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Case Number ACP – 323957-25
Ballyfasy Wind Farm
Response to Submissions Report

MANOGATE LTD

A **FuturEnergy Ireland** and **ART Generation** Joint Venture

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1. INTRODUCTION

1.1 PURPOSE OF THIS REPORT

This report has been prepared in response to a letter from An Coimisiún Pleanála (ACP) dated 20th February 2026, inviting the applicant (Manogate Ltd) to respond to the 118 submissions received in respect of a planning application for the proposed Ballyfasy Wind Farm development in County Kilkenny (ACP case number 323957-25).

We confirm that the following responses address all the matters raised in the submissions.

1.2 FORMAT OF RESPONSE

This response document firstly addresses the themes raised in the prescribed body submissions followed by the third party submissions. Each theme is discussed in a specific section of this response. The submissions contain a large number of comments. Although many comments do not necessitate response, it should not be taken that the applicant accepts or agrees with those comments. This submission has focused on the points raised under each theme where a response is warranted and may be helpful for ACP in making a determination on the application.

All specialists involved in the preparation of the Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) have reviewed each of the individual observations and have provided a technical response to the items relevant to their area of expertise and EIAR chapter.

1.3 RELEVANT PLANNING CONTEXT

This section will provide a short summary of the following key case law and government policy relevant to the proposed Ballyfasy Wind Farm:

- Coolglass Wind Farm Limited v An Coimisiún Pleanála [2026] IESC 5
- Friends of Killymooney Lough -v- An Coimisiún Pleanála & Ors [No.2] [2025] IEHC 576
- Ireland's Large Energy User Action Plan (LEAP)
- Large Energy Users (LEU) Connection Policy CRU/2025236
- Energy Security in Ireland to 2030

Coolglass Wind Farm Limited v An Coimisiún Pleanála [2026] IESC 5

Since the lodgement of this planning application on the 15th December 2025, a Supreme Court judgment has been issued, which is of relevance to the consideration of the proposed project.

The Supreme Court's judgment in ***Coolglass Wind Farm Limited v An Coimisiún Pleanála [2026] IESC 5***, was issued on 4th of February 2026, and provides important support for the proposed Ballyfasy Wind Farm insofar as it confirms that, in determining an application for renewable energy development, ACP must engage in a **real and substantive way** with the **climate benefits** of the project.

The judgement emphasises that renewable electricity and climate mitigation benefits of development must be expressly considered as part of the planning balance. At the same time, the Court made clear that Section 15 of the Climate Action and Low Carbon Development Act 2015 (as amended) does **not** create an automatic presumption in favour of every renewable

energy project, **but it does require that climate objectives be meaningfully addressed within the decision-making process.**

The Climate Action and Low Carbon Development Act 2015 (as amended), outlines duties for certain bodies (which includes consenting authorities) under Article 15 (1) as follows:

A relevant body shall, in so far as practicable, perform its functions in a manner consistent with—

(a) the most recent approved climate action plan,

(b) the most recent approved national long term climate action strategy,

(c) the most recent approved national adaptation framework and approved sectoral adaptation plans,

(d) the furtherance of the national climate objective, and

(e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.

In this regard, the proposed Ballyfasy Wind Farm is consistent with each of the matters identified in Section 15(1)(a)–(e) of the Climate Action and Low Carbon Development Act 2015, as amended, insofar as it would contribute to the delivery of renewable electricity, support national emissions reduction and climate neutrality objectives, and form part of the wider transition to a climate-resilient energy system:

Section 15(1) criterion	Response of proposed development
(a) The most recent approved climate action plan	The proposed Ballyfasy Wind Farm aligns with the **most recent approved Climate Action Plan**, namely **Climate Action Plan 2025**, which identifies the transition to renewable electricity as a central part of Ireland's pathway to halving emissions by 2030 and achieving climate neutrality by no later than 2050. The Plan states that Ireland is to achieve **80% of electricity demand from renewable sources by 2030**. In that context, a wind farm with a proposed capacity of **between 57 MW and 72 MW**, capable of generating clean electricity for **over 40,313 to 50,922 households annually**, would make a direct contribution to the delivery of additional renewable electricity generation capacity.
(b) The most recent approved national long term climate action strategy	The proposed Ballyfasy Wind Farm is also consistent with Ireland's **Long-term Strategy on Greenhouse Gas Emissions Reductions**, which sets out the pathway to achieving **carbon neutrality by 2050** and includes the decarbonisation of the electricity sector as a key component of that transition. By increasing the supply of indigenous renewable electricity over the long term, the proposed development would contribute to the structural decarbonisation of the national energy system.
(c) The most recent approved national adaptation framework and	The proposed Ballyfasy Wind Farm is capable of being advanced in a manner consistent with the **National Adaptation Framework**, published in **2024**, which provides the national strategy for adaptation measures

approved sectoral adaptation plans	and requires public bodies and infrastructure sectors to plan for climate resilience. While adaptation is distinct from mitigation, a well-sited and appropriately designed wind farm forms part of the resilient electricity infrastructure required in the context of climate change. The proposed development also takes into account flood risk as part of climate change scenarios. On that basis, the proposed development would support a more climate-resilient energy system, subject to detailed design and assessment.
(d) The furtherance of the national climate objective	The **national climate objective** under the 2015 Act, as amended, is for the State to pursue and achieve, by no later than **2050**, the transition to a **climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy**. The proposed Ballyfasy Wind Farm will support the furtherance of that objective by generating renewable electricity at utility scale and displacing electricity otherwise generated from fossil fuels. In doing so, it will contribute to the transition to a climate neutral economy and to the wider decarbonisation of Ireland's energy system.
(e) The objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State	The proposed Ballyfasy Wind Farm directly supports the objective of **mitigating greenhouse gas emissions** by increasing the supply of renewable electricity and reducing reliance on carbon-intensive generation. Given its proposed capacity of **57 MW to 72 MW** and its ability to generate clean electricity for **over 40,313 to 50,922 households annually**, the development will make a material contribution to national emissions reduction efforts. In addition, by adding domestic renewable generation to the electricity system, the project also supports climate adaptation in a broader strategic sense by strengthening energy resilience and reducing dependence on fossil fuel-based supply.

Of note, Section 3 "Strategic Justification" of the submitted Planning Statement outlines EU and National level policy that clearly drives the need for this type of renewable energy development.

The need for the proposed project is driven by the following factors:

- A legal commitment from Ireland to limit greenhouse gas emissions under the Kyoto protocol to reduce global warming;
- A requirement to increase Ireland's national energy security as set out in Ireland's Transition to a Low Carbon Energy Future 2015-2030 Adopted Paper;
- A requirement to diversify Ireland's energy sources, with a view to achievement of national renewable energy targets and an avoidance of significant fines from the EU (the Renewable Energy Directive (EU) 2023/2413 (RED III));
- Provision of cost-effective power production for Ireland which would deliver local benefits;
- Increasing energy price stability in Ireland through reducing an over reliance on imported gas; and

- The proposed project will also aid in bridging the gap of over 4 GW electricity shortfall in Ireland, in turn contributing towards achieving the CAP25 target of 9 GW of energy to be sourced from onshore wind by 2030. The current installed wind capacity at the end of 2024 is 4.8 GW according to Wind Energy Ireland.

Of relevance is the Energy White Paper – Ireland's Transition to a low Carbon Energy Future, as well as the target outlined under CAP24. Ireland faces significant challenges to meet its EU targets for renewable energy by 2030 and its commitment to transition to a low carbon economy by 2050. The proposed project is critical to helping Ireland address these challenges as well as addressing the country's over-dependence on imported fossil fuels.

On a regional scale, RPO 44 of the Southern RSES states that:

> *'It is an objective to ensure the delivery of sustainable actions under the Rural Development Programme (RDP) 2014-20 and beyond in priority areas of innovation, bio-diversity restoration, water and soil management, renewable energy and waste management, carbon conservation and sequestration, diversification, job creation and ICT development in our rural areas'.*

Additionally policy RPO 87 Low Carbon Energy Future:

> *"The RSES is committed to the implementation of the Government's policy under Ireland's Transition to a Low Carbon Energy Future 2015-30 and Climate Action Plan 2019. It is an objective to promote change across business, public and residential sectors to achieve reduced GHG emissions in accordance with current and future national targets, improve energy efficiency and increase the use of renewable energy sources across the key sectors of electricity supply, heating, transport and agriculture."*

In conclusion, the proposed project will contribute towards international, EU, national, regional, and local policy regarding the reduction of dependence on fossil fuels, increased reliance on renewable energy and reducing emissions of GHGs. It will contribute to meeting the EU's challenging target of at least 42.5% renewable energy by 2030.

It will contribute towards national policies to increase wind electricity generation capacity in the country and assist in the exploitation of Ireland's renewable energy resources. With a proposed capacity of between 57 MW and 72 MW, the proposed Ballyfasy Wind Farm will generate clean electricity for over 40,313 and 50,922 households annually, thereby significantly reducing reliance on imported fossil fuels and contributing to Ireland's legally binding target of achieving net-zero emissions by 2050.

Friends of Killymooney Lough -v- An Coimisiún Pleanála & Ors [No.2] [2025] IEHC 576

In climate policy terms, the proposed Ballyfasy Wind Farm represents a form of development that directly supports the achievement of the State's statutory climate objectives and should be assessed in that context.

As referenced earlier, Section 15 of the Climate Action and Low Carbon Development Act 2015, as amended, requires public bodies, so far as practicable, to perform their functions in a manner consistent with national climate goals.

