes downstream of the Proposed Wind Farm site, that there would be no potential for effects to occur downstream of the King's River near Callan. The total catchment of the King's River at this location was found to be 20,000ha, which is a significant area and is considered to be a conservative study area.

The subsequent sections of the EIAR assess the potential for cumulative effects with agriculture (Section 9.5.7.1), forestry (Section 9.5.7.2), other wind farm developments (Section 9.5.7.3), other wind farm grid connections (Section 9.5.7.4), EPA licenced wastewater facilities (Section 9.5.7.5) and other developments (Section 9.5.7.6).

The exhaustive cumulative assessment concludes that with the implementation of the tried and tested, best-practice mitigation measures as prescribed in the EIAR and CEMP, there will be no potential for cumulative effects to occur. With the implementation of the Proposed Wind Farm drainage system there will be no discharge of untreated or unattenuated waters. Furthermore, the prescribed mitigation measures detailed with respect to suspended solids (refer to Sections 9.5.2.1, 9.5.2.2, 9.5.2.3 and 9.5.2.4 of the EIAR), hydrocarbons (refer to Section 9.5.2.6 of the EIAR), cement-based products (refer to Section 9.5.2.7 of the EIAR) and wastewater (refer to Section 9.5.2.8 of the EIAR) will protect the receiving hydrological/hydrogeological environment from potential contamination.

2.2 OTHER ITEMS RAISED IN THE PLANNERS REPORT

2.2.1 Land, Soils and Geology

The Planners Report states the following concerns:

- The applicant refers to the borrow pit as a source of aggregate for concrete mixes but this would appear to be an error.

HES Response: This is an error, as concrete for the Proposed Project will be sourced from offsite locations and will be transported to the Site in concrete lorries from local batching plants. As detailed in Section 9.5.2.7 of the EIAR there will be no batching of wet-concrete products on-site.

- Concerns existing regarding the levels of contamination in materials removed from the roads and this material would not be permitted entry into zones earmarked for spoil placement being near or adjacent to the Callan PWS source protection area.
HES Response: As detailed in Section 8.6.2.3 of Chapter 8 of the EIAR, all waste tar will be removed off-site and taken to a licenced waste facility. Only inert spoil material will be stored at the Proposed Wind Farm site and this material will have no potential to contaminate the local environment.
- The planning authority is not satisfied on the stated approach for avoidance of issues arising from overlapping of timelines for other grid connection works which leaves this discussion between contractors.
HES Response: Refer to Section 2.1.1.1 above. There will be no overlap of the grid connection construction of the Farranrory and Briskalagh developments as these projects are at different stages – Farranrory wind farm is currently under construction. Nevertheless, Briskalagh Ltd are happy to accept a planning condition that directs that there can be no overlap between the construction of these two grid connections installations, should the Board consider it necessary.

2.2.2 Hydrology and Hydrogeology

The Planners Report states the following concerns:

- The local authority has significant concerns in relation to the development of the proposed wind farm and borrow put on a site of a drinking water supply source which would increase the risk of groundwater contamination.
HES Response: A comprehensive impact assessment of the potential effects on the local public and group water supplies is included in Sections 9.5.2.17 and 9.5.3.4 of the EIAR for the construction and operational phases of the Proposed Project. A summary of the assessment on the Callan PWS, as presented in Chapter 9 of the EIAR, is included in Section 3.3 in response to Uisce Éireann's submission. Meanwhile, a summary of the assessment, as presented in Chapter 9, on the Tullaroan and Ballycallan GWSs is included in Section 4.1 below.
- Sections of the proposed development lies within the Source Protection Area for the River Nore water supply.
HES Response: Please refer to Section 3.3 for an assessment of the potential effects on the Troyswood supply which was screened out of the impact assessment presented in EIAR Chapter 9.
- Inadequate provision of mitigation measures and lack of clarity in mitigation does not support the applicants findings that residual effects will be imperceptible.
HES Response: The mitigation measures detailed in the EIAR are tried and tested, best practice mitigation measures for the protection of surface and groundwater quality. Further details are provided in Section 2.1.2.1 above. Similar mitigation measures for the protection of the receiving water environment were proposed in the EIARs for several recently permitted wind farm developments.
- Concerns regarding the proposal for the voids between the edge shutter and the exposed soil face to be filled with suitably sized aggregate, thus may constitute a preferential flow path down to the bedrock.
HES Response: The bedrock mapped at the site is classified as a poor bedrock aquifer, with low permeability, and rejects the vast majority of the potential groundwater

recharge (the GSI recharge cap at the Proposed Wind Farm site is 50mm/yr max). On the valley sides, all groundwater discharges into several small streams which flow downslope towards the Tullaroan Stream. During the operational phase, the bedrock at the site will continue to reject the potential groundwater recharge and groundwater will discharge to the Tullaroan Stream, its tributaries or the sand and gravel aquifer on the floor of the valley. Therefore, the creation of potential preferential flowpaths to the bedrock is insignificant. Nevertheless, the prescribed mitigation measures will ensure the protection of groundwater quality. (Sections 8.6.2 and 9.5.2 of the EIAR)

- Lack of site investigation at T07.

HES Response: Please refer to Section 4.1 below.

- Borrow pits and other locations are to be backfilled with excavated material from unknown locations.

HES Response: The proposed borrow pit will be backfilled with excess material generated on site and will comprise of natural overburden, as stated in Chapter 4, Section 4.3.1.9, of the EIAR. The borrow pit will not be backfilled with any contaminated material. There will be no potential for the inert backfill material to impact local groundwater quality.

- The cable ducting route will traverse several bridges and substantial watercourses. The applicant has proposed several systems to address this but failed to detail specific units to specific crossings, and details for how the relevant watercourses will be protected during the works. Inadequate information provided in relation to directional drilling.

HES Response: Table 4-5 in Chapter 4 of the submitted EIAR details the proposed crossing methodology at each of the watercourse crossings along the Proposed Grid Connection underground cabling route. Furthermore, detailed mitigation measures for the protection of surface water quality during the proposed works at watercourse crossings along the Proposed Grid Connection underground cabling route are detailed in Section 9.5.2.10 of the submitted EIAR. There will be no instream works at these crossing locations and all works will be minor and transient in nature. Directional drilling is proposed at 4 no. crossings and additional mitigation measures were prescribed in EIAR Section 9.5.2.13. These are standard mitigation measures for directional drilling and will ensure that there are no significant effects on the water environment.

- Inadequate information has been presented in relation to surface water and potential flooding.

HES Response: A comprehensive Flood Risk Assessment was submitted as Appendix 9-1 of the EIAR. Please refer to Section 4.1 for a full response in relation to flooding.

- The lack of specification of limits for water quality parameters in Chapter 9.

HES Response: Water quality monitoring is only proposed during the construction phase. The parameters to be analysed will be the same as those detailed in Section 9.3.7 of the submitted EIAR. Full details are provided in the Section 4.2 of the CEMP (Appendix 4-2 of the EIAR).

3 STATUTORY SUBMISSIONS

3.1 DEPARTMENT OF HOUSING, LOCAL GOVERNMENT AND HERITAGE

The DoHLG have raised concerns regarding the use of silt fences, with the EIAR stating that the silt fences will only be used 'if required' along the Proposed Grid Connection.

The applicant can confirm that silt fences will be utilised downgradient of all proposed works areas, including along the Proposed Grid Connection underground cabling route, to ensure that there is no entrainment of suspended solids in surface water runoff from construction areas.

3.2 INLAND FISHERIES IRELAND

In its submission IFI requested that:

- All mitigation measures detailed in the NIS, EIAR and CEMP are adhered to in full.
HES Response: All mitigation measures prescribed in the EIAR, NIS and the CEMP for the protection of water quality will be implemented in full.
- IFI are consulted at the design stage for the new crossings and alterations to the existing crossings.
HES Response: IFI will be consulted at the design stage and prior to the commencement of works.
- All crossings comply with IFI's "Guidelines on Protection of Fisheries during Construction Works in and adjacent to Waters" (2016).
HES Response: All crossings will comply with IFI guidance.
- The contractor refers to the OPW's "Design Guidance for Fish Passage on Small Barriers" (2021) where existing crossings are being upgraded.
HES Response: All relevant guidance will be consulted prior to the commencement of the works.
- Method statements for all crossings are presented to IFI at least 10 days prior to the commencement of works.
HES Response: In advance of intended construction works, method statements for the works at watercourse crossings will be supplied to IFI within the stated timeframe.
- New crossings of 2nd order watercourses or higher must be clear-span crossings only.
HES Response: Only 1 no. new crossing at the Proposed Wind Farm site is mapped over a 2nd order or higher watercourse. As detailed in Section 9.5.2.9 of the submitted EIAR, all new proposed stream/river crossings will be clear span bridge crossings, the existing banks will remain undisturbed and there will be no instream works. Meanwhile, the new crossing of the River Nore along the Proposed Grid Connection underground cabling route will be completed using Horizontal Directional Drilling, under the river, and thus avoiding instream works.

The detailed tried and tested, best-practice, mitigation measures prescribed in the EIAR (Section 9.5.2.9 for works at watercourse crossings at the Proposed Wind Farm site and in Section 9.5.2.10 for works at watercourse crossings along the Proposed Grid Connection underground cabling route, with additional mitigation measures prescribed in Section 9.5.2.13 for the directional drilling) will ensure that the works associated with new and existing watercourses crossings will not result in any significant effects on downstream surface water quality.

3.3 UISCE ÉIREANN

Uisce Éireann raised concerns regarding the potential for the Proposed Project to impact Uisce Éireann drinking water sources, with particular reference made to the Callan PWS and the surface water abstraction for Kilkenny City (Troyswood). These concerns are addressed below.

Potential Effects on the Callan PWS

The potential for the Proposed Project to effect the Callan PWS was thoroughly assessed in Section 9.5.2.17 of the EIAR for the construction phase and Section 9.5.3.3 of the EIAR for the operational phase.

The comprehensive impact assessment was completed cognisant of the County Kilkenny Groundwater Protection Scheme, Volume II: Source Protection Zones report. The assessment was based on the local hydrogeological regime, the nature of the bedrock aquifer and the overlying sand and gravel aquifer, the GSI's delineated Zone of Contribution (ZoC) to the source and the location of the source with respect to the Proposed Project. The assessment was completed in accordance with "Wind farms and groundwater impacts – A guide to EIA and Planning considerations" (DoE/NIEA, 2015).