In *Friends of Killymooney Lough v. An Coimisiún Pleanála*, the High Court made clear that this statutory framework is relevant to the exercise of consent functions, and that a development may properly be regarded as "compatible" where it contributes to those goals, including where it aligns with and assists implementation of the relevant Climate Action Plan. The High Court articulated three essential steps for projects that cause greenhouse gas emissions: 1. Identify net emissions, 2. Evaluate against targets, and 3. Evaluate practicability.

This reasoning is particularly supportive of renewable energy infrastructure such as the proposed development. A wind farm is not simply a neutral form of development in climate terms; it is a project whose purpose is to facilitate decarbonisation of the electricity sector and to support delivery of the State's legally recognised transition pathway.

This is important in the context of carbon budgets. Unlike forms of development that may give rise to significant operational greenhouse gas emissions, a wind farm is understood as infrastructure that assists in the reduction of reliance on fossil-fuel-based electricity generation. As such, it thereby supports compliance with the national carbon budget framework. Government policy expressly identifies the expansion of onshore wind energy as necessary to achieving the target of 80% renewable electricity by 2030 and for supporting the electricity sector's carbon budget programme. In that way, the proposed development does not consume carbon-budget headroom; rather, it contributes to the structural changes required for the State to remain within its carbon budget trajectory. The carbon-budget analysis in the case law therefore supports the grant of permission for the proposed Ballyfasy Wind Farm.

Large Energy User Action Plan (LEAP)

Ireland's LEAP was published in January 2026 by the Department of Enterprise, Tourism and Employment and the Department of Climate, Energy and the Environment. LEAP is a Government strategy to facilitate future investment in energy intensive sectors, while unlocking Ireland's renewable energy potential. LEAP will enable Ireland to attract investment from energy intensive sectors (e.g. data centres, Artificial Intelligence (AI), life sciences), driving the economy and innovation for future decades.

LEAP is a plan led approach, ensuring cross Government collaboration, that will align large energy users with Ireland's national climate and energy targets. Through 17 enabling actions to be delivered over the next five years, it aims to address development barriers impacting large energy users and in particular regarding energy infrastructure.

Central to LEAP is the role of renewable energy: the plan explicitly aims to unlock Ireland's renewable energy potential by co-locating large energy users with close access to renewable energy generation in designated green energy parks and prioritising developments that support renewable investment and grid efficiency.

It also seeks to ensure that growing industrial electricity demand is met, as far as possible, from renewables, reinforcing Ireland's transition to a low-carbon energy system. Overall, renewables are not just a supporting element but a core condition of LEAP, shaping where and how future large-scale industrial growth can occur.

Large Energy Users (LEU) Connection Policy CRU/2025236

The Commission for Regulation of Utilities (CRU) Large Energy Users (LEU) Final Connection Policy (2025) sets out a pathway for connecting large electricity demand users (data centres) to Ireland's electricity system. This paper addresses the risks in relation to the security of Ireland's energy supply and system constraints. It promotes renewable energy targets, while reducing where possible, the potential impact on national carbon emissions.

Ther policy aims to balance continued growth in the digital sector with security of supply, grid capacity limits, decarbonisation objectives and climate targets.

The proposed Ballyfasy Wind Farm provides an opportunity to address the constraints energy supply and system constraints identified under this policy. The proposed development therefore directly supports this policy.

Energy Security in Ireland to 2030

The Irish Government's Energy Security in Ireland to 2030 outlines a new strategy to ensure energy security in Ireland for this decade while ensuring a sustainable transition to a carbon neutral system by 2050. This is extremely important given the current Middle East crisis and energy emergency.

This policy recognises that Ireland faces particular vulnerabilities due to its geographic isolation, heavy reliance on imported fossil fuels, and limited interconnection with other energy markets.

> *"Informed by the government's energy security policy objectives - to ensure energy is affordable, sustainable, and secure - the review considered the risks to oil, natural gas, and electricity. The report sets out that Ireland's future energy will be secure by moving from an oil- and gas-based energy system to an electricity-led system, maximising our renewable energy potential, flexibility and being integrated into Europe's energy systems. Meeting our climate, renewable, and energy efficiency targets through actions and measures set out in the annually updated Climate Action Plan will deliver this secure energy future"*[1].

The development of the proposed Ballyfasy Wind Farm aligns with this approach and is capable of generating clean electricity for over 40,313 to 50,922 households annually. This would make a direct contribution to the delivery of additional renewable electricity generation capacity.

[1] https://www.gov.ie/en/department-of-climate-energy-and-the-environment/publications/energy-security-in-ireland-to-2030/

2. PRINCIPAL OF RESPONSE

2.1 PRESCRIBED BODIES

2.1.1 Development Applications Unit (DAU)

2.1.1.1 Archaeology

The DAU submission advises of four conditions which should be a condition of any grant of planning 'To ensure the continued preservation (either in situ or by record) of places, caves, sites, features or other objects of archaeological interest'. These conditions are agreeable to the applicant.

2.1.1.2 Appropriate Assessment

The DAU submission advises that a condition to any planning grant should be that all mitigation measures outlined in the Natura Impact Statement (NIS) and all other relevant documents must be implemented in full. This is agreeable to the applicant.

2.1.1.3 Wet Heath / Hydrology

The DAU submission acknowledges the importance of the heath habitat on site and queries if the adjacent turbine T3 can be relocated and seeks details regarding the hydrology in the area. In response, turbine T3 cannot be relocated and has purposefully been positioned to avoid the heath habitat. Due to significant environmental and technical constraints, including separation distances, turbine siting is a complex, balanced process.

Turbine T3 was purposely located outside of the heath habitat to ensure its preservation. Ecological surveys on site noted that (as detailed in EIAR Chapter 6 (Biodiversity)) "*.. due to the influence of surrounding drainage and modification of the land for forestry and agricultural purposes, this habitat is considered to be degraded. Notwithstanding, the siting of proposed infrastructure within this area has been avoided*".

EIAR Chapter 6 (Biodiversity), also states, "*To ensure that no direct impact occurs within the footprint of the HH3 habitat, the entire area of wet heath (which is adjacent to T3) will be fenced off to ensure no construction phase vehicles, machinery, personnel and/or works take place within this area of habitat, including personnel and machinery undertaking conifer felling as part of the bat buffer at T3. Demarcation of the area will be done so under guidance and supervision of the Ecological Clerk of Works*".

The hydrology of the area was also considered in the EIAR biodiversity and hydrology assessments. In order to prevent additional surface water from entering this habitat, drainage at turbine T3 will be directed to flow westerly away from this area (refer EIAR Appendix 2-8 Surface Water Management Plan). This will ensure no change to the habitat type as a result of surface water.

Also as noted in EIAR Chapter 6 (Biodiversity), this area of heath habitat is included in proposed biodiversity enhancement works. EIAR Section 6.12.7.3 states that "*Deer fencing (2 – 2.4 m high) will be erected around the area of wet heath (total length of 501.29 m) to prevent the negative impact of overgrazing, trampling, loss of species diversity and the subsequent conversion of wet heath to grassland (Wicklow Uplands Council, 2022)*". The DAU query if low grazing or clearance of scrub

could be undertaken in this area. Additional ecological enhancements measures in this area are agreeable to the applicant and measures to control scrub, either by grazing or manual clearance, will be overseen by the Ecological Clerk of Works (ECoW) during the construction phase of the project. Ongoing monitoring and clearance of this habitat throughout the operational phase of the project will be implemented by the applicant in consultation with a suitably qualified ecologist.

The DAU submission also queried if this heath habitat was included within bird surveys on site. It is confirmed that this heath area north of turbine T3 was included in ornithology surveys for the project (see EIAR Chapter 7 (Ornithology)). Limited number of hen harrier flights were recorded across the site which indicates that this is not considered key foraging habitat for hen harrier.

2.1.1.4 Habitat Loss

The DAU submission notes the habitat loss that will occur as a result of the proposed development and in particular queries the positioning of the turbine T7 hardstand in woodland habitat and overall loss of hedgerows and treelines. The DAU also expresses concern regarding the residual habitat loss and lack of replanting.

EIAR Chapter 6 (Biodiversity), discusses the assessed value of ecological habitats on site along with the losses, mitigation replanting and biodiversity enhancement measures agreed with landowners and included in the proposal. The positioning of turbines on site is a fine balance and has taken into consideration both environmental and technical constraints on site. This has included avoiding habitats of biodiversity value, separation distance to residential properties, separation distance to other turbines on site, separation distance to other turbines adjacent to site, wind requirements, recorded archaeology, the inclusion of watercourse buffers etc (see EIAR Chapter 3 (Consideration of Reasonable Alternatives)). The embedded mitigations that were used in the design to reduce the environmental impacts, including for biodiversity, are discussed in each of the relevant EIAR chapters.

It is acknowledged in Chapter 6 (Biodiversity) of the EIAR that there are permanent, significant residual effects at a local geographic scale as a result of the loss of hedgerows and treelines. The hedgerows vary in structure from dense and unmanaged to gappy and scrub like. Typical hedgerow height is between 2-5 m. The treelines recorded are predominantly dense, continuous and unmanaged with a height of 5-10 m. Mitigation and enhancement measures outlined in Chapter 6 (Biodiversity) of the EIAR propose replanting of 1,022.93 m of hedgerow (see Table 2-1 herein).

With regards to the DAU's submission, the applicant acknowledges and accepts the potential for habitat enhancement of retained hedgerow and treeline habitats within the proposed project site and proposes the enhancement measures outlined below to bolster and improve the ecological condition of retained hedgerow and treeline habitats. These measures will be implemented following advice from, and under the supervision of an Ecological Clerk of Works (ECoW).

- Where gaps within an existing hedgerow/treeline occur, they will be infilled with native tree/shrub species of local provenance.

- Planting will be done using a combination of mainly feathered whips and occasional advanced nursery stock (minimum 10 to 12 cm girth trees to fill gaps). This method employs the principles of 'under-planting' feathered whips to the inside of the existing hedgerow and 'inter-planting' of whips and advanced nursery stock within gaps.
- Hedgerow cutting will occur on a two or three year cycle in rotation.

The implementation of mitigation and enhancement measures will offset biodiversity losses and create new opportunities for wildlife, however, Chapter 6 (Biodiversity) of the EIAR acknowledges that permanent significant residual effects at a local geographic scale will remain due to the loss of hedgerows and treelines as set out in EIAR Table 6-11.

With regards to woodland habitat loss at Turbine 7, this turbine has been located within an agricultural grassland field, and hard-standing areas associated with this turbine will result in the removal of 0.12ha of mixed broadleaved woodland (see Figure 2-1 herein). The bat buffer area for this turbine will result in the removal of a further 0.21ha of this woodland. In total, 0.32ha of mixed broadleaved woodland will be removed i.e. approximately 15% of the overall extent of this habitat onsite.

Enhancement measures outlined in EIAR Chapter 6 (Biodiversity) notes that there will be 2.39ha of compensatory woodland planting implemented as part of the proposed project, in the locations of the compounds. These are located approximately 530 m and 870 m away from the area of proposed woodland loss at Turbine 7 and will result in an approximate 99.9% net gain of this habitat onsite. Chapter 6 (Biodiversity) of the EIAR concludes that following the mitigation and enhancement measures proposed, the proposed project will not result in any significant residual effects on mixed broadleaved woodland habitat.

Also as detailed in Section 6.12.7 of EIAR Chapter 6 (Biodiversity) and shown on Figure 6-16, to enhance the existing ecological habitat within the proposed wind farm site the following biodiversity enhancement measures will be implemented by the applicant:

- Woodland planting of native trees (WD1 – [Mixed] broadleaved woodland) (2.39ha);
- The creation of a pond within an area of wet grassland east of turbine T8;
- Protection of the area of wet heath adjacent to turbine T3 utilising deer fencing; and
- The retention of land for the purposes of enhancement (1.76 ha).

These areas are included within the planning application boundary.

Figure 2-1: Habitat loss at Turbine 7 (snapshot from EIAR habitat map 6-8 including T7 hardstand)

Table 2-1: Habitat Loss within the Proposed Project

Habitat	Baseline Total	Habitat Loss	Retained	Replanting/ Compensatory Planting	Net Loss/Gain
Hedgerow (WL1)	4602.97m	2228.28m (permanent) 430.25 (temporary)	1,944.44m	1022.936m	1205.5m 22% net loss
Treelines (WL2)	1513.14m	589.48m	923.66m	N/A	589.48m 38% net loss
Mixed broadleaved woodland (WD1)	2.08ha	0.32ha	1.76ha	2.39ha	2.07ha 99.9% net gain

2.1.1.5 Pine Marten /Red Squirrel

In the DAU submission, the Department recommends that prior to any removal of woodland or forest habitats, the Ecological Clerk of Works (ECoW) should carry out specific pre-felling surveys for pine marten or red squirrel dens/dreys. This is agreeable to the applicant.

As a further enhancement measure, the DAU suggests that pine marten boxes could be proposed in areas of retained woodland. The applicant will work with the ECoW and landowners in identifying suitable areas for pine marten nest boxes and install some in suitable areas.

2.1.1.6 Bats

The DAU submission raised concerns regarding the potential impacts of keyholing on the local bat populations. Further information on these potential impacts and relevant mitigation was requested. Turbines T2 and T4 are proposed in areas of conifer plantation and Turbines T1, T3 and T7 are in close proximity to areas of conifer plantation. Keyholing is the term used to describe the removal of trees around the wind turbine to avoid large-scale or clear felling of trees while also allowing for the construction and operation of turbines. Keyholing is proposed within conifer plantation for T2 and T4. Although conifer plantation as a whole is not considered valuable habitat for bats, the woodland edge provides foraging and commuting habitat. Keyholing increases the amount of available edge habitat and thus the amount of available foraging and commuting habitat. The additional habitat creates a flight path that approaches and surrounds proposed turbines and as such there is an increased risk of collision mortality, barotrauma and other injuries. This was taken into consideration when discussing the significance of the effect of collision, barotrauma and other injuries on both low and high collision risk species in the impact assessment provided in the Bat Survey Report (see Table 4-2 of Appendix 6-5 of the EIAR).

The mitigation suggested in Section 6.12.3.3.1.2 of the Biodiversity Chapter of the EIAR includes a bat buffer, cut-in speed/curtailment, and monitoring and is in line with wind farm mitigation guidance published by NatureScot (2021). The use of bat buffers is considered a suitable mitigation for the impact of collision, barotrauma, and other injuries to bats given that bat activity is related to proximity to habitat features such that activity decreases as distance from habitat features increases (Verboom & Spoelstra 1999; Downs & Racey 2006)[2, 3]. Using NatureScot guidance (2021), an estimated bat buffer can be calculated using the following formula and values:

Equation 1: Bat buffer distance calculation

$$\mathrm{b} = \sqrt{(50 + bl)^2 - (hh - fh)^2}$$

[2] Verboom, B. & Spoelstra, K. (1999) Effects of food abundance and wind on the use of treelines by an insectivorous bat *Pipistrellus pipistrellus*. Canadian Journal of Zoology 77:1393 -1401.

[3] Downs, N.C. & Racey, P.A. (2006) The use by bats of habitat features in mixed farmland in Scotland. Acta Chiropterologica 8:169-185. Hundt, L. (2012) Bat Surveys: Good Practice Guidelines (2nd edition). The Bat Conservation Trust, London. ISBN-13: 9781872745985.

Table 2-2: Variable Definitions for Buffer Zone Formula

Variable	Definition	Value
bl	Blade length	81.5 m
hh	Hub height	105.5 m
fh	Feature height	30 m
b	Buffer distance	107.67 m

It is noted that this was incorrectly calculated in the Bat Survey Report (see Table 4-2 of Appendix 6-5 of the EIAR). The maximum blade tip height (defined as the measurement height from the ground to the blade tip) of 180 m was used instead of the blade length. The bat buffer is proposed at 100 m from the blade tip. Although the calculated distance is larger than the proposed 100 m buffer, it is considered suitable given the implementation of appropriate cut-in speed/curtailment measures.

Cut-in speed is the minimum wind speed at which a wind turbine will begin to produce power. Curtailment is the reduction or cessation of power outage by increasing the cut-in speed, which can be used to protect wildlife including bats. A basic form of curtailment is stopping turbine during bat activity between dusk and dawn. However, there are more sophisticated forms that use a supervisory control and data acquisitions (SCDA) which will monitor environmental conditions to avoid optimal bat foraging conditions. The curtailment regime considers key weather parameters (at least wind speed, but temperature and precipitation can also be considered) and/or other factors (time after sunset and month of the year).

The effectiveness of these measures will be observed, and the curtailment regime will be adapted if necessary depending on results of the three-year post-construction monitoring (automatic detection surveys and carcass detection) proposed to limit the occurrence of collision mortality, barotrauma and other injuries to bats. In the event that bat activity remains consistent or increases and/or carcass searches indicate there are bat fatalities, cut-in speed will be increased. The curtailment effectiveness will be monitored by repeating monitoring in years 5, 7, 10, 15, 20, 25 and 30.

It is acknowledged that the following mitigation will be adopted:

- Completion of pre-construction surveys no more than one month prior to felling;
- Pre-felling inspections of potential roost feature (PRF) bearing trees; and
- Cessation of works in the event that any bats are encountered.

The addition of bat boxes was considered during the initial assessment to compensate for the loss of the five PRF bearing trees. Bat boxes are not proposed within or adjacent to turbine locations, as encouraging roosting activity close to the rotor-swept zone would not reduce collision, barotrauma or other operational risks. Should compensatory roost provision be required, bat boxes would be placed within retained woodland or treelines outside turbine buffers, where they would not increase bat exposure to operational turbines. The surrounding landscape contains a network of hedgerows, treelines and woodland edge habitat that already provides functionally connected alternative roosting opportunities for bats.

2.1.1.7 Birds

The DAU submission advises that a condition to any planning grant should include that all vegetation removal will be scheduled outside of the bird nesting season, which is between the 1st of March and 31st of August. As noted within EIAR Chapter 2 (Description of the Proposed Project), EIAR Chapter 7 (Ornithology), and the Construction Environmental Management Plan (CEMP) the applicant has confirmed the following. With the exception of commercial forestry felling, vegetation clearance will commence outside the breeding birds season, which runs from the 1st of March to the 31st of August to protect any active bird nests and chicks. If any minor clearance or trimming is required within those dates, or if the initial vegetation clearance extends past the 1st of March due to unsuitable weather conditions, the works will be preceded by a confirmatory ecological survey (carried out by a qualified and suitably experienced ecologist) to ensure there are no active bird nests within the vegetation involved. If active bird nests are identified, works will stop and consultation will be undertaken with the National Parks and Wildlife Service (NPWS).

2.1.1.8 Lighting

The DAU submission has noted that white (or green) lights are believed to be less attractive to birds than red lights, which may affect nocturnal migrant navigation. The DAU submission notes that the lighting design should consider best practice guidance, such as the recently published NatureScot Information Note on the Effects of Aviation Obstruction Lighting on Birds at Wind Turbines, Communication Towers and Other Structures. The DAU submission notes that a number of mitigation options exist, and these are listed in this guidance and must be considered in relation to the proposed project.