The robust and comprehensive impact assessment, as presented in Chapter 9, found that there is limited potential for effects on the Callan PWS for the following reasons:

- The scale of the works proposed within the ZoC to the Callan PWS is infinitely small in comparison with the overall size of the ZoC. The total footprint of the Proposed Project within the ZoC is 5.93ha, which accounts for only 0.2% of the total ZoC area;
- The separation distance between the closest turbine (T07) and the Callan Spring and its associated inner source protection area (>9km);
- The emplacement of the proposed infrastructure at the Proposed Wind Farm site will not significantly alter recharge or runoff rates. As detailed Table 9-20 of the submitted EIAR, even in the absence of mitigation measures, the development footprint at the Proposed Wind Farm site would only result in a 0.2% increase in surface water runoff from baseline conditions. This is due to the naturally high runoff rates across the site (due to the presence of relatively low permeability tills) with groundwater recharge confined to the lower ground along the Tullaroan Stream (Tullaroan/Kilmanagh River) where glacio-fluvial sands and gravels are present;
- The construction of infrastructure and foundations associated with the Proposed Project within the ZoC will not impact groundwater flowpaths as groundwater can move relatively freely in the sand and gravel subsoils in the valley of the Tullaroan Stream and can easily migrate around any installed infrastructure;
- The Proposed Wind Farm drainage regime will ensure that there are no changes in surface water runoff and/or groundwater recharge rates and there will be no net loss of water within the ZoC;
- Tried and tested, best-practice mitigation measures have been prescribed in the EIAR in relation to felling (Section 9.5.2.1), suspended solids (Sections 9.5.2.2, 9.5.2.3 and 9.5.2.4), hydrocarbons (Section 9.5.2.6), cement-based products (Section 9.5.2.7), wastewater (Section 9.5.2.8) and morphological changes to watercourses (Section 9.5.2.9);
- These mitigation measures will ensure that there is no deterioration in water quality as a result of the Proposed Project;
- Short-term temporary excavation dewatering may be required in some turbine base excavations (as assessed in Section 9.5.2.4 of the EIAR). All water pumped from the excavation will be treated via attenuation and settlement ponds or via a Siltbuster (refer to Section 9.5.2.12). There will be no discharge of untreated water from excavations;

- The sands and gravel subsoils in the valley of the Tullaroan Stream (Tullaroan/Kilmanagh River) are excellent natural filters and will polish all treated water within a couple of metres of flow (note that the Proposed Project does not in any way rely on the natural filtration capacity provided by the soils and subsoils at the site); and,
- There will be no discharge of untreated or unattenuated water associated with the Proposed Wind Farm.

Potential Effects on the Kilkenny (Troyswood Supply)

An impact assessment of the potential effects on the surface water supply for the Kilkenny City (Troyswood) Supply, located on the Nore_160 river waterbody, was screened out of the impact assessment presented in the EIAR as there was no potential for effects on this drinking water supply were identified.

The closest downstream surface water abstractions to the Proposed Wind Farm site (located on the Nore_220 river waterbody) and the Proposed Grid Connection (located on the Nore_120 river waterbody) were assessed in the EIAR and the WFD Compliance Assessment. The thorough assessment presented in the EIAR concluded that there would be no significant effects on these drinking water protected areas, which are the nearest abstractions downstream of the Proposed Project.

An EIAR presents an assessment of the significant potential impacts of a proposed project on the receiving environment. The Proposed Project has no potential for significant effects on the Troyswood supply. The proposed works are minor, transient in nature and are distant from the water supply. The proposed works along the Proposed Grid Connection underground cabling route are similar to pipelaying works that are completed by Uisce Éireann or their subcontractors. We note that ~2.9km of new watermain was constructed between Troyswood Water Treatment Plant and Radestown Reservoir as part of the Kilkenny Regional Water Supply Scheme. Some of these works would have been proximal to the source location, including upgrades to the treatment facilities at Troyswood.

For clarity there is no potential for effects on the Kilkenny City (Troyswood) Supply for the following reasons:

- No area of the Proposed Wind Farm site is located upstream of the Kilkenny City (Troyswood) Supply;
- The Proposed Wind Farm Site is drained by Tullaroan Stream (Tullaroan/Kilmanagh River) which discharges into the Munster River which in turn flows into the King's River. The King's River discharges into the River Nore ~20km downstream of the abstraction location at Troyswood;
- Therefore, the proposed works at the Proposed Wind Farm site have no potential to impact on the surface water abstraction for the Kilkenny City (Troyswood) Supply;
- The only aspects of the Proposed Project located upstream of the Kilkenny City (Troyswood) Supply relate to ~17km of the Proposed Grid Connection underground cabling route;
- However, these works are distant from the Troyswood supply;
- The shortest hydrological flowpath between the Proposed Grid Connection underground cabling route and the abstraction location is ~11.8km along the Nuenna and Nore rivers;
- All works located along the Proposed Grid Connection underground cabling route are temporary and transient and have a very limited potential to impact surface water quality;
- The works proposed along the Proposed Grid Connection underground cabling route are similar to roadworks completed across the country with a shallow trench excavated in the carriageway of the existing roadway;

- The River Nore is a large watercourse which has an upstream catchment area in excess of 1,050km² at Ballyragget. The large flow volumes in such a major watercourse significantly reduce the potential for effects from minor works associated with an underground grid connection excavation in the carriageway of an existing road;
- Detailed mitigation measures are prescribed in the EIAR (Sections 9.5.2.2 and 9.5.2.10 in relation to suspended solids, Section 9.5.2.6 in relation to hydrocarbons, Section 9.5.2.7 in relation to cement-based products and Section 9.5.2.8 in relation to wastewater) for the works along the Proposed Grid Connection underground cabling route and will ensure the protection of water quality in the immediate vicinity and downstream of the work areas;
- The EIAR also includes mitigation measures for the works proposed at all watercourse crossings including the proposed horizontal directional drilling over the River Nore (refer to Sections 9.5.2.10 and Section 9.5.2.13). Note that the proposed crossing over the River Nore at Ballyragget is distant (~16.5km upstream) from the Troyswood abstraction; and,
- By protecting surface water quality in streams/rivers proximal to the proposed works, there is no risk for effects on watercourses located ~11.8km downstream of the works areas.

Interactions with Uisce Éireann assets

Uisce Éireann does not permit build over of its assets and the separation distances as per Uisce Éireann Standards Codes and Practices must be achieved.

Uisce Éireann assets are mapped to overlap with the Proposed Grid Connection along the L5023 in Tullaroan, along the R694 at Freshford and Ballyragget and on the N77. A build near query would be lodged and a Confirmation of Feasibility would be acquired, where necessary along the Proposed Grid Connection underground cabling route, following a grant of planning permission and prior to construction.

3.4 HEALTH SERVICE EXECUTIVE

The Health Service Executive (HSE) recommend that the mitigation measures detailed in the EIAR to mitigate the potential effects on the land, soils, geological and hydrological and hydrogeological environments should be included as a condition of planning of granted.

HES Response: It is confirmed that the mitigation measures detailed in the submitted EIAR will be implemented in full and will ensure that there are no adverse health effects as a result of the Proposed Project. It is common practice for such planning conditions to be included in decisions to grant permission, and the applicant would welcome same.

The HSE also recommend that there should be no direct or indirect emissions of wastewater to surface or groundwater during the construction phase.

HES Response: As detailed in Section 9.5.2.8 of the submitted EIAR, self-contained port-a-loos with an integrated wastewater holding tank will be used at each of the site compounds (and along the Proposed Grid Connection underground cabling route). These systems will be maintained by the providing contractor, with all wastewater being removed from the site to be discharged at a suitable off-site treatment locations. There will be no discharge of wastewater at the Proposed Wind Farm site or along the Proposed Grid Connection underground cabling route.

With the implementation of the tried and tested, best-practice mitigation measures as detailed in Chapter 8 and Chapter 9 of the submitted EIAR there will be no health effects associated with the Proposed Project as a result of soil or water contamination.

4 3RD PARTY SUBMISSIONS

This section presents our response to recurring themes included in various non-statutory 3rd party submissions. The following recurring themes were raised in these submissions:

- Potential effects on surface water quality;
- Potential effects on downstream designated sites;
- Potential effects on the Bregagh sub-catchment Priority Action Area (PAA);
- Potential effects on groundwater quality;
- Potential alterations to groundwater flows;
- Potential effects on the local Public and Group Water Schemes;
- Potential effects on local private groundwater well supplies;
- Potential increased flood risk; and,
- Inadequate site investigations at T07.

Notable submissions were received from Hydro-G, Peter and the Kilkenny West Group Water Scheme Cooperative Society. These cover many of the recurring themes listed above and are addressed for each of these notable submissions in Sections 4.1 and 4.2.

Other recurring themes which are not raised in the Hydro-G or Kilkenny West Group Water Scheme Cooperative Society submissions are addressed in Section 4.3.

4.1 KILMANAGH BALLYCALLAN TULLAROAN (KBT) RESPONSIBLE ENERGY - HYDRO-G SUBMISSION

A substantial submission was received from the community group Kilmanagh Ballycallan Tullaroan (KBT) Responsible Energy. Submission 1 from the KBT community group comprised of a review and included a report from Hydro-G. This section provides a response to the key issues raised in Hydro-G's "Expert Opinion on Behalf of KBT Responsible Energy".

Assessment Reporting

Hydro – G state that the name assigned to the river draining the Proposed Wind Farm site in the EIAR, i.e. the "Tullaroan Stream", was inappropriate and isolated the locals who know this watercourse as the Kilmanagh or Tullaroan River. It was never HES's intention to mislead anyone through the naming of the local watercourses. HES just utilised the EPA's nomenclature which is best practice in the preparation of hydrological assessments.

HES acknowledge that the watercourse draining the Proposed Wind Farm site is known by several different names. The EPA blueline database refers to this watercourse as the "Tullaroan Stream" whilst the Kilkenny County Groundwater Protection Report (Kilkenny County Council and the Geological Survey of Ireland, 200) refers to it as the Kilmanagh River whilst some local basemaps refer to it as the Oldtown River. HES recognise that it is also common for watercourses to be christened names by local communities (in this case the Tullaroan/Kilmanagh River).

It was never the HES's intention to mislead any stakeholders by using the EPA's nomenclature. The EPA's river flow network database is available to view on www.catchments.ie which is a publicly available website which was referenced several times throughout Chapter 9. This name was chosen to avoid the confusion of using several names for a single watercourse within one document. By utilising the EPA assigned name and by providing a map in the EIAR which identified and labelled this watercourse (EIAR Figure 9-2), all readers of the EIAR, including local and non-local stakeholders, can readily identify the watercourse in question.

Whilst a short sentence could have been included in the text which explained that the Tullaroan Stream referred to in the Chapter was indeed the Kilmanagh/Tullaroan/Oldtown River, sufficient information was presented that would have allowed readers to identify this.