In response, the colour of the turbine lights must be in compliance with Irish Aviation Authority (IAA) standards. Wind turbines in Ireland are equipped with specific lighting for aviation and maritime safety, which are regulated by the IAA and the Commissioners of Irish Lights. Certain colours mean certain things to the pilots. Red lights are the most common lights on onshore turbines and alert pilots to the presence of structures. Green and yellow lights are often used for offshore wind farms with the green indicating to helicopter pilots that the turbine is secure for hoists. The applicant is open to white or green lights but ultimately those fitted on the proposed Ballyfasy turbines will be in compliance with IAA standards. As requested by the IAA in the EIA Scoping (see EIAR Appendix 1-6), the applicant will liaise with the IAA to agree an aeronautical obstacle warning light scheme for the wind farm development upon planning approval.

2.1.1.9 Mitigation Measures

The DAU submission states that a schedule collating all mitigation measures should be produced as part of the CEMP and agreed with the Local Authority prior to commencement of any works. This submission further advises that an appropriately qualified Ecologist is retained as an Ecological Clerk of Works during any operations and that a post-operation mitigation compliance report is produced by the Ecological Clerk of Works and submitted to the Local Authority for review.

In response it is confirmed that a Schedule of Mitigation Measures is presented in EIAR Chapter 19. This Schedule of Mitigation Measures is also presented in the CEMP (see EIAR Appendix 2-6) along with mitigation measures from the Natura Impact Statement (NIS). These mitigation measures include for the appointment of an Ecological Clerk of Works. As noted within the CEMP, this is a live document and will be reviewed and updated, as necessary to incorporate any planning conditions. Upon appointment, the Contractor for construction of the proposed project shall update the CEMP to produce an updated version (i.e. the Contractor's CEMP) which will account for any additional requirements set out in planning conditions.

2.1.2 Kilkenny County Council (KCC)

2.1.2.1 Kilkenny Wind Strategy

In relation to the Kilkenny City and County Development Plan 2021-2027, the KCC submission states that on the 15th of October 2021, the Minister of State at the Department of Housing, Local Government and Heritage, notified KCC of his intention to issue a Direction to the Kilkenny City and Council Development Plan 2021-2027. In accordance with Section 31 (4) of the Planning and Development Act 2000, those parts of the Kilkenny City and Council Development Plan 2021-2027 referred to in the notice shall be taken to have not come into effect, been made or amended; namely;

- Chapter 11 Renewable Energy
- Section 11.4 Kilkenny Targets
- Section 11.5.1 Current status and targets
- Figure 11.4 Wind Strategy Areas

KCC are awaiting further direction from the Minister in this regard and currently wind energy projects in Kilkenny are being assessed on a project by project basis.

The applicant is aware of this from project consultations with KCC. This issue is discussed further herein and in the submitted Planning Statement with the application.

2.1.2.2 Separate Planning Applications / Prematurity

Page 70 of the KCC submission notes that a separate planning application for the grid connection is not practical as one application does not function without the other application and therefore they must be considered as a single application.

In response, the applicant has acknowledged both applications are linked and has provided an EIAR which assessed both applications. It is a single project for the purposes of EIA (which was stated in statutory notices) and therefore the EIAR addresses all elements of the project (i.e. both applications). Both applications were also submitted on the same date however, both fall under different provisions of Irish planning legislation as discussed at pre planning meetings (proposed wind farm - ACP case number; 320900-24 and proposed grid connection - ACP case number 321814-25) with An Coimisiún Pleanála. Therefore they are required to be submitted separately under Sections 182A and 37E of the Planning and Development Act, 2000, as amended, respectively.

It is also deemed by KCC that the submission of the grid connection application with two options is premature as a route has not been selected. In response, design flexibility has been sought

from An Coimisiún Pleanála (ACP case number 322293-25) for the project grid connection (see EIAR Chapter 1 (Introduction), Section 1.10.1 and the ACP design flexibility opinion in Appendix 1-3). Two options for the grid connection are considered to connect the proposed project to the national grid and both were fully assessed in the EIAR.

Grid Connection Option (GCO) One proposes to install a 110kV underground cable from the proposed onsite substation to the consented Castlebanny Wind Farm 110kV substation approximately 12 km to the north.

GCO Two proposes to connect the onsite substation with the existing 110kV Great Island-Kilkenny overhead line which crosses approximately 2.3 km to the east of the proposed wind farm site.

A single grid connection will be constructed for the proposed project. The GCO constructed is subject to receiving a grid connection offer following EirGrid/ESBN post planning system studies.

Design flexibility was sought as the grid connection cannot be confirmed prior to grant of planning. ACP provided a design flexibility opinion (ACP case number – 32229325) regarding the two grid connection options under Section 182G of the Planning and Development Act 2000, as amended and the Planning and Development Regulations 2001, as amended. This opinion was provided in EIAR Appendix 1-3.

It is confirmed that both grid connection options have been considered and fully assessed within the project EIAR.

2.1.2.3 Sensitive Receptors

On page 35 of the Kilkenny County Council (KCC) submission it notes that the shadow flicker conclusions state there are no sensitive receptors within 720 m of a turbine. The KCC submission identifies a property approximately 370 m north of turbine T10. It also notes this house was not considered within noise assessments. On pages 69 and 70 of the submission this property is again referenced with regards to shadow flicker and hydrology.

In response, there are two Eircode's in this location (both within Folio 9122F) for which there are legal agreements in place to purchase. The property owner is financially involved. These properties will not be residential at the time of construction/ operation. Please see solicitor letters from both landowners in Appendix A of the Planning Statement submitted with the application.

2.1.2.4 Construction Environmental Management Plan (CEMP)

The KCC submission makes several comments and suggestions regarding the CEMP which are addressed herein.

A CEMP is provided in EIAR Appendix 2-6. As noted within this document, it is a live document and will be reviewed and updated, as necessary with any planning conditions. Upon appointment, the Contractor for construction of the proposed project shall update the CEMP to produce an updated version (i.e. the Contractor's CEMP) which will account for any requirements set out in planning conditions. This updated CEMP will be provided to KCC for approval before construction commences.

Staff Inductions

In relation to staff inductions, all staff will be inducted before commencing work on site. The CEMP will form part of staff inductions.

Schedule of works

KCC have asked for a more inclusive schedule of works covering both ducting options. The project schedule of works sets out the proposed works. If planning permission is granted, the schedule of works will be progressed as part of detailed design, within the parameters proposed as part of the planning application. The updated schedule of works will cover the grid connection option being progressed. Currently the grid connection option is unconfirmed and forms part of the project design flexibility opinion. The grid connection option constructed is subject to receiving a grid connection offer following EirGrid/ESBN post planning system studies.

Specific KCC requests

KCC request that proposed buffer zones to protect aquatic zones should be clearly marked in advance of works commencing to preserve their integrity. It is also requested that site compounds or any area designated for maintenance, cleaning, refuelling and repair work of vehicles and machinery must be located at least 50 m of the nearest aquatic zone. It is also requested that buffer zones and methodology to install and manage the same should be included in the CEMP. KCC also request that the CEMP fully detail direction drilling mitigation measures and reclamation process and disposal of bentonite slurry.

There are two temporary construction compounds on the wind farm site in which any maintenance, cleaning, or refuelling will be undertaken. These are shown in planning drawings 11474-2010 – 2014 and are located at a distance greater than 50 m from the nearest aquatic zone.

The applicant recognises these requests by KCC and will ensure they form part of the CEMP prior to construction works commencing.

Waste Permit

KCC note that a waste permit will be needed for the temporary storage of waste. The applicant is aware of this and confirms they will apply for all necessary permits and licences required.

Risk Assessment Method Statement (RAMS)

KCC has requested that the applicant provides a Risk Assessment Method Statement (RAMS) for the removal of contaminated material in event of a hydrocarbon spill during the construction stage. The applicant commits to preparing a RAMS in advance of site works commencing as these documents also form part of the applicants own health and safety process and records.

Decommissioning

KCC state that decommissioning works deliberately do not include for the removal of hard standing pathways across the landscape but instead only make allowance for turbine removal. If the area is to be truly decommissioned, then roads and hard standing should be properly addressed and at a minimum grubbed up.

In response, as detailed in EIAR Section 2.12.1, upon decommissioning of the proposed project, the wind turbines will be disassembled in reverse order to how they were erected. All above ground turbine components will be separated, cut up to allow them fit on a standard articulated lorry and removed off-site for recycling.

Turbine foundations will remain in place underground and along with hardstands will be allowed to revegetate naturally. Leaving the turbine foundations and hardstands in-situ is considered a more environmentally prudent option, as to remove that volume of reinforced concrete and stone from the ground could result in potentially needless environment nuisances such as noise, dust and/or vibration. There would be no real environmental benefit from removing the foundations, as the concrete is underground, stable and inert if untouched.

The site roadways (as queried in the KCC submission) will be in use for additional purposes to the operation of the wind farm (e.g. for forest/agricultural access) over its lifetime. Therefore, it is assessed to be more appropriate to leave the site roads in situ for continued landowner use.

Spoil Management

KCC raised concerns in relation to management of soils including tarmac. Concerns were also raised in relation to slopes at Deposition Area 3.

In response there is no tarmac removal from the windfarm site. Tarmac excavated does not require a waste permit or licence for temporary storage in accordance with the Waste Management Act 1996 as amended.