Therefore, Chapter 9 of the submitted EIAR used correct and appropriate naming conventions for the local watercourses and provided the reader, by way of Figure 9-2, with the opportunity to identify the watercourses being referenced in the text.

WFD Compliance Assessment

Hydro-G state that the WFD Compliance Assessment Report submitted as Appendix 9-3 is a desk study report and does not reference the site-specific field results which were presented in the Aquatic Baseline Report (EIAR Appendix 6-3). The approach presented in the WFD Compliance Assessment utilises the available WFD status for local waterbodies, in line with best practice for the completion of WFD Compliance Assessments. It is the EPA's responsibility to assign status to waterbodies. WFD status should not be assigned to a waterbody by the public or by private environmental consultancies. The approach presented in the WFD Compliance Assessment for the Proposed Project has been reviewed and approved by the Board for previous wind farm planning applications including the recently permitted Glenard Wind Farm (ABP Case No: 312659) and the permitted Seven Hills Wind Farm (ABP Case No. 313750)..

Whilst the report itself is desk-based, it utilised the available WFD status information for the watercourses in the vicinity and downstream of the Proposed Project. Under the WFD, waterbodies can be awarded 1 of 5 no. status ranging from "Bad" status to "High" status. Waterbodies are assigned a status based on monitoring of biological elements (i.e. fish, macro-invertebrates etc.) and supporting elements (hydromorphology, nutrients, dissolved oxygen etc.). Each of these elements contribute to the overall WFD status of a waterbody, with the lowest common denominator rule being applied, whereby the lowest scoring element denotes the overall status of a waterbody. The EPA complete extensive monitoring work in support of the WFD and the frequency of monitoring is outlined in **Table A** and correspond to the minimum monitoring frequencies as recommended in Annex V of the WFD.

2 no. types of monitoring programme completed by the EPA: Surveillance Monitoring (SM) and Operational Monitoring (OM). Surveillance Monitoring provides a comprehensive and long-term picture of water body status while Operational Monitoring assesses any changes in the status of the waterbody.

According to www.catchments.ie there are several National Water Monitoring Stations located along the Tullaroan Stream in the vicinity and downstream of the Proposed Wind Farm site at Kilmanagh. Therefore, the "Good" status assigned to the Tullaroan Stream_030 surface waterbody (SWB) has been assigned based on water quality monitoring at these stations as per the frequencies outlined in **Table A**. This is the WFD status which was used in the WFD Compliance Assessment as this is the most recent WFD status which is available for this watercourse.

We note that the Aquatic Baseline Report found that the watercourses in the vicinity of the Proposed Wind Farm site, including the Tullaroan Stream (Tullaroan/Kilmanagh/Oldtown River) achieved biological Q-ratings of Q3 ('Poor' status) to Q3-4 ('Moderate' status). Therefore, the Aquatic Baseline Report indicates that these watercourses have experienced a deterioration in water quality. This deterioration may relate to the works associated with the watercourse alterations which were recorded during the baseline aquatic surveys. However, this is not an assigned WFD status.

Regardless of whether the Tullaroan Stream_030 SWB is of 'Good' status (WFD 2016-2019 cycle) or 'Poor' status (biological monitoring completed as part of the baseline assessments), the tried and trusted, best-practice mitigation measures prescribed in the EIAR for the protection of surface water quality and quantity, will ensure that the Proposed Project:

- will not cause a deterioration in the status of all SWBs assessed;
- will not jeopardise the objectives to achieve 'Good' status;
- does not jeopardise the attainment of 'Good' surface water chemical status;
- does not jeopardise the attainment of 'Good' surface water quantitative status;

- does not permanently exclude or compromise the achievement of the objectives of the WFD in other waterbodies within the same river basin district;
- is compliant with the requirements of the WFD (2000/60/EC); and,
- is consistent with other Community Environmental Legislation including the EIA Directive (2014/52/EU), the Habitats Directive (92/43/EEC) and the Birds Directive (2009/147/EC).

Table A: Frequency of monitoring for each quality element in the national surface water WFD monitoring programme (IP A, 2021)

Water Quality Element	Water Category
Biological Monitoring	
Macroinvertebrates	Every 3 years (annual monitoring of macroinvertebrates in priority areas)
Fish	
Aquatic Plants	
Phytobenthos	Annual (SM)
Phytoplankton	-
Hydromorphology	
Hydromorphology	Every 6 years
Priority Substances	
Priority Substances	12 times per annum every 6 years
Physico-Chemical Parameters	
Nutrients	5 times per annum (OM)
Oxygen Conditions	12 times per annum (SM)
Acidification	
Specific Pollutants	12 times per annum every 6 years

Potential Effects on the River Nore Surface Water Abstraction for Kilkenny City

Hydro-G state that "the proposed development is located within the Source Protection Area for the River Nore Public Water Supply (PWS) surface water system for Kilkenny City" and "that no consideration has been given to the consequences of catchment alterations and surface water runoff in this source protection zone arising from the proposal for the enabling road's construction, borrow pit, crane hardstanding etc., foundations for turbines, permanent concrete bases, reinforcing steel, permanent hardstandings, or any other component of the proposed development".

The potential for effects on the Kilkenny City (Troyswood) Supply has been comprehensively addressed in response to Uisce Éireann's submission (refer to Section 4.1.3 above). It can be robustly concluded that there is no potential for effects on this supply due to its distant location from the proposed works, the minor and transient nature of the works located a significant distance upstream of the supply, the large volumes of water within the River Nore and the detailed mitigation measures prescribed for the protection of surface water quality. It can be robustly concluded that there is no potential for effects on the Kilkenny City (Troyswood) Supply as a result of the Proposed Project.

Drinking Water Risk Assessment on the Catchment Scale – Kilmanagh Gravels and Ballingarry GWBs

Hydro-G state that there has been no assessment with respect to the European Union Drinking Water Regulation 2023 despite the fact that the Proposed Wind Farm is mapped in the groundwater drinking water protected areas associated with the Kilmanagh Gravels (IE_SE_G_083) and the Ballingarry (IEPA_SE_G_009) protected areas.

All GWBs in the Republic of Ireland are identified as drinking water protected areas due to the presence of public and private abstractions across the country (www.catchments.ie). An assessment of the potential effects of the Proposed Project on the Kilmanagh Gravels and Ballingarry drinking water protected areas is included in the submitted WFD Compliance Assessment Report (Appendix 9-3). The WFD Compliance Assessment assessed the potential qualitative and quantitative effects of the Proposed Project on the Kilmanagh Gravels GWB

and the Ballingarry GWB and in doing so also assessed the potential effect of the Proposed Project on these drinking water protected areas.

The WFD Compliance Assessment concluded that with the implementation of the mitigation measures prescribed in the EIAR, which are clarified further as part of this appeal, the Proposed Project;

- will not cause a deterioration in the status of all GWBs assessed;
- will not jeopardise the objectives to achieve 'Good' status;
- does not jeopardise the attainment of 'Good' groundwater chemical status;
- does not jeopardise the attainment of 'Good' groundwater quantitative status;
- does not permanently exclude or compromise the achievement of the objectives of the WFD in other waterbodies within the same river basin district;
- is compliant with the requirements of the WFD (2000/60/EC); and,
- is consistent with other Community Environmental Legislation including the EIA Directive (2014/52/EU), the Habitats Directive (92/43/EEC) and the Birds Directive (2009/147/EC).

Based on the above, the Proposed Project will not affect the Kilmanagh Gravels or the Ballingarry drinking water protected areas.

Potential Effects on the Local Public Water Supplies

Hydro-G state that none of the Callan PWS, Tullaroan GWS, BallyCallan Shale Region GWS and/or BallyCallan Limestone Region GWS have been correctly assessed in the EIAR and *"at no point in the EIAR is the potential impact presented or assessed in relation to the 1,000's of litres of gear oils and gases in the hub at the top of each of the turbine masts and the chemical coatings on the blades of the turbines"*.

The concerns regarding effects on the Callan PWS have been addressed in the response to Uisce Éireann's submission (refer to Section 3.3 above).

Sections 9.5.2.17 and 9.5.3.6 of the submitted EIAR also present detailed, comprehensive and robust impact assessments of the potential effects of the construction and operational phases of the Proposed Project on the Tullaroan GWS, BallyCallan Shale Region GWS and/or BallyCallan Limestone Region GWS.

As presented in the EIAR and summarised below, there will be no potential for significant quantitative effects on these public and group water supplies for the following reasons:

- The nature of the proposed works within each of the GSI delineated Source Protection Areas:
 - The works within the Source Protection Area associated with the BallyCallan Shale and BallyCallan Sand and Gravels GWSs comprise solely of road construction and upgrades to existing roads. These works are relatively minor, excavations will be small and works will be temporary and transient. No deep or significant excavations are proposed in this area;
 - The works within the Source Protection Area associated with the Tullaroan GWS are associated with the Proposed Grid Connection underground cabling trench. These works are relatively minor, localised, cover a very small area and will be completed within the carriageway of existing roadways; and,
 - No works are proposed within the Source Protection Area associated with the BallyCallan Limestone Region.
- The proposed works areas within the GSI's delineated Source Protection Areas are infinitely small in comparison with the overall Source Protection Areas associated with these schemes. This significantly reduces the potential for quantitative effects as the

groundwater recharge rates across the vast majority of the zone of contributions to these schemes will remain unaltered:

- The development footprint within the Source Protection Area to the BallyCallan Shale and BallyCallan Sand and Gravel GWs accounts for 0.8% of the total area;
- The only works proposed in the Source Protection Area to the Tullaroan GWS are associated with ~1.1km of the Proposed Grid Connection underground cabling route; and,
- No works are proposed in the Source Protection Area to the BallyCallan Limestone Region GWs.
- Groundwater recharge rates or groundwater flowpaths will not be altered by the Proposed Project:
 - As detailed in Table 9-20 of the submitted EIAR, the emplacement of the permanent development footprint at the Proposed Wind Farm site (in the absence of the proposed drainage system) would only result in a 0.2% increase in surface water runoff from baseline conditions;
 - This is due to the naturally high runoff rates across the site (due to the presence of relatively low permeability tills) with groundwater recharge confined to the lower ground along the Tullaroan Stream (Tullaroan/Kilmanagh River) where glacio-fluvial sands and gravels are present;
 - Groundwater recharge rates are low across the vast majority of the Proposed Wind Farm site with the subsoils comprising of glacial tills of relatively low permeability;
 - Therefore, the emplacement of development infrastructure in these areas will not significantly alter groundwater recharge rates;
 - Groundwater recharge in the local area is concentrated along the valley of the Tullaroan Stream (Tullaroan/Kilmanagh River) where glacio-fluvial sands and gravels are present;
 - The proposed development footprint in these areas will have limited potential to alter groundwater flows as the sand and gravel subsoils are highly permeable and will allow groundwater to flow around any proposed infrastructure/foundations;
 - During the operational phase, the wind farm drainage system will be designed for greenfield runoff rates whereby any rainfall falling on the proposed development footprint that would have previously recharged to ground will recharge to ground adjacent to the proposed infrastructure locations;
 - Therefore, the existing greenfield runoff and recharge rates will be maintained; and,
 - There will be no net loss of recharge to the underlying aquifer.
- The EIAR presents comprehensive mitigation measures for the protection of surface water and groundwater quality during all phases of the Proposed Project with respect to suspended solids, hydrocarbons, cement-based products, wastewater and also assesses the potential effects associated with piled foundations. The implementation of these mitigation measures, combined with the prevailing hydrogeological regime, will ensure that there are no residual effects on surface water or groundwater quality.
- 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.

With regards to the assessment of the oils held within the turbines, Section 9.5.3.3 of the submitted EIAR assess the potential effects of hydrocarbon release during the Operational Phase of the Proposed Project. The transformers within each of the 7 no. turbines will hold oil

and any leaks could impact on local surface or groundwater quality. However, detailed mitigation measures are prescribed in the EIAR including that oil in the turbine transformers will be fully banded within the enclosed turbine. Therefore, the potential pathway to the water environment will be blocked and there will be no potential for surface or groundwater contamination. With the implementation of the tried and tested, best-practice mitigation measures with respect to hydrocarbons, no significant effects will occur.

Concerning the use of chemical coatings on the blades of wind turbines and the potential for leaching, this has not been considered to be a significant issue previously. Such chemical, weather resistant, coatings are present on every wind turbine across the country. The use of chemical coatings is not restricted to wind turbines however, with similar coatings used on the outside of many buildings and other infrastructural elements. This is not considered to be an issue which can result in significant effects on the local environment.

Flood Risk Assessment

A detailed Flood Risk Assessment (FRA) has been completed for the Proposed Project and was included as Appendix 9-1 of the submitted EIAR. This FRA used the available data sources on the OPW's www.floodinfo.ie website, combined with detailed hydrological walkover surveys, to classify the risk of flooding in the vicinity and downstream of the Proposed Project.

Hydro-G's submission states that the FRA and EIAR do not acknowledge the flood experience downgradient of the Proposed Wind Farm Site in Kilmanagh and at the Graigue Ballycallan GAA Club Pitches. This statement is untrue as the assessment presented in the FRA and in EIAR Chapter 9 refers to the OPW's record of a recurring fluvial flood event (OPW Past Flood Event ID: 2548) in the village of Kilmanagh. Furthermore, National Indicative Fluvial Flood zones are mapped along the Tullaroan Stream (Tullaroan/Kilmanagh River) in the vicinity and downstream of the Proposed Project and show extensive flood zones which cover the Graigue Ballycallan GAA Club Pitches. These flood zones are discussed in Section 4.3.6 of the FRA, presented as FRA **Figure F**, and discussed in Section 9.3.6 of the EIAR.

In accordance with the relevant guidelines, the submitted FRA fully acknowledges the risk of development in a floodplain and assesses the potential impact in terms of increased downstream flood risk. The FRA robustly concludes that, following the completion of the required Justification Test, that the proposed development in the floodplain is appropriate for the following reasons:

- The Proposed Project design has been subject to an iterative design process which included moving all proposed turbines and other infrastructure, apart from site access roads) outside of the modelled flood zones;
- The small footprint of the Proposed Project within the flood zones (~0.2226ha) will have an imperceptible effect on the downstream flood risk;
- The new watercourse crossing over the Tullaroan Stream will be completed in accordance with Section 50 consent and there will be no instream works or displacement of floodwaters;
- The upgrades to the existing roads will be completed at the existing ground level and will have no potential to displace floodwaters;
- The new access roads will have a small fill, comprised of permeable stone, and culverts will be regularly spaced to ensure that drainage pathways are maintained.

In relation to the wider Proposed Wind Farm infrastructure, including the proposed borrow pit and spoil management areas, increasing the downstream flood risk:

- As detailed in Table 9-20 of the submitted EIAR, the emplacement of the permanent development footprint at the Proposed Wind Farm site (in the absence of the proposed drainage system) would only result in a 0.2% increase in surface water runoff from baseline conditions;

- The Proposed Wind Farm drainage system has been designed to ensure that the Proposed Project will not change the existing flow regimes or the runoff rates across the site;
- There will be no discharge or untreated or unattenuated runoff water;
- All runoff from the developed areas will be routed through settlement/Attenuation ponds;
- The outflow from the settlement ponds will be released in a controlled (attenuated to greenfield runoff rates) and diffuse (not concentrated at one point but carefully spread out across the development) manner. Therefore, the Proposed Project will not increase the magnitude of the hydrograph peak; and,
- The Proposed Project will therefore not contribute to the downstream flood risk.

Hydro-G also reference the embankment excavation and re-alignment works that have been observed and recorded in the Aquatic Survey Report (Appendix 6-3 of the EIAR) undertaken on the river and say that these have not been assessed in the FRA. This is correct, those alterations were not assessed in the FRA. However, we can state the following having observed the alterations:

- Downstream of WF-1: banks of the river channel appear to have been strengthened, and the channel has been widened. The strengthening of the LHS bank (left hand side) will prevent erosion and maintain water quality, and the widening of the river will slow water flow slightly, therefore reducing downstream flood risk slightly.
- Downstream of WF-3: The modified river channel is in an area of sand and gravel that appears to be continuously altered by river flow. It appears the recent (observed) works here are intended to strengthen the damaged river bank in a likely attempt to improve water quality and prevent further erosion. The works also lengthen the river flow path (to its original pathway rather than the shortened pathway to LHS of the island), which in itself will slightly reduce any perceived increase in downstream flood risk or maintain its original form.

Both of these observations occur over short distances (<50m) and are located in a catchment area of some 40km² (to the bridge in Kilmanagh). The Tullaroan River falls at a moderate slope of some 80m from its northern extents to the bridge in Kilmanagh over a distance of ~8.4km. As a result of these catchment conditions, neither of these observations have the potential to significantly alter flood flows in the downstream river. Also, the natural and variable conditions of the river channel and the wider catchment are likely to alter continuously, both with land use change, and with variations in agriculture and forestry.

Hydro-G also state the following: *"The Planning Authority is precluded from granting permission to a site in hydrological connection with downstream receptors already experiencing flooding."* This statement is completely untrue. Think about the implications for such a statement. Flooding is a natural process that can happen at any time in a wide variety of locations. The OPW published guidelines in 2009 entitled "The Planning System and Flood Risk Management" (PSFRM). These PSFRM Guidelines were used for the FRA completed for the Proposed Project. The PSFRM Guidelines require a risk based sequential approach to flood risk management. The guidelines state the following on pg (v) (Overview of the Guidelines):

"Planning authorities will ensure that only developments consistent with the overall policy and technical approaches of these Guidelines will be approved and permission will be refused where flood issues have not been, or cannot be, addressed successfully and where the presence of unacceptable residual flood risks to the development, its occupants or users and adjoining property remains."

As outlined above, and in-line with the stated objectives of the PSFRM Guidelines, the flood risk management approach taken for the Proposed Project is to maintain natural flows, and

attenuate discharges to ensure no increase in downstream flood risk. This is a standard approach taken for many projects, and is certainly not one that precludes planning approval.

Site Investigation Methodology

Hydro-G's submission criticised the use of point methods as site investigations.

HES consider that the site investigations completed at the Proposed Wind Farm site were suitable for the following reasons:

- The use of point location geotechnical investigations (i.e. boreholes and trial pits) are a reliable and trusted method of site investigation for proposed developments;
- These geotechnical investigations provide precise geological information at a given location and the wider geology can be understood if there is a suitable quantity of point investigations completed at a given site;
- The quantum of site data gathered to characterise the baseline soils and geological environment, comprising of 16 no. point investigations (14 no. trial pits and 2 no. boreholes) combined with site walkover surveys, logging of exposed soils/subsoils at the site and laboratory analysis of recovered soil samples, is considered to be suitable for the scale of the proposed development (7 no. turbine wind farm) and the geological/hydrogeological setting of the site;
- The geology encountered at the Proposed Wind Farm site was relatively predictable with glacial tills and relatively shallow bedrock (0.4-3.3mbgl) encountered on the sides of the valley and thicker glaciofluvial deposits (up to 18.7m thick) encountered on the lower ground in the vicinity of the Tullaroan Stream (Tullaroan/Kilmanagh River);
- The soils and subsoils encountered during the site investigations largely corresponded with the GSI mapped soils and subsoils (www.gsi.ie);
- The siltstone bedrock encountered at the Proposed Wind Farm site was also consistent with the Killeslin Siltstone Formation as mapped by the GSI; and,
- No karst bedrock is mapped at the site and karst features were recorded during walkover surveys or during the site investigations at the Proposed Wind Farm site which would warrant extensive geophysical surveys.

For these reasons, it is considered that further site investigation works at the Proposed Wind Farm site would have been superfluous.

The lack of site investigations at the proposed T07 location is also highlighted in the submission. No site investigations were completed at this location due to inaccessibility, with dense forestry present at T07. The closest site investigations to T07 were TP15, completed ~270m to the southwest, and TP13, located ~350m to the east/northeast. Both of these TPs encountered gravelly SAND to depths of 0.5m underlain by glacial till. The homogeneity of the site investigation results, both at these locations and across the wider site, mean that the geological profile at T07 can be inferred with a high degree of confidence. Nevertheless, any potential for geological variability at T07 was accounted for in the impact assessment in Chapter 8 and Chapter 9 which included the assessment of both a gravity foundation and a piled foundation at this turbine location in terms of potential effects on the receiving environments. An assessment of the potential impacts from piling on the water environment is presented in Section 9.5.2.14 of the EIAR. The assessments concluded that with the implementation of the proposed mitigation measures, for both the piled and un-piled scenarios, that there would be no significant effects on the land, soils and geological environment and/or the water environment.

4.2 KILKENNY WEST GROUP WATER SCHEME COOPERATIVE SOCIETY

The submission from the Kilkenny West GWS Co-Operative Society raises concerns in relation to the BallyCallan Limestone Region GWS. The submission concludes that "the inherent

vulnerability of the karst limestone aquifer, combined with the lack of soil data for T07" presents a risk to the GWS.

Many of the issues raised in this submission overlap with issues raised in the Hydro-G submission above.