Soils vary across the site however there is not a pronounced distinct delineation between the basic and acidic areas due to the deposition history. It is proposed to reuse material on site in accordance with the circular economy principles and the Waste Management Act 1996 as amended. There is a requirement to separate topsoils and subsoils. Soils will be tested in accordance with the EPA Soil recovery protocols.

In relation to Deposition Area 3 (near turbine T6), slopes in this area are three degrees and do not represent a risk of stability. Existing infiltration rates in all areas on the proposed wind farm site are low based on the underlying bedrock and the infiltration rates will not be significantly altered as a result of the proposed development. The deposition area will be replanted with native trees post construction thereby providing a beneficial end use of this area in accordance with the circular economy principles.

It is not proposed to remove access roads created on the wind farm as these provide a beneficial use for agricultural practices and forestry.

Spoil management on the Turbine Delivery Route (TDR)

Soils, overburden, and rock will be reused on site to reinstate any excavations where appropriate. Construction of the TDR will require the same mitigation measures as outlined in the EIAR (see EIAR Chapter 19). Any excess material will be reused on site in the borrow pits or disposed of to a waste facility in accordance with the Waste Management Act 1996 as amended or By-product regulations.

Dewatering and Ground Water monitoring

KCC suggested continuous turbidity monitoring in the groundwater.

This appears to be a misunderstanding of the risks to groundwater and is likely a reference to surface water monitoring. Turbidity monitoring is proposed for the surface water with details provided in the Surface Water Management Plan (SWMP) (see EIAR Appendix 2-8). Turbidity in groundwater is not a significant risk due to the low permeability and natural filtering effects in the bedrock aquifer.

The potential generation of suspended solids (and therefore elevated turbidity) is a result of construction works and any discharge from the excavations will pass through the surface water management network. Measures are also outlined in the SWMP to prevent the generation of elevated suspended solids at source.

Blasting

Based on the site investigation, blasting is unlikely to be required. There are no potential significant effects on hydrogeology or hydrology as a results of the borrow pit excavation methods.

Spill kits/ alternative measures

KCC queried the use of spill kits or alternative measures on site. It should be noted that an oil interceptor will be used for the higher risk areas. Low risk areas will be managed in accordance with the Construction Environmental Management Plan. Unsealed pavement (like asphalt) is semi-porous, therefore liquids can quickly soak into the surface. The first step for any spill is to use a standard spill kit to contain and absorb the bulk of the liquid. The proposed procedure is as follows:

- Containment: Absorbent socks or booms are used to circle the spill and prevent it from spreading.
- Absorption: Apply the absorbent materials (like pads, granules) to soak up the hydrocarbons. For spills on unsealed pavement, clay-based or universal absorbents are effective.
- Disposal: The used absorbent material must be swept up and disposed of properly according to waste management regulations.

Site specific refuelling details

Refuelling will be undertaken in dedicated areas as outlined in EIAR Chapter 9 (Hydrology and Hydrogeology). It is proposed to install an oil/water separator at the construction compounds and substation prior to discharging to the proposed settlement ponds. The storm water entering this system will include run-off from the refuelling areas and therefore may contain hydrocarbons which require removal. The separator has been sized to cater for 2000 m^2.

Refuelling with bowser will be undertaken in accordance with the mitigation outlined in EIAR Chapter 9 (Hydrology and Hydrogeology), the Construction Environmental Management Plan

and in accordance with HSA guidance on ADR (2025) *Agreement Concerning the International Carriage of Dangerous Goods by Road*[4].

Confirmation of concrete lagoons/ washing out procedures/ mangement of truck volumes

Details in relation to concrete are outlined in Chapter 9 (Hydrology and Hydrogeology)- Section 9.5.1.1.1. '*Concrete is required for the construction of the turbine bases and foundations. Wash out of the main concrete mixing drum will not be permitted on site; wash out is restricted only to chute wash out. Wash down and washout of the concrete transporting vehicles will take place at an appropriate facility off-site.*

Cement and raw concrete will not be spilled into watercourses. Ready-mixed supply of wet concrete products and emplacement of pre-cast elements such as culverts and the clear span bridges across the watercourses will take place. During the delivery of concrete on site, only the chute will be cleaned on-site.

Chute cleaning will be undertaken at lined cement washout lagoons. The collected concrete washout water and solids will be emptied on a regular basis. Washout will be undertaken at the construction compounds. These lagoons will be cleaned out by a licensed waste contractor. No discharge of cement contaminated waters to the construction phase drainage system or directly to any artificial drain or watercourse will be allowed. Weather forecasting will be used to plan dry days for pouring concrete. The pour site will be kept free of standing water and plastic covers will be ready in case of sudden rainfall event.'

Borrow pit reinstatement compaction methodology

Clean natural soils will be utilised to reinstate the borrow pits. The borrow pits will be reinstated with surplus soil and placed in layers, or "lifts," as determined by the geotechnical engineer and compacted to achieve the desired grade and stability. The natural soils will deliver a beneficial after use of the borrow pits that aligns with the biodiversity and environmental management plan. Once the target volume is reached, the final shaping is completed. Grading of the slopes will be completed to a safe, stable angle (e.g., no steeper than 1:4) so they blend with the surrounding landscape. Drainage will remain in place downgradient of the proposed borrow pits.

Forestry clearance and risk of suspended solids as a cumulative impact with wind farm works

Forest felling will be undertaken as part of the construction works. The standards for felling and reforestation describe the universal standards that apply to all felling (thinning, clear felling) and reforestation projects on all sites. The standards will be implemented under a felling licence issued by the Department of Agriculture, Food & the Marine.

In accordance with the Forestry and Water Quality Guidelines (Forestry Service, 2000), buffer zones will be identified and marked out on the ground. These guidelines deal with sensitive areas, erosion, buffer zone guidelines for aquatic zones, ground preparation and drainage,

[4]https://www.hsa.ie/eng/your_industry/adr_-carriage_of_dangerous_goods_by_road/information_guidance

chemicals, fuel and machine oils. Construction activities will be curtailed within the buffer zones in order to reduce erosion and sedimentation and, therefore, to protect surface water quality.

A Forestry Report is included with the application as detailed in EIAR Appendix 2-3.

Stream crossings – silt fencing

KCC raises a query in relation to the use of silt fencing. For the watercourse crossing, silt fencing will be erected at the location of watercourse crossings. It is proposed to use double silt fences (woven, high tensile strength heavy porous filter fabric) near the watercourse. The first silt fence will be installed by hand. Installing silt fencing requires proper placement based on the contours, fencing without long runs, heavy gauge (>130 g/m2) porous filter fabric i.e. Terrastop™, posts with proper depth and spacing, and tight soil compaction on both sides of the silt fence. Silt fencing specifications and locations will be mapped prior to works commencing on site and form part of the Contractors Construction Environmental Management Plan.

Surface water protection

KCC recommend that drainage swales serving steep areas should ideally be surface dressed in hessian cloth or similar to prevent erosion whilst not preventing foliage from becoming established in swale.

Slopes on site are shallow to moderate. Hessian cloth is typically used on steep slopes- i.e. >1:3. These steep slopes do not occur on site. Slopes are shallow and areas where slopes are greater than 1:12 only occur on access tracks to turbines T4 and T6.

Concern was raised by KCC on the potential alteration in water runoff characteristics generally associated with large developments that do not have appropriately designed drainage systems. Runoff from the development area will be maintained at greenfield runoff rates with significant treatment in terms of flow and quality using various SuDS measures. The SuDS surface water management will mimic natural drainage by:

- Storing runoff and releasing it slowly (attenuation);
- Slowly transporting (conveying) water on the surface;
- Filtering out sediments/pollutants; and
- Allowing sediments to settle out by controlling the flow of water.

The attenuation pond is designed following the guidance in the CIRIA SuDS Manual (C697) to attenuate runoff to existing greenfield runoff rates. The attenuated runoff volume for the 1 in 100-year 6-hour event (plus 20% climate change allowance) is limited to the greenfield runoff volume. Each of the turbine and hardstand (0.9 hectare) areas drain to a constructed settlement pond with a length of 25 m and 8.5 m in width (capacity of 210 m^3), providing more than sufficient volume to cater for this runoff (with additional storage capacity for 1:100 yr extreme events plus climate change). Flows will discharge from the pond via a hydrobrake or similar hydraulic control that is designed to cap the discharge to existing greenfield runoff rates. The proposed conservative drainage design is considered appropriate for the proposed site. It should be noted that the calculations are highly conservative. The existing runoff characteristics is for 95% runoff from the agricultural and forestry lands. Due to the design of the hardstand areas, the runoff co-efficient based on empirical evidence is 85-90% due to the gravel surface (increased storage) and shallower slopes (<1 degree).

The proposed wind farm development is not located in an area subject to flooding. The drainage design referred to above will ensure that the site runoff is controlled at greenfield rates, therefore ensuring that the proposed development will not result in downstream flooding issues.

2.1.2.5 Construction Traffic Assessment and Management

The submission from KCC includes comments relating to the use of the local road network for construction traffic, the management of turbine deliveries and the protection of the local road network during construction. In response, construction traffic associated with the proposed development has been fully assessed within EIAR Chapter 16 (Traffic and Transportation).

Traffic surveys undertaken as part of the assessment confirmed that baseline traffic volumes on the surrounding road network are relatively low. The assessment indicates that the majority of construction traffic will consist of light vehicles associated with construction personnel, while heavy goods vehicles represent a relatively small proportion of total traffic movements.

Construction traffic and turbine deliveries will be managed through the implementation of a Construction Traffic Management Plan (TMP) included in EIAR Appendix 16-1. The TMP outlines procedures for scheduling deliveries, managing abnormal load movements, implementing temporary traffic management measures and protecting the condition of the road network.

A pre-construction road condition survey will be undertaken along the construction haul routes and a post-construction survey will also be completed following construction. Where any damage to the road network is identified as being attributable to construction traffic associated with the development, this will be addressed and rectified in agreement with the relevant local authority.

2.1.2.6 Landscape and Visual Impact Assessment (LVIA)

KCC's Chief Executive's Report encompasses their review of the application including the landscape and visual impact assessment (LVIA).

Macro Works (Part of APEM Group) are the LVIA consultants for this project. Macro Works are Ireland's leading landscape consultancy firm specialising in LVIA development projects and one of the only companies in Ireland wholly dedicated to LVIA and associated mapping and visualisations. Established in 1999, Macro Works provide a full suite of visual assessment, analysis, GIS mapping and simulation tools for all aspects of energy (wind, solar, transmission lines, sub-stations, power generation facilities, hydro dams), civil engineering infrastructure and commercial developments.

Macro Works has been the premier provider of visual impact analysis and graphics to the renewable energy sector for over 20 years. Their experience extends to over 200 wind farm projects and a similar number of solar farm projects of varying scales and across a variety of landscape settings.

It would appear that the main KCC observations relate to the operational phase visual impact assessment and the accuracy of the proposed photomontages, which is discussed in detail herein.

The submitted photomontages have been prepared in accordance with established LVIA visualisation standards, specifically the guidance set out by NatureScot (formerly Scottish Natural Heritage). The methodology, technical parameters, and verification processes are clearly outlined on the second page of each photomontage booklet and are further described in the relevant sections of the LVIA (see EIAR Chapter 13 (Landscape and Visual Impact)). These visualisations are derived from surveyed viewpoint locations, use calibrated photography, and are prepared in line with recognised best practice guidance and professional judgement to ensure accuracy, reproducibility, and transparency. As such, they provide a reliable and objective representation of the likely visual effects of the proposed wind farm development.

By contrast, Computer Generated Images (CGIs) constitute fully digital visualisations that depict a virtual environment rather than a photographic record of an existing baseline condition. Such imagery may incorporate artificial lighting, atmospheric conditions, vegetation modelling, or other artistic elements that are not necessarily representative of real-world conditions at a specific location and time. CGIs are not prepared in accordance with NatureScot visualisation standards for LVIA and are typically used for marketing or promotional purposes, where artistic impression rather than technical accuracy is the primary objective.

The assessment is based solely on photomontages prepared in accordance with recognised professional guidance and industry standards, ensuring that the visual effects have been assessed on a robust, transparent, and objectively verifiable basis.

2.1.2.6.1 Accuracy of the Photomontages

The KCC submission also calls the accuracy of the photomontages into question. As noted above, Macro Works are Ireland's leading landscape consultancy firm specialising in LVIA and are the LVIA consultants for this project. The applicant respectively rejects the view of the KCC observation within regards to LVIA as their view is not based on professional expertise or knowledge of LVIA.

In terms of the accuracy, Macro Works produce photomontages in line with the current Nature Scot Guidelines and guidance set by the British Landscape Institute 2011 – Advice Note 01/11. Viewpoints were selected (in consultation with Kilkenny County Council in November 2024 and February 2025 via emails and meetings) and high-quality photography in RAW format is captured using a digital Single-Lens Reflex (SLR) camera with a fixed 50 mm lens on a Monfrotto panoramic head and leveller. Viewpoint locations are then spatially captured using a survey grade Global Positioning System (GPS) unit to within 10 cm of accuracy. High resolution 360-degree panoramas are generated from the captured photography. The scheme is then modelled using a Digital Terrain Model (created with a combination of LiDAR and OS Terrain Data) and real world reference points. It is rendered in Autodesk 3DS Max 2023 with identical image characteristics to that of the camera used for the baseline photography allowing the render and the photography to be merged with a high degree of accuracy.

It should also be noted that the comparison made between the submitted photomontages and Google Street View imagery highlights a potential misunderstanding of photomontage methodology and the strict standards set out in NatureScot's photomontage guidance. Google Street View imagery is captured from a height of approximately 2.5 m above existing ground level, which can result in a greater apparent visibility of the surrounding landscape. In contrast,

photomontages are prepared to represent the view of an average observer and are set at a height of 1.7 m above ground level, in accordance with best practice LVIA guidance. Furthermore, Google Street View imagery is typically captured using wide-angle lenses and provides a near-360° panoramic view. These wide-angle lenses can exaggerate the perception of depth and spatial relationships and, therefore, do not provide a true comparison to the visual experience of a receptor from a specific viewpoint. Consequently, comparisons between photomontages and Google Street View imagery are not appropriate or technically valid for LVIA.

2.1.2.6.2 Perceived Selective Nature of the Representative Viewpoints for Assessment

In terms of the selection of the viewpoint locations for assessment, this is guided by the GLVIA3 (Guidelines for Landscape and Visual Impact Assessment). The viewpoint selection is undertaken utilising the ZTV (Zone of Theoretical Visibility) mapping, which provides the basis for selection of key viewpoints from which to study the visual and landscape impact of the proposed project in detail. It is not practical to include every single location that provides a view of the proposed project as this would result in an unwieldy report and make it difficult to draw out the key impacts arising. Instead, the assessors endeavoured to select a variety of location types that would provide views of the proposed project from different distances, different angles and different contexts. The locations selected are significant because they comprise, for example, centres of population and important communication routes whether due to traffic volume or their scenic value.

It should also be noted that the representative viewpoints for assessment were shared with Kilkenny County Council (in consultation with Kilkenny County Council in November 2024 and February 2025 via emails and meetings). Following review, the local authority requested the inclusion of five additional viewpoints, which were subsequently incorporated into the visual impact appraisal.

An initial broad set of potential views was generated from a desk study using the ZTV map. Each potential VP is colour coded to identify which of the following receptor types it represents;

- Key Views - from features of international or national importance;
- Amenity Views - from important heritage or amenity locations;
- Designated Scenic Routes and Views;
- Local Community Views;
- Centres of Population; and
- and Major Routes.

It is important to note that some VPs may be applicable to several receptor categories, in which case, they will be assessed under the group that best reflects that location's particular sensitivities. Whilst every effort is made to select viewpoints with the clearest and most unimpeded view of the proposed project, in some instances, only a partial view of the proposed project will be visible from the nearest publicly accessible location that was selected to represent the visual receptor. In instances where the proposed project is heavily screened from a specific receptor, a photomontage has been included to highlight the degree of intervening screening afforded between the visual receptor and the proposed turbines. In circumstances

where a branch or cluster of vegetation partially screens a turbine or section of the development, the wireframe view is utilised to understand the potential visual impacts and perceived scale of the development from that receptor.

Finally, it is important to note that Macro Works always attempts to use the most open views relative to the receptor being represented, whether these are views from a town or a designated scenic route. It serves no purpose to assess visual impacts from a location, which can be readily proven not to be representative of worst-case visual exposure from a particular receptor, as this only undermines the assessment. In terms of the timing of baseline photography, this was captured during late 2024 into Summer 2025.

2.1.2.6.3 Comparative Study of Google Street View with Submitted Photomontage

As noted above, KCC has provided comparisons of several representative viewpoints using Google Street View imagery. It is important to reiterate that such comparisons between photomontages and Google Street View imagery are neither appropriate nor technically valid for LVIA. In this regard, it is deemed that any commentary based on these comparisons is considered misguided. Notwithstanding this, a detailed response to the Council's observations regarding the selected comparative viewpoints is provided in the table below.

VP Ref.	KCC Comments	Macro Works Comments
VP8	*Forestry "will be de nuded and harvested in time to come for which turbines will appear visually prominent".* *"It is further considered that VP8 contextual photograph is taken from an angle where maximum screening to the western side of the host local road, thereby screening views of the turbines, however views from just north offer a much more open and offer views of Turbine No. 4."*	With regard to the surrounding forestry, harvesting is a key component of forest management and has the potential to result in clearer views of the proposed turbines and associated site access tracks. However, it is not anticipated that the underlying lands will ever be harvested in their entirety. Instead, forestry operations typically occur in phases, whereby sections are harvested and subsequently replanted once harvesting activities have concluded. In this context, it is not considered that the more exposed views of turbines arising from potential harvesting activities would give rise to significant additional visual effects. Indeed, the wireframe views of the proposed project, which present the turbines in a bare-earth scenario, have been routinely considered in the assessment of visual effects. As noted above, general variations in the degree of roadside screening are inherently considered in the assessment of visual effects through the use of wireframe views of the proposed project, which depict the turbines under bare-earth conditions. In this regard, the visual effect stated for VP8 considered receptors with more open and