In relation to the groundwater vulnerability and the karst aquifer, HES would like to highlight the following:

- The ZoC from the limestone aquifer to the Ballycallan GWS does not overlap with any area of the Proposed Wind Farm site;
- The Ballycallan Limestone Region ZoC is distant (~2km) from the closest proposed turbine (T07);
- No limestone or karstic bedrock is mapped at the Proposed Wind Farm site;
- The siltstone bedrock encountered during the site investigations corresponds with the GSI mapped Killeslin Formation which is classified as a 'Poor Aquifer – Bedrock which is Generally Unproductive except for Local Zones';
- Whilst some areas of the Proposed Wind Farm site are mapped by the GSI as having 'High' to 'Extreme' groundwater vulnerability, the areas in the south of the site which overlap with the BallyCallan Shale and BallyCallan Sand and Gravel ZoCs are mapped as having 'Low' to 'Moderate' vulnerability;
- No excavations or works are proposed with the ZoC associated with the BallyCallan Limestone Region;
- The only works proposed in the BallyCallan Shale and BallyCallan Sand and Gravel ZoCs relate to the construction of new roads and the upgrade of an existing road,
- These works will be of a short-duration and will have limited potential to impact local groundwater or surface water quality;
- Nevertheless, the EIAR details best practice mitigation measures for the protection of surface and groundwater quality.

The lack of site investigations at T07 is addressed in Section 4.1 above.

4.3 OTHER 3RD PARTY SUBMISSIONS

Potential Effects on Surface Water Quality

A robust and comprehensive impact assessment in terms of potential effects on surface water quality was presented in Chapter 9 of the EIAR. The assessment presented in Chapter 9 concluded that with the implementation of the prescribed mitigation measures, that there would be no significant effects on downstream surface water quality.

Detailed, tried and test best practice mitigation measures for the protection of surface water quality in the vicinity and downstream of the Proposed Wind Farm site are prescribed with respect to suspended solids (refer to Sections 9.5.2.1, 9.5.2.2, 9.5.2.3 and 9.5.2.4), hydrocarbons (refer to Section 9.5.2.6), cement-based products (refer to Section 9.5.2.7), wastewater (refer to Section 9.5.2.8) and morphological changes to watercourses (Section 9.5.2.9). Furthermore, the best-practice mitigation measures are detailed in the EIAR for the protection of surface water quality along the Proposed Grid Connection underground cabling route in relation to suspended solids (Sections 9.5.2.2, 9.5.2.3 and 9.5.2.4), hydrocarbons (Section 9.5.2.6), cement-based products (Section 9.5.2.7), wastewater (Section 9.5.2.8), morphological changes to watercourses (Section 9.5.2.11) and directional drilling (Section 9.5.2.13). The proposed wind farm drainage system will ensure that there is no release of untreated or unattenuated water. The prescribed mitigation measures are best in-class and will ensure that there is no potential for significant qualitative effects on the receiving surface water environment. These mitigation measures have been successfully applied at many recently constructed wind farms and are

similar to those proposed in the EIARs for the recently permitted Glenard Wind Farm (ABP Case No: 312659) and the permitted Seven Hills Wind Farm (ABP Case No. 313750).

With the implementation of the prescribed mitigation measures there is no potential for significant effects on surface water quality.

Potential Effects on Groundwater Quality

A robust and comprehensive impact assessment in terms of potential effects on groundwater quality was presented in Chapter 9 of the EIAR. The assessment presented in Chapter 9 concluded that with the implementation of the prescribed mitigation measures, that there would be no significant effects on local groundwater quality.

Tried and tested, best-practice mitigation measures have been prescribed in the EIAR in relation to felling (Section 9.5.2.1), suspended solids (Sections 9.5.2.2, 9.5.2.3 and 9.5.2.4), hydrocarbons (Section 9.5.2.6), cement-based products (Section 9.5.2.7), wastewater (Section 9.5.2.8) and morphological changes to watercourses (Section 9.5.2.9). These mitigation measures will ensure that there is no deterioration in water quality as a result of the Proposed Project. Short-term temporary excavation dewatering may be required in some turbine base excavations (as assessed in Section 9.5.2.4 of the EIAR). All water pumped from the excavation will be treated via attenuation and settlement ponds or via a Siltbuster (refer to Section 9.5.2.12). There will be no discharge of untreated water from excavations. The sands and gravel subsoils in the valley of the Tullaroan Stream (Tullaroan/Kilmanagh River) are excellent natural filters and will polish all treated water within a couple of metres of flow (note that the Proposed Project does not in any way rely on the natural filtration capacity provided by the soils and subsoils at the site). There will be no discharge of untreated or unattenuated water associated with the Proposed Wind Farm.

Detailed, tried and test best practice mitigation measures are also proposed for the works along the Proposed Grid Connection underground cabling route. These works are shallow, minor and transient in nature with limited potential for effects on groundwater quality. Nevertheless, the EIAR details tried and tested, best-practice mitigation measures in relation to suspended solids (Sections 9.5.2.2, 9.5.2.3 and 9.5.2.4), hydrocarbons (Section 9.5.2.6), cement-based products (Section 9.5.2.7), wastewater (Section 9.5.2.8), morphological changes to watercourses along the Proposed Grid Connection underground cabling route (Section 9.5.2.11) and directional drilling (Section 9.5.2.13). These mitigation measures will ensure the protection of local groundwater quality.

With the implementation of the prescribed, tried and tested, best practice mitigation measures there is no potential for significant effects on local groundwater quality as a result of the Proposed Project.

Potential Effects on WFD Priority Action Areas

Priority Action Areas (PAAs) are listed in Appendix I of the River Basin Management Plan for Ireland (2022-2027). PAAs are areas proposed for focused action and collaboration to improve water quality so that these waterbodies can meet their WFD objectives.

The Bregagh River sub-catchment is identified as a PAA under the Water Framework Directive. As detailed in Section 9.3.3 and Table 9-7 of the EIAR, a small area in the east of the Proposed Wind Farm site is located in the Nore_SC_090 sub-catchment and the Bregagh (Kilkenny)_010 WFD river sub-basin. This sub-basin is designated as a PAA in the 3rd cycle of the WFD. However, no infrastructure is proposed in the Bregagh (Kilkenny)_010 WFD river sub-basin. The closest proposed turbine (T02) is located in excess of 120m from this river sub-basin, with topography in this area sloping to the west/southwest away from the Bregagh (Kilkenny)_010 river sub-basin. Therefore, the Proposed Project has no potential to impact water quality or quantity within the Bregagh River. There is no potential for the Proposed Project to impact this PAA or its WFD objectives.

Meanwhile, the Proposed Grid Connection underground cabling route, including 2 no. watercourse crossings, is mapped within the Nuenna_020 river sub-basin which is also identified

as a PAA. Due to the minor and transient nature of the works along the Proposed Grid Connection underground cabling route there is limited potential for effects. Furthermore, the EIAR details tried and tested, best-practice mitigation measures in relation to suspended solids (Sections 9.5.2.2, 9.5.2.3 and 9.5.2.4), hydrocarbons (Section 9.5.2.6), cement-based products (Section 9.5.2.7), wastewater (Section 9.5.2.8), morphological changes to watercourses along the Proposed Grid Connection underground cabling route (Section 9.5.2.11) and directional drilling (Section 9.5.2.13). These mitigation measures have been successfully applied during the construction of countless grid connections for permitted wind farm developments and will ensure the protection of surface and groundwater quality. There is no potential for significant effect on this PAA.

The Proposed Project will be result in any significant effects on PAAs.

Potential Effects on Local Groundwater Well Supplies

The potential impact on local private groundwater wells was thoroughly assessed in the EIAR in Section 9.5.2.11. This assessment was based on the local hydrogeological regime, the properties of the underlying bedrock aquifer, the overburden aquifer, the recorded thickness of overburden/subsoil deposits, the recorded depth to groundwater levels, and the location of the nearest wells. The assessment was completed in accordance with "Wind farms and groundwater impacts - A guide to EIA and Planning considerations" (DoE/NIEA, 2015).

There is limited potential for impacts on local groundwater wells for the following reasons:

- There is no potential for effects on local dwellings to the west, north and east of the proposed Wind Farm site due to:
 - the prevailing hydrogeological regime with all groundwater flow being towards the Tullaroan Stream;
 - the low permeability till deposits present on the sides of the valley;
 - the Poor Bedrock Aquifer with short groundwater flowpaths; and,
 - the separation distances to potential receptors.
- In the valley of the Tullaroan Stream, groundwater and surface water will interact as the local sand and gravel aquifer is unconfined in this area. The closest downgradient dwellings are situated ~1.2km south of the nearest turbine (T07).
- All proposed excavations are temporary, and are near surface;
- Limited temporary dewatering may be required at turbine bases; and,
- The EIAR presents comprehensive mitigation measures for the protection of groundwater quality during all phases of the Proposed Project with respect to hydrocarbons, cement-based products, wastewater and also assesses the potential effects associated with piled foundations. The implementation of these mitigation measures, combined with the prevailing hydrogeological regime, will ensure that there are no residual effects on groundwater quality.

Potential Effects on Downstream Designated Sites

A comprehensive impact assessment was completed for the River Barrow and River Nore SAC, the River Nore SPA, the River Nore/Abbeyleix Woods Complex pNHA and the Inchbeg pNHA in Section 9.5.2.18 of the EIAR. All other designated sites were screened out of the impact assessment due to the lack of hydrological and/or hydrogeological connectivity.

The assessment, as presented in Chapter 9, concludes that no significant effect on downstream designated sites will occur for the following reasons:

- The length of the hydrological flowpaths between the Proposed Wind Farm site and the downstream designated sites. The closest designated site (the River Barrow and River Nore SAC) is located ~5.6km downstream on the lower reaches of the Tullaroan Stream;

- The only works which are located in the immediate vicinity of a designated site is the new proposed crossing of the River Nore along the Proposed Grid Connection underground cabling route. There will be no instream works at this location and the crossing will be achieved by directional drilling under the river;
- The potential for effects on other designated sites is limited given the increasing volumes of water and associated dilution effect in downstream watercourses (Munster, King's and Nore rivers downstream of the Proposed Wind Farm site and the River Nore downstream of the Proposed Grid Connection underground cabling route); and,
- Nevertheless, tried and tested, best-practice mitigation measures (as detailed in the EIAR and clarified further in this appeal response) for the protection of surface and groundwater water quality will be implemented during the construction phase of the Proposed Project to ensure that there is no deterioration in local or downstream water quality.