		clearer views than those illustrated in the corresponding photomontage. Overall, the residual visual effect rating of Substantial–Moderate for VP8 is therefore considered to be accurate and robust.
VP9	*"the landscape appears much more closed with greater levels of vegetation screening when compared to Google Street View which offers more expansive views of the landscape and would generate wider views of wind turbines in particular Turbine No.'s 5 and 6 and to a less extent 4 and 7."* *Considered that the significance is considerably greater than moderate and photograph take from position/angle both zoomed in with tree line specifically in front of view of turbines. Consider that turbines will be spatially dominant and of an overbearing scale at/in immediate proximity around this location".*	As noted above, Google Street View does not provide an accurate representation of visibility in terms of scale, distance, or field of view. The submitted photomontages have been prepared in accordance with the strict visualisation guidance published by NatureScot, and present the proposed development correctly when viewed at *"a comfortable arm's length"*, as specified in the NatureScot guidance. It is therefore inappropriate to suggest that the images have been zoomed in. Such an approach would in fact present the turbines as more prominent, rather than less prominent, than would be experienced in reality. Overall, the assessed residual visual effect of Moderate is therefore considered to be accurate and robust.
VP10	*"the landscape appears much more closed as it appears that the camera is zoomed in. There is a hedge associated to residential property screening views of where wind turbines would be. When viewed onsite and with Google Street View, the landscape appears more open which would generate wider views of wind turbines (in particular 3, 4, 5, 6 and 7)"* *"Consider the commentary in Appendix 13-1 in relation to wind turbines obscured from view inaccurate"*	As noted above, Google Street View does not provide an accurate representation of visibility in terms of scale, distance, or field of view. The submitted photomontages have been prepared in accordance with the strict visualisation guidance published by NatureScot, and present the proposed development correctly when viewed at *"a comfortable arm's length"*, as specified in the NatureScot guidance. The landscape presented in the photomontage reflects the prevailing landscape conditions and has been captured in accordance with current guidance and best practice. The submitted photomontage therefore presents the proposed development as it would be experienced from this location. Overall, the assessed residual visual effect of Moderate is deemed to be accurate and robust.
VP11	*"the close proximity of wind turbines particularly Turbines 1 and 10 to X91K7R7 is noted however this now appears to serve as a*	As noted above, Google Street View does not provide an accurate representation of visibility in terms of scale, distance, or field of view. The submitted photomontages

	building for the commercial forestry surrounding rather than a private residence" *"As per Google Street View the impacts are likely to appear closer and therefore much more significant than shown on LVIA. Consequently consider that VP11 imagery is somewhat misleading."*	have been prepared in accordance with the strict visualisation guidance published by NatureScot, and present the proposed development correctly when viewed at *"a comfortable arm's length"*, as specified in the NatureScot guidance. It is important to note that the nearby dwelling referenced (*X91K7R7)* is proposed to be acquired by the developer as part of the overall proposed project. See Section 2.1.2.3. Overall, it is inappropriate to consider the submitted photomontages as inaccurate, as they have been prepared fully in accordance with strict guidance. This is particularly relevant given that the photomontages are being compared to Google Street View imagery, which does not accurately represent scale, distance, or visual experience. Thus, the assessed residual visual effect of Substantial–Moderate is considered to be accurate and robust.
VP12	*"Turbine No.6 and Turbine No.7 are in close physical proximity c.1 km and c.1.2 km away respectively. Notwithstanding a rise in gradient level from south to north/south east to north west, the turbines at 180m high appear quite low from this point. Furthermore, the CGI provided shows a grey cloudy sky which helps to further mitigate their visual impact"* *"Consider impacts more significant than moderate given proximity of turbines. In addition, Google Maps shows turbines of greater visual significance."* *"Consider commentary inaccurate as close proximity would be spatially dominant and of an overbearing scale when viewed from close proximity given more open nature of land in this area. The level of screening provided indicated by commentary is also inaccurate as it is considerably less in reality."*	As noted above, Google Street View does not provide an accurate representation of visibility in terms of scale, distance, or field of view. The submitted photomontages have been prepared in accordance with the strict visualisation guidance published by NatureScot, and present the proposed development correctly when viewed at *"a comfortable arm's length"*, as specified in the NatureScot guidance. The proposed turbines are viewed from the context of the public road, which is fully consistent with GLVIA guidance regarding the selection of representative viewpoints, all of which should be from publicly accessible locations, such as local road corridors. As noted above, the preparation of the photomontages and wireframes has been undertaken in full compliance with industry standards and best practice. There is no technical rationale, other than a subjective opinion, suggesting that the turbines are inaccurately represented. The wireframes utilize up to date and accurate DTM data for the surrounding terrain, which clearly demonstrates the degree of screening provided by intervening landform.

		The photomontage therefore provides an accurate depiction of the potential visibility of the 180 m high turbines from this location. Therefore, both the photomontage and the assessed residual visual effect of Moderate are considered to be robust and appropriate.
VP13	*"from the west of Ballyfasy Upper along the L3424, the landscape appears more open and expansive when viewed in both directions on Google Street View and onsite. Furthermore, the presence of a mainly cloudy sky to the CGI helps to obscure views"* *"Consider commentary inaccurate as turbines would be spatially dominant and of an overbearing scale when travelling in either direction given views in both directions on L3424 are broader and more expansive as per Google Street view and site inspection when comparing VP13 photograph."*	As noted above, Google Street View does not provide an accurate representation of visibility in terms of scale, distance, or field of view. The submitted photomontages have been prepared in accordance with the strict visualisation guidance published by NatureScot, and present the proposed development correctly when viewed at *"a comfortable arm's length"*, as specified in the NatureScot guidance. As noted above, the wireframe photomontage is always considered in the assessment, particularly under prevailing cloudy conditions. Regarding the commentary suggesting the images are "inaccurate," the assessment fully accounts for the prominent, but not overbearing, scale of the proposed turbines in this context. With respect to the selection of representative viewpoints, these are inherently representative by definition. In this case, the viewpoints were specifically captured to reflect the potential visibility from the nearest surrounding residential receptors, located a short distance to the east of the viewpoint, in addition to local community receptors traverse the surrounding local road network. This approach follows guidance and standard practice in the selection of representative viewpoints. As a result, the assessed residual visual effect of Substantial–Moderate is deemed to be accurate and robust.
VP14	*"the views towards turbines, particularly Turbines 1 and 10, (both c. 2.3km away) are taken from a selected point at the junction whereby views are considerably screened by tree lines to either side of road, and tree stands obscure views. In fact there would be more open and expansive views of landscape at dwellinghouse at X91 W244 thus proposed turbines at Ballyfasy windfarm would be much more visible"*	As noted above, the selected viewpoints are representative by nature, with some encompassing varying degrees of screening. Notwithstanding this, the assessment of visual effects fully accounts for all turbines, regardless of any screening present at these static locations, through the use of the wireframe photomontage. In this regard, the scale, character, and potential visibility of the turbines from the

		depicted viewpoint and its surrounding context are comprehensively considered in the assessment presented in the submitted LVIA. Thus, the assessed residual visual effect of Moderate is considered to be accurate and robust.
VP15	*"the angle at which the CGI has been formed (views looking south east) includes a high roadside boundary ditch and trees to the rear of the dwellinghouse at X91 APH9, hence does not offer a clear view compared to that offered directly in front of X91 APH9 as viewed onsite and with Google Street View. Views onsite and Google Street View are much more open and expansive."* *"With regard to commentary in Appendix 13-1, it is stated that the proposed turbines are screened to varying degrees by intervening vegetation and terrain. As VP15 does not accurately reflect views of a broad open landscape from roadside boundary, given angle of photograph and/or use of zoom function on camera giving a more enclosed landscape backdrop."*	As noted above, Google Street View does not provide an accurate representation of visibility in terms of scale, distance, or field of view. The submitted photomontages have been prepared in accordance with the strict visualisation guidance published by NatureScot, and present the proposed development correctly when viewed at *"a comfortable arm's length"*, as specified in the NatureScot guidance. It is evident from the depicted view that the roadside boundary, comprising predominantly winter vegetation, provides minimal screening of the turbines. Therefore, the suggestion that this viewpoint was selected to potentially diminish the visual effect of the turbines is inappropriate. The partial screening noted in this instance is associated with the intervening terrain and a more distant conifer tree line, set back beyond the nearby pastoral field. The submitted photomontage thus provides a clear and accurate representation of the potential visibility of the proposed turbines from this viewing context. Accordingly, the assessed residual visual effect of Substantial–Moderate is considered to be accurate and robust.
VP19	*"while the images may be relatively accurately shown, the effects are considered much more significant than 'moderate' (as per Appendix 13-1) given the height of the turbine in the context of the subject dwellinghouse. Contrary to commentary in Appendix 13-1, the dwellinghouse would resultantly be overborne. The consideration of impacts as Moderate / Negative / Long-term should be 'Substantial-moderate / Negative / Long-term"*	Although the nearest proposed turbine to this representative viewpoint is approximately 800 m away (beyond the minimum setback of 720 m), the existing conifer forestry and surrounding vegetation will provide substantial screening of the turbine. Even at this relatively close distance, the degree of screening will significantly reduce the perceived visual presence of the turbines from the adjacent residential receptor, which is the only dwelling along this section of the local road. Furthermore, the principal aspect of amenity from this receptor is oriented to the west, in the opposite direction of the proposed turbine array.