5 SUBMISSION SUMMARY

In summary and in response to Kilkenny County Council's Planning Report (including the EIAR review completed by CAAS Ltd.), statutory submission and 3rd Party submissions:

- HES completed a robust, detailed and comprehensive impact assessment on the land, soils and geological environment which concluded that there will be no significant effects on the land, soils and geological environment as a result of the Proposed Project;
- HES completed a robust, detailed and comprehensive hydrological and hydrogeological impact assessment, WFD Compliance Assessment, a detailed Stage 2 Flood Risk Assessment and cumulative hydrological impact assessment for the Proposed Project which concluded that there will be no significant effects on the hydrological/hydrogeological environment as a result of the Proposed Project;
- HES has responded to all matters raised in the CAAS EIAR Review, in the Planners Report, and to concerns raised by Statutory Bodies, and also concerns raised in 3rd party submissions;
- The issues raised in the CAAS EIAR review have been clarified and further details provided regarding the specifications of the silt fences to be used and the concrete sourcing proposals;
- The adequacy of the proposed mitigation for the protection of local water quality and quantity has been addressed. The prescribed mitigation measures in relation to suspended solids, hydrocarbons, cement-based products and wastewater are tried and tested, best practice mitigation measures which have been applied successfully at many recently constructed wind farms;
- Concerns regarding the potential effects on public and group water groundwater supplies have also been thoroughly assessed. It has concluded that there will be no potential significant effects on the Callan PWS or the Tullaroan or Ballycallan GWSs due to the scale of the proposed works within the zone of contribution to each of these supplies and the proven, best in-class mitigation measures for the protection of water quality during all phases of the Proposed Project;
- An assessment has also been completed for the potential effects of the proposed works along the Proposed Grid Connection on the Kilkenny City (Troyswood) supply which abstracts from the River Nore. The assessment concludes that there is no potential for effects due to the distant location between the proposed works areas and the source, the minor and transient nature of the works and the prescribed, best-practice mitigation measures;

- The flood risk downstream of the Proposed Wind Farm site was addressed in the submitted FRA. The Proposed Project will not result in any change to surface water runoff or groundwater recharge rates. The proposed drainage system will be designed for greenfield runoff rates and there will be no increase in the downstream flood risk; and,
- Other concerns relating to potential effects on designated sites, local private groundwater well supplies and WFD Priority Action Areas are also addressed.

We respectfully submit to the Board that this letter response reiterates the conclusions of the robust and comprehensive impact assessments presented in EIAR Chapter 8 (Land, Soils and Geology), EIAR Chapter 9 (Hydrology and Hydrogeology), the associated Flood Risk Assessment (Appendix 9-1) and WFD Compliance Assessment Report (Appendix 9-3). The impact assessments presented in the EIAR rely upon the tried and tested, best practice mitigation measures which ensure the protection of the receiving environment. Similar mitigation measures have been successfully applied during the construction of countless wind farm developments across the country and were also presented in the EIARs for several recently permitted wind farm developments. Therefore, the mitigation measures prescribed in the EIAR for the Proposed Project are suitable and will ensure that there are no significant effects on the receiving environment.

As a result of the above, we urge the Board to issue a positive decision with respect to this appeal submission.

Yours sincerely,

Michael Gill PGeo
Civil Engineer and Hydrogeologist
B.A., B.A.I., M.Sc., Dip Geol, MIEI, MCIWEM

© HYDRO-ENVIRONMENTAL SERVICES

22 Lower Main Street, Dungarvan, Co. Waterford, X35 HK11
T: +353-(0)58-441 22 F: +353-(0)58-442 44 E: info@hydroenvironmental.ie

www.hydroenvironmental.ie



APPENDIX 3

RESPONSE BY AWN
CONSULTING LTD.



REPORT



Trinity
Consultants



awnconsulting

Response to Noise and Vibration Topics **DRAFT**

Project Title: Briskalagh Wind Farm

CLIENT
MKO

DOCUMENT REFERENCE
237501.0460NR02

DATE
26 March 2025

DOCUMENT CONTROL SHEET

Document Control Sheet		
Our Reference	237501.0460NR02	
Original Issue Date	25 March 2025	
Client:	MKO	
Client Address :	Tuam Road, Galway	
Revision	Revision Date	Description
Details	Written by	Approved by
Signature	<i>Mike Simms</i>	<i>Dermot Blunnie</i>
Name	Mike Simms	Dermot Blunnie
Title	Principal Acoustic Consultant	Associate (Acoustics)
Date	26 March 2025	26 March 2025
Disclaimer This report considers the specific instructions and requirements of our client. It is not intended for third-party use or reliance, and no responsibility is accepted for any third party. The provisions in this report apply solely to this project and should not be assumed applicable to other developments without review and modification.		



TABLE OF CONTENTS

1. INTRODUCTION	1-1
1.1 Involvement.....	1-1
2. 3RD PARTY SUBMISSIONS	2-2
2.1 Characteristics of Wind Turbine Noise	2-2
2.1.1 Kilkenny County Council Planner's Comment.....	2-2
2.1.2 Response	2-3
2.2 Equine Receptors	2-3
2.2.1 Bluegate Stud	2-3
2.2.2 Response	2-3
2.3 Grosevnor report.....	2-3
2.3.1 Baseline acoustic monitoring 'Annex 5 IARO report'	2-3
2.3.2 Low-Frequency Noise and Infrasound	2-4
2.3.3 Amplitude Modulation	2-4
2.4 Huson reports	2-5
2.4.1 Wind Turbine Noise Criteria.....	2-5
2.4.2 Ground Absorption Factor	2-5
2.4.3 Sound Power Levels	2-5
2.4.4 Amplitude Modulation and Low-frequency Noise.....	2-5
3. PLANNER'S REPORT	3-6
3.1 Noise Study Area.....	3-6
3.1.1 Planner's Comment	3-6
3.1.2 Response	3-7
3.2 Blasting Bedrock and Piling.....	3-7
3.2.1 Planner's Comment	3-7
3.2.2 Response re Linear Construction Works.....	3-7
3.2.3 Response re Blasting Bedrock.....	3-8
3.2.4 Response re Piling.....	3-8
3.3 Traffic Noise.....	3-9
3.4 SPAs and SCAs	3-9
3.4.1 Planner's Comment	3-9
3.4.2 Response	3-9
3.5 Presentation of Predicted Noise Levels	3-9
3.5.1 Planner's Comment	3-10
3.5.2 Response on Assignment of Limit Values.....	3-10
3.5.3 Response on 'residences that have been excluded from further assessment'	3-10
3.5.4 Response on 'information on relationship between wind speed and the mapped contours'	3-10
4. SUMMARY	4-11
APPENDIX A. PREDICTED NOISE LEVELS AT 9 M/S WIND SPEED	4-12

1. INTRODUCTION

1.1 Involvement

AWN are the noise consultants for this project and prepared Chapter 12 Noise and Vibration of the submitted Environmental Impact Assessment Report (EIAR) and carried out the assessments presented therein.

AWN undertook baseline noise monitoring, conducted detailed noise modelling with consideration of cumulative impacts and prepared the noise and vibration section of the submitted EIAR.

AWN have prepared noise assessments for numerous wind farms throughout Ireland with successful planning permission grants. AWN have also carried out many commissioning noise compliance tests on completed wind farms.

The noise and vibration assessment carried out as part of the submitted EIAR is considered robust, comprehensive and in line with best practice as set out in the *Wind Energy Development Guidelines for Planning Authorities* published by the Department of the Environment, Heritage and Local Government (2006) and *A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise* (IOA, 2013); however, appropriate clarifications and further discussion are presented in the following sections of this technical note to clarify, expand, and highlight relevant previous statements within the submitted EIAR and address the items raised in the 3rd party submissions and the Planner's Report.

3RD PARTY SUBMISSIONS

2.1 Characteristics of Wind Turbine Noise

2.1.1 Kilkenny County Council Planner's Comment

The Planners Report Appendix on page 19 it is stated that

ABP recently refused Slieveacurry Ltd given the lack of guidance in the 2006 Wind Energy Guidelines having regards to the lack of guidance on low frequency noise and amplitude modulation and cumulative impacts, and potential impacts on residential amenity.

2.1.2 Response

The information provided in Section 12.3.2.2 of the submitted EIAR presents a discussion on the issue of Amplitude Modulation noise associated with the operation of wind turbines.

In Section 12.6.2.1.2, the following comments are provided to confirm how the operator would address AM during the operational phase of the Proposed Wind Farm, if AM were to arise at a noise-sensitive location; this considered best practice approach to this issue.

In the event that a legitimate complaint which indicates potential amplitude modulation (AM) associated with turbine operation, the operator will employ a qualified acoustic consultant to assess the level of AM in accordance with the methods outlined in the Institute of Acoustics (IOA) Noise working Group (Wind Turbine Noise) Amplitude Modulation Working Group (AMWG) namely, Institute of Acoustics IOA Noise Working Group (Wind Turbine Noise) Amplitude Modulation Working Group Final Report: A Method for Rating Amplitude Modulation in Wind Turbine Noise (9 August 2016) or subsequent revisions.

The measurement method outlined in the IOA AMWG document, known as the 'Reference Method', will provide a robust and reliable indicator of AM and yield important information on the frequency and duration of occurrence, which can be used to evaluate different operational conditions including mitigation.

The measurement method outlined in the IOA AMWG document, known as the 'Reference Method', will provide a robust and reliable indicator of AM and yield important information on the frequency and duration of occurrence, which can be used to evaluate different operational conditions.

As noted in Section 12.3.2.2.1, 'It is not possible to predict an occurrence of AM at the planning stage. While OAM can occur, it is noted that the research has shown that it is a rare event associated with a limited number of wind farms.'

In relation to low-frequency noise, as noted in Section 12.3.2.1 'There is a significant body of evidence to show that the infrasound associated with wind turbines will be below perceptibility thresholds and typically in line with existing baseline levels of infrasound within the environment.'

Further comment on low-frequency noise is presented in Section 2.3.2 of this response report.

2.2 Equine Receptors

2.2.1 Bluegate Stud

Within a section called "Impact on Sensitive receptors" on page 45 of the Planners Report Appendix comments that Bluegate Stud, a habitat for horses, is not identified or addressed as a sensitive receptor in the EIAR.

2.2.2 Response

It has been highlighted within third-party submissions that stud farms and other equine facilities within the vicinity of the Proposed Wind Farm were not considered within the EIAR. It is acknowledged that there is an incorrect reference, in Chapter 5 of the EIAR, to the closest stud farm being Whytemount Stud, located in Kells, Co. Kilkenny, approximately 14.5 km south of the nearest proposed turbine. The closest registered stud farm is Bluegate Stud. The facility is located approximately 2.65 km south of T07. Horses on lands within the townland of Knockeenglass are also referenced within the submissions.

A response to these submissions has been provided in Section 4 of the main Grounds of Appeal document.

2.3 Grosevnor report

On page 22 and 23 of the Appendices of the Planners report, reference is made to the Grosevnor and Huson reports which state concerns in relation to low-frequency noise and infrasound.

2.3.1 Baseline acoustic monitoring 'Annex 5 IARO report'

On page 22 of the Appendices of the Planners report, reference is made to a study of 'baseline acoustic monitoring' carried out by International Acoustic Research Organisation (IARO) at 11 houses at indoor locations during periods of between 3 and 20 hours. The presentation of the results in the report appear to focus on narrow-band analysis in the low-frequency range. The noise monitoring parameters measured are not applicable to an assessment of environmental noise from wind turbines as set down in the guidance used in the EIAR or the Wind Energy Development Guidelines.

It is re-iterated that the baseline noise monitoring carried out by AWN Consulting in the preparation of the EIAR is in accordance with the relevant best practice guidance, i.e. the Institute of Acoustics (IOA) A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise (IOA, 2013) and the supporting document *Supplementary Guidance Note 1: Data Collection* (IOA, 2014).

2.3.2 Low-Frequency Noise and Infrasound

Following on from the above, AWN acknowledges that there are various studies in relation to the measurement of low-frequency noise in the vicinity of wind farms; In Section 12.3.2 of the EIAR, comment is provided on a set of published documents and the section concludes that

There is a significant body of evidence to show that the infrasound associated with wind turbines will be below perceptibility thresholds and typically in line with existing baseline levels of infrasound within the environment.

In addition to this, the following comment is offered:

In the 2019 Draft Wind Energy Development Guidelines, a limit for low-frequency noise was raised. However, as presented in the EIAR "Specific concerns expressed by a group of acoustic professionals working in the field are most relevant. The group was made up of acousticians who act for wind farm developers, Councils, Government bodies and residents' groups (all of whom are members of the Institute

MKO / 237501.0460NR02

acoustics, IOA). The group contained several of the authors / contributors to ETSU-R-97, the IOA Good Practice Guide (IOA GPG) and the IOA Amplitude Modulation Working Group, which are all referenced extensively in the draft Guidelines."

A section from this response is relevant here:

Low frequency noise – zero tolerance approach

3.7.1 In addition to the RRNL, the draft guidelines refer to a zero tolerance approach to low frequency noise (LFN) and references two documents ('the first report' and 'the second report respectively'):

1. Moorhouse, Waddington and Adams, (2011), Proposed criteria for the assessment of low frequency noise disturbance, DEFRA Contract no. NANR45 revision 1 December 2011.

2. Moorhouse, A., Waddington D. and Adams, M., Procedure for the assessment of low frequency noise complaints, February 2005, Contract no NANR45 to the UK Department for Environment, Food and Rural Affairs (DEFRA); and

3.7.2 The aim of the first report (which was also originally published in 2005 and updated in 2011) was to: "recommend a method for assessing low frequency noise (LFN), suitable for use by Environmental Health Officers (EHOs) in the UK."

3.7.3 It is however very important to note the context provided on page 62 of that document where the authors note: "It is suggested that the proposed criterion be used not as a prescriptive indicator of nuisance, but rather in the sense of guidance to help determine whether a sound exists that might be expected to cause disturbance. Some degree of judgement by the EHO is both desirable and necessary in deciding whether to class the situation as a nuisance, and is likely to remain so. One of the main reasons is that, from the control cases, it is clear that problems do not necessarily arise when the criteria are exceeded. Indeed, we can conjecture that genuine LFN complaints occur only in a few such cases." (emphasis added).

Once again, as noted in Section 12.3.2.1 'There is a significant body of evidence to show that the infrasound associated with wind turbines will be below perceptibility thresholds and typically in line with existing baseline levels of infrasound within the environment.'

2.3.3 Amplitude Modulation

The topic of amplitude modulation has been raised as a concern in several of the third-party submissions.

AWN can confirm that the information provided in Section 12.3.2.2 of the submitted EIAR presents a discussion on the issue of Amplitude Modulation noise associated with the operation of wind turbines.

In Section 12.6.2.1.2, quoted above in section 2.1.2 of this report, confirms how the operator would address AM during the operational phase of the Proposed Wind Farm, if AM were to arise at a noise-sensitive location.

2.4 Huson reports

On page 20 Planners report, reference is made to the Huson report 'Review of Proposed Briskalagh Wind Farm Planning Application'. The topics covered therein include the Amplitude modulation low frequency noise and the selection of wind farm noise criteria, and the noise modelling parameters used including the ground absorption factor.

2.4.1 WindTurbine Noise Criteria

There are references to the use of the 2006 Wind Energy Development Guidelines rather than the Draft version which dated 2019. In Section 12.3.1.2.1 of the EIAR, there is commentary on the continuing relevance of the 2006 guidelines including a statement by the Minister for Housing, Local Government and Heritage during a Dail Eireann Debates on 13 June 2022, which concludes:

When finalised, the revised Guidelines will be issued under section 28 of the Planning and Development Act 2000, as amended. Planning authorities and, where applicable, An Bord Pleanála, must have regard to guidelines issued under section 28 in the performance of their functions generally under the Planning Acts. In the meantime, the current 2006 Wind Energy Development Guidelines remain in force."

Thus, the guidelines used in the EIAR continue to be applicable.

2.4.2 Ground Absorption Factor

In relation to the Ground Absorption Factor 'G', which is a parameter of the noise modelling carried out for the EIAR, AWN confirm that the value of this parameter used was $G=0.5$. This is fully supported in the guidance once the allowance for uncertainty in the sound power level also applied. In section 12.3.7, "As per best practice guidance contained within the IOA GPG, an allowance for uncertainty in the measurement of turbine source levels of +2 dB is applied in modelling to all turbine sound power levels".

2.4.3 Sound Power Levels

In relation to the sound power levels, used in the assessment, AWN confirms that the values as presented in main noise chapter were used throughout the assessment; with a highest sound power level of 106.6 dB L_{WA} . The +2dB allowance for uncertainty is added to that for the noise model value giving 108.6 dB(A).

2.4.4 Amplitude Modulation and Low-frequency Noise

The Huson report also refers to the topics of amplitude modulation and low-frequency noise; responses for these topics provided for the Grosevnor report also apply here.

3.1 Noise Study Area

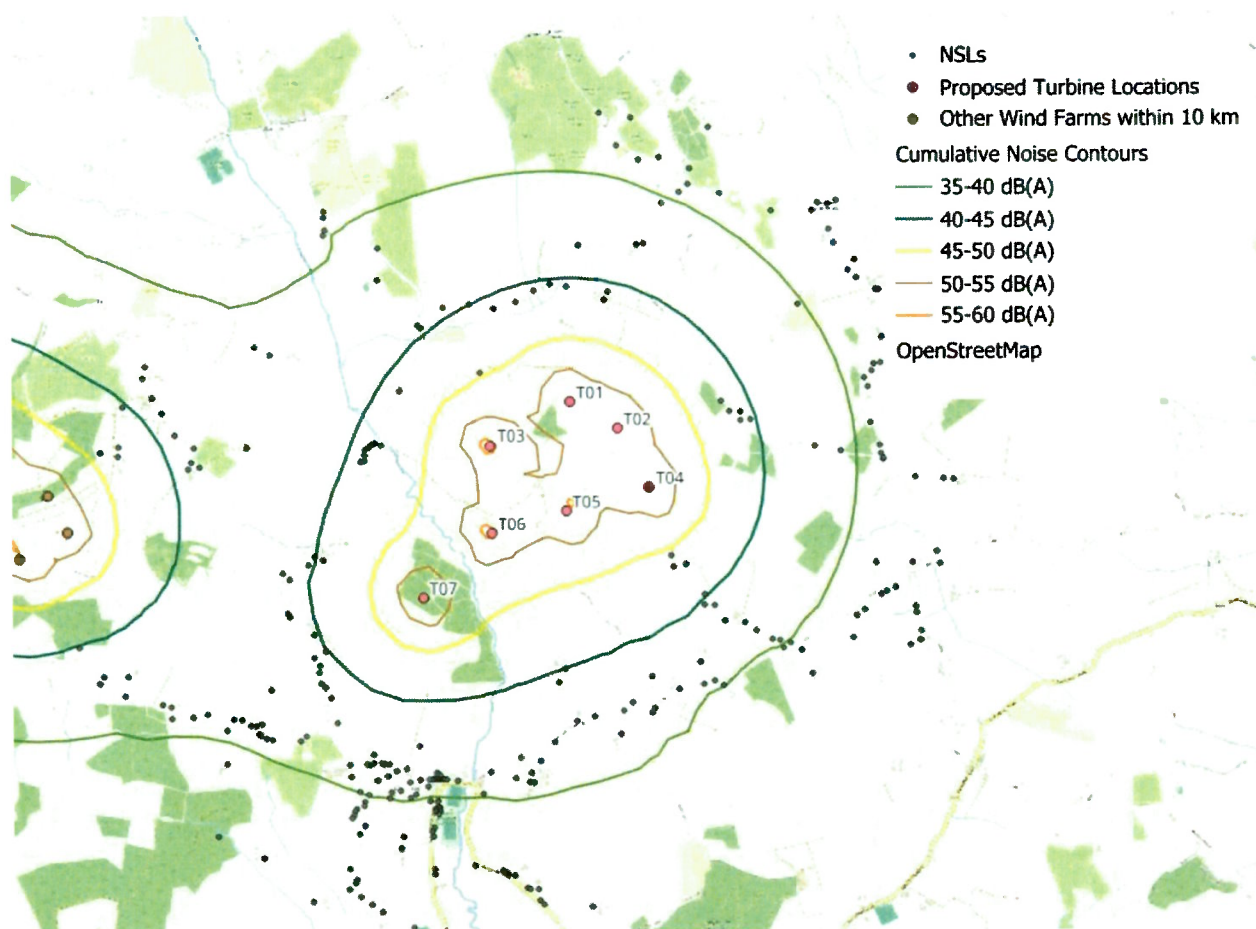
3.1.1 Planner's Comment

The definition of the study area is based on standard IOA guidance that it should extend to a 35 dB LA90 preliminary noise model contour. This contour is not shown. Because of this, it is not possible to check that this the extent of the study area is appropriate.

3.1.2 Response

The rationale for the noise study area is presented in Section 12.3.5 of the EIAR.

In terms of the 35 dB LA90 contour, From Appendix 12.9 of the EIAR, the Figure titled 'Predicted Cumulative Noise Contours' is reproduced here; the cumulative noise contours are shown including that for 35 dB LA90. Locations of NSLs are shown as points and it can be seen that the area covered by the points, extends beyond the 35 dB LA90 contour. A more detailed version of this figure is presented in Appendix A of this report.



The selection of the noise study area is robust. In terms of wind turbine noise, any points to the west of Foyle wind farm will be governed by turbines at Foyle wind farm rather than Briskalagh wind farm.

3.2 Blasting Bedrock and Piling

3.2.1 Planner's Comment

On page 59 of the planner's report, the following is stated:

Vibration effects of rock breaking, a proposed construction activity with high potential to cause vibration effects, have been assessed. On the basis of distance of the borrow pit from residences (approximately 500m) and reference data provided on vibration monitoring elsewhere, it is stated that vibration levels are likely to be well within levels set out in BS5228-2.

Notwithstanding the above, there are concerns regarding noise limits guidance being used and possibly exceeded in relation to linear construction works and blasting bedrock. Insufficient information has also been provided in relation to blasting bedrock and impacts on residents. However, vibration effects of potential piling have not been assessed. This gap is considered to be a potentially significant omission.

3.2.2 Responder Linear Construction Works

The rationale for the noise limits for linear construction are presented in Section 12.3.1.1.1 of the EIAR.

In the EIAR, on section 12.5.2.2.2, the following is stated in relation to potential noise from linear construction works:

It is important to note that the works for the construction of the underground electrical cabling will vary and will not be continuous in nature. The associated construction works will occur for short durations (rolling construction method, approx. 100 – 200 m per day over an estimated 115 – 230 working days) at varying distances from NSLs. Works will therefore be in proximity to the closest NSLs for limited amount of time, i.e. less than one day.

The predicted noise levels at the closest NSLs, at distances of within 25m from works have the potential to exceed the construction noise criterion of 70 dB $L_{Aeq,1hr}$ set out in Section 12.3.1.1.1, if the works generate high noise level in proximity to the NSLs. However, on this basis that the duration of the noise effect is brief, mitigation measures are not required.

The point being made here is that while there is likely to be some impact from the construction of the underground cable route, the duration of the effects at any one noise-sensitive location is brief.

Notwithstanding this, the applicant commits to, in discussion with the relevant property owners, use mobile screens to reduce noise levels during these works where the noise-sensitive locations are within 25m of the cable route.

3.2.3 Responder Blasting Bedrock

In section 12.5.2.1.4 of the EIAR, noise effects due to the Borrow Pits are presented. Noise levels are presented for two methods of rock extractions are presented – blasting (Scenario A) and rock-breaking (Scenario B). At the end of the section, the following conclusions are made:

Review of the data contained in Table 12-16 confirms the following:

- Predicted construction noise levels for both Scenario A and B are well within the construction noise criterion outlined in Table 12-1, therefore it is concluded that there will be no significant noise impact associated with the construction of the borrow pit, therefore no specific mitigation measures are required.*

- *The blasting proposal results in lower levels of construction noise as the rock breaking plant is not required to operate to the same extent in this scenario. Predicted noise levels are lower at all assessed locations for Scenario A.*
- *It is accepted that the individual blast events will be audible at certain locations which may result in slight impacts. Blast events will be designed and controlled such that the best practice limits values outlined in the mitigation section of this chapter are not exceeded.*

Thus, the potential for the requirement for blasting was thoroughly assessed in the EIAR.

3.2.4 Response re Piling

Section 12.5.2.1.1 contains an assessment of potential noise emissions from the construction of turbines, hardstands and the met mast. In Table 12-13, one of the construction plant items is Piling Operations for which the noise levels is 88 dB $L_{Aeq,T}$ at 10 m distance from the activity. The calculations are performed for 504m to the nearest NSL and 742 m to the nearest NSL with no involvement in the project. The resultant noise levels due to piling alone are 47 dB $L_{Aeq,T}$ at 504m and 43 dB $L_{Aeq,T}$ at 742 m. The total noise levels predicted for construction of turbines and are 51 dB $L_{Aeq,T}$ at 504m and 47 dB $L_{Aeq,T}$ at 742 m. These noise levels are well within the criteria of 65 dB L_{Aeq} for construction noise.

To add to the information in the noise chapter, it is likely that piling may only be required at the T7 turbine base, reducing the duration of piling activity

3.3 Traffic Noise

On page 59 of the planner's report, the following is stated:

During delivery of concrete for construction of foundations, which is proposed to take 7 days, increases of +6.3 and +5.6 dB(A) are predicted on the R695 south of Kilmanagh and the R695 east of Kilmanagh, respectively. This level of change is categorised as 'major' using the DMRB scale of effects. The basis of the 7 day duration of concrete pouring is not clear.

Should the duration be 10 days or more then the DMRB rating of significance would change to significant.

It is not explained how, or whether, the assessment of noise due to out of hours traffic which may be a significant consideration during concrete pours has taken account of change in sensitivity to traffic noise during night-time or weekends.

The number of days of concrete delivery is dictated by the number of turbine bases to be constructed. The concrete for each one has to be poured continuously thus there is no possibility of more than seven days' pouring.

Moreover the concrete bases will not necessarily be poured on consecutive days; the construction programme can be arranged to allow a minimum of 3 days between pours.

Based on this construction programme, the noise effects of construction traffic would remain below the criteria for a significant effect according to the best-practice assessment methodology and guidance in the EIAR.

3.4 SPAs and SCAs

3.4.1 Planner's Comment

SPA's and SCA's are not clearly identified on maps where noise and vibration may be more injurious.

3.4.2 Response

The Proposed Grid Connection underground cabling route crosses both the River Barrow and River Nore SAC and the River Nore SPA in the townland of Moatpark, Co. Kilkenny, where the cabling is proposed to cross the River Nore via horizontal directional drilling.

SPA's and SAC's were not considered within the noise and vibration impact assessment included in Chapter 12 of the EIAR. However, the potential for disturbance effects on Qualifying Interest/Special Conservation Interest species of the SAC and SPA mentioned above, namely otter and kingfisher, during the construction phase, have been robustly assessed in Chapter 6 and Chapter 7 of the EIAR, respectively.

3.5 Presentation of Predicted Noise Levels

3.5.1 Planner's Comment

On pages 59-60 of the planner's report, it states:

Appendix 12.7 sets out predicted noise levels at the 276 NSLs in tabular format over 7 pages.

It does not:

- *show which limit values have been taken to apply at each location*
- *identify residences that have been excluded from further assessment on basis of noise from other wind turbines (including turbines at Foyle and Kyleballyoughter) being >10dB more than noise from proposed project or*
- *highlight those locations where predicted cumulative noise levels exceed limit values.*

It is not made clear (in Appendix 12.7 or elsewhere) which noise criteria (from Table 12-12 or elsewhere) are taken to apply at each NSL or group of NSLs.

Table 12-20 presents a review of predicted turbine noise levels at locations where potential exceedances of the derived noise criteria have been predicted in the model against the relevant criteria. However, the lack of information on assignment of the limit criteria to individual NSLs (or NSL groups) and of identification of exceedances and any exclusions in Appendix 12.7 impedes clarity, cross checking of results and accessibility of this key information.

The predicted noise contour map given in Appendix 12.8 is a key illustration for purposes of explaining the level and extent of noise effects of the proposed turbines. However, it lacks clarity in several respects-

- *absence of numbering of NLSS - precludes cross referencing to Appendix 12.7 or Table 12-20*
- *absence of scale bar (or any other scaling)*

- *absence of information on relationship between wind speed and the mapped contours*

3.5.2 Response on Assignment of Limit Values

Table 12-2 presents the noise criteria curves derived from the background noise measurements at each noise survey location, along with criteria based on the 'envelope', i.e. based on the lowest derived background levels at each wind speed.

Within Section 12.4.2 of the EIAR, it states: 'in this assessment the approach used is to assign the envelope criteria to all locations where background noise data has not been measured as a conservative approach to this aspect of the assessment.' The same section confirms 'In line with the ETSU-R-97 guidance a lower threshold of 45 dB $L_{A90,10min}$ has been applied to the NSLs involved with wind energy development.'

To add to the information in the EIAR, the following table confirms the which criteria in Table 12-12 in the EIAR were applied at each location.

Table 3-1. Assignment of noise criteria to receptors

Receptor	Noise Criteria Curve based on:
H013	Noise Survey Location B (H013)
H049	Noise Survey Location E (H060)
H060	Noise Survey Location F (H060)
Involved Property (45 dB L_{A90})	H001, H002, H003, H004, H009, H029, H031, H040, H058, H086, H116, H119, H214, H235 and H239
All Others	Envelope in Table 12-12

The table above clarifies which noise criteria were applied at each receptor. Note that Section 12.6.2.1.1 states that 'With the implementation of turbine curtailment as outlined in Tables 12-23 & 12-24, the predicted noise levels are presented in Table 12-25; no exceedances of the criteria are noted at H012, H008 or H048.' Thus all exceedances of the noise criteria are mitigated through the proposed curtailment measures.

3.5.3 Response on 'residences that have been excluded from further assessment'

Section 12.3.5 of the EIAR presents the rationale for the selection of the study area, with reference to Appendix 12-2 *Cumulative Screening*. As mentioned in Section 3.1 of this Response document, the noise contour shows that noise levels any points to the west of Foyle wind farm will be governed by turbines at Foyle wind farm rather than the Proposed Wind Farm.

3.5.4 Response on 'information on relationship between wind speed and the mapped contours'

AWN confirms that the noise contours presented in Appendix 12-8 refer to a wind speed of 9 m/s at standardised 10 m height. A more detailed version of the figure is included in Appendix A of this report, which includes noise-sensitive location numbering and a scale bar.

4. SUMMARY

This report has been prepared in response to the Kilkenny County Council decision to refuse permission for the Proposed Project. It includes response to third-party appeal submissions received by Kilkenny County Council and the Kilkenny County Council Planner's Report on the file.

The submitted noise impact assessment (EIAR Chapter 12) is robust and has been carried out in line with current standards and best practice guidelines (i.e. Planning Guidelines for Wind Development 2006). The submitted EIAR Noise and Vibration assessment demonstrates that the Proposed Wind Farm can operate within the noise criteria derived from the relevant guidance. This document has reiterated the relevant sections of the EIAR and provided additional clarifications to comprehensively address the concerns raised by the third-party submissions and the planner's report.

APPENDIX A. PREDICTED NOISE LEVELS AT 9 m/s WIND SPEED

(overleaf)

Briskalagh Wind Farm
County Kilkenny

0	400	800 m
---	-----	-------



- NSLs

Noise Contour at 9 m/s

35 dB(A)

40 dB(A)

— 45 dB(A)

50 dB(A)

55 dB(A)

- Wind turbine

OpenStreetMap



The Tecpro Group, Clonsilla Business Park,
Technology Park, Dublin 17

T: +353 1 847 4220 | F: +353 1 847 4252

AWN Job Reference: 237501.0460

Issue Date: 26 Mar 2025