		Thus, the assessed residual visual effect of Moderate is deemed to be accurate and robust.
VP21	*"views in close proximity due north may have provided a better viewpoint for the LVIA, the landscape becomes open and expansive. I note the commentary in Appendix 13-1 stating a 'notable degree of filtering screening is provided by intervening trees and hedgerow vegetation' which is stated to compromise visibility of turbines. With regard to classification of the visual effects as 'medium', I disagree with the viewpoint and the resultant disagreement with the viewpoint is that the viewpoint should be taken from a distance much closer which would have resulted in more significant impacts noted"*	The commentary demonstrates a misunderstanding of LVIA methodology and the selection of representative viewpoints. By definition, representative viewpoints are intended to provide an assessment of receptor types and visual contexts; it is neither feasible nor necessary to include viewpoints from every location within the study area. Representative viewpoints capture a range of viewing distances, angles, and landscape contexts. In this instance, several representative viewpoints are included further to the north, namely VP12 and VP13 in the vicinity of the settlement of Ballyfasy. The selected and depicted viewpoint at VP21 was included specifically to represent local community receptors at this location and within the surrounding landscape. The form of intervening screening observed is characteristic of a low rolling plateau landscape and therefore accurately reflects the views available to receptors in this visual context. Accordingly, the assessed residual visual effect of Moderate is considered to be accurate and robust.
VP22	*"selected to represent potential impacts of the development from local elevated receptor at Tory Hill to the south (all known landscape features). VP sensitivity is classified as 'High-Medium' with significance of quality/duration of impact described as 'Moderate / Negative / Long-term'. The photograph under consideration is considerably zoomed from the elevated vantage point. Appendix 13-considers visual effects moderate at this receptor. I disagree as turbines will present very prominently and dominate views towards the Barrow Valley and Blackstairs Mountains in the distance more significantly than existing turbines to wind farms at Ballymartin and Smithstown given height and proximity to."*	It is important to note that the photography used in the submitted photomontages is neither zoomed nor inaccurate. Indeed, the commentary provided in the KCC submission reflects a misunderstanding of the rigorous guidelines that are followed in the preparation and presentation of photomontages for wind farm developments (refer to NatureScot . With regard to the depicted viewpoint VP22, this location encompasses a degree of visual sensitivity due to its elevated vantage point, which affords 360-degree visibility of the surrounding landscape, as well as its historical associations. In this context, a visual receptor sensitivity of High–medium was deemed appropriate. While views are pleasant and elevated, they are influenced by typical working land uses in addition to other anthropogenic features, including existing wind turbines and major transport corridors.

		In terms of the assessment of visual effects, the proposed turbines will form a notable feature when viewed from this viewpoint. However, the turbines are not considered dominant, as the nearest units are approximately 2.8 km away and are viewed within an open 360 degree panorama already influenced by wind energy development. Although the proposed turbines represent an increase in the intensity of wind farm development in this part of the landscape, they are not out of scale or incongruous, particularly when considered in the context of the surrounding existing turbines. Overall, the assessed residual visual effect of Moderate is considered to be accurate and robust.

2.1.2.6.4 Summary

In summary, the assessment of visual effects within the submitted LVIA demonstrates that the proposed project has been rigorously evaluated using best practice industry-standard methodology and guidance. Photomontages and wireframes have been prepared in accordance with current guidance and best practice and professional judgement, accurately reflecting scale, distance, screening, and the context of the surrounding landscape. Representative viewpoints capture a range of receptor types, distances, and visual conditions, and potential visibility has been comprehensively considered. While the turbines will be noticeable in certain locations, they are appropriately integrated into the landscape, and residual visual effects are deemed Not Significant. Overall, the assessed residual visual effects are accurate, robust, and reflect a balanced appraisal of the proposed projects landscape and visual effects.

2.1.2.7 Archaeology

The submission from Kilkenny County Council recommends that all groundworks will be monitored under archaeological licence and supervision with condition reference no. 3 within the archaeology section of the October 2022 OPR Practice Note PNO3 Planning Conditions to be adhered to. Archaeological monitoring of topsoil stripping across the proposed project is included as a mitigation measure in Chapter 15 (Archaeology and Cultural Heritage) of the submitted EIAR.

2.1.2.8 Noise

The Environment Section of KCC has listed several statements pertaining to noise and vibration in the KCC submission the following subsection presents a response to each items raised.

2.1.2.8.1 Statement 1 from KCC

'*If draft 2019 WEDG guidelines are followed, then when applying the penalties for evening and night-time, there may be instances of non-compliance with predicted noise level and set limits accordingly*'.

The Draft Revised Wind Energy Development Guidelines (Draft Revised WEDGs (2019)) were considered in the EIAR in the context of the noise impacts assessment and are addressed in Section 12.1.7.5.4 EIAR. The EIAR has been assessed in accordance with the applicable in accordance with the applicable guidelines contained in the *Wind Energy Development Guidelines for Planning Authorities*, 2006 (2006 WEDGs), and supported by best practice guidance for the assessment of wind turbine noise, namely, *A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Turbine Noise* (2013) and its supplementary Guidance Notes (2014) (IOA GPG). Full details of guidance documents referenced for the assessment of operational wind turbine noise are presented in Section 12.1.7.5.4 of the EIAR.

2.1.2.8.2 Statement 2 from KCC

'No tonal penalty included for predictive noise modelling, e.g. when the turbine is moving to catch the best wind conditions'.

Section 12.1.7.5.7 of the EIAR addresses Tonality from the operation of the wind turbines. The following statement is reiterated from Section 12.2.4.2.1 of the EIAR '*In this assessment, no tonal penalty has been applied to the predicted noise levels. However, the selected turbine manufacturer will provide a warranty confirming that the turbine's noise output will not necessitate a tonal correction under best practice guidance.* '

2.1.2.8.3 Statement 3 from KCC

'The mitigations and commitments sections for AM noise not referenced correctly and could not be found as a result. "Error! Reference source not found" was displayed'.

The mitigation measures for AM are presented in Section 12.5.3.3.1 (Amplitude Modulation and Tonality) of the EIAR.

2.1.2.8.4 Statement 4 from KCC

Statement by KCC: '*The raw background and wind shear data needs to be included in the planning file so the information is publicly available to allow external noise consultants to carry out post commissioning testing.*'

Section 12.2.2 and Appendix 12.4 of the EIAR present full details of the methodology applied to the background noise survey and the associated data processing, in accordance with established best practice. This ensures that the methodology can be fully interrogated and replicated by third parties.

The raw data from the survey is not required for post-commissioning testing. As confirmed in Section 12.5.3.3 of the EIAR, post-commissioning surveys will be undertaken to verify compliance with any noise conditions. These surveys will be carried out in accordance with the IOA Good Practice Guide (GPG) and Supplementary Guidance Note 5: *Post Completion Measurements* (July 2014).

2.1.2.8.5 Statement 5 from KCC

'Noise guidance documents ETSU-R-97 and the IOA GPG should be the principal documents used to assess noise with WEDG 2006 and Draft WEDG 2019 used to supplement.'

Refer to response under Section 2.1.2.8.1

2.1.2.8.6 Statement 6 from KCC

'*For location A, a fixed lower limit of 35 -40 dB(A) could be applied based on review of "A Good Practice Guide To The Application Of Etsu -R -97 For The Assessment And Rating Of Wind Turbine Noise". It is noted that ETSU-R-97 states (page 63) that: "Where the local authority and the developer are in agreement that the background noise levels do not vary significantly between the amenity periods and the night -time, then a single lower fixed limit of 35 – 40 dB(A) can be imposed based upon background noise levels taken during the amenity periods and the night analysed together. The document goes on to state in section 3.2.9 There is no definition of what is considered significant in this context, but where the amenity and night -time derived background noise levels differ by the order of 3 dB or less, over the key wind speed range between cut -in to when the turbines reaches their maximum level of noise emissions, it could then be appropriate to apply this clause of ETSU -R -97.*'

Section 12.1.7.5.3 of the EIAR confirmed that the applicable guidelines *Wind Energy Development Guidelines for Planning Authorities* (WED06) states '*A fixed limit of 43dB(A) will protect sleep inside properties during the night.*' For context section 3.2.7 The IOA GPG States '*ETSU-R-97 indicates that for the protection of sleep of occupants within buildings an external free-field level of 43 dB L_{A90} is appropriate when background noise levels are low. When background noise levels are sufficiently high, then the noise limits are set to the prevailing background + 5 dB, in the same manner as that used for the Amenity Hours.*'

Applying a single lower fixed limit for day and night time periods would not be appropriate for this assessment and would not be in accordance with the applicable guidelines (WED06) and current best practice for selecting wind turbine noise criteria in Ireland.

2.1.2.8.7 Statement 7 from KCC

'*In Section 12.4.4.1.1 Predicted Levels – Nordex N163 states the potential exceedances identified at H270, H272, and H557 in predicted omni-directional cumulative turbine noise levels range from 0.2 to 2.3 dB at wind speeds of 6 m/s or higher however tables do not show 2.3dB exceedance*'

Section 12.4.4.1.1 of the EIAR contained a typo pertaining to the level of the exceedances. It is confirmed that the values reported in Table 12-18 of the EIAR are correct. The amended stated is corrected as follows:

"*Table 12-18 confirms that the potential exceedances identified at H270, H272, and H557 in the predicted omni-directional cumulative turbine noise levels range from 0.1 to 0.8 dB at wind speeds of 6 m/s or higher.*"

2.1.2.8.8 Statement 8 from KCC

'*Not clear if noise assessment included for additional effects that result from following: being downwind, crest of hill, humidity/cold snap, wear and tear, friction and turbulences*'

EIAR Section 12.2.4 describes in detail methodology adopted for the assessment of operational turbine noise. The EIAR assessment is robust and the methodology and calculation setting are in full accordance with best practice guidance.

Additionally, wind turbines are subject to a rigorous maintenance and servicing programme in order to maintain optimum operational performance and efficiency.

2.1.2.8.9 Statement 9 from KCC

'*Mitigation measures for AM noise must be provided prior to construction. Post construction testing must be carried out to determine if AM Noise likely to be problem with this site. Mitigation measures must be shown before granting of permission to determine if mitigation measures possible*'.

The EIAR sufficiently considered AM in Sections 12.1.7.5.8 and 12.5.3.3.1. It is not possible to predict if AM will occur at planning stage. The following statement is reiterated from Section 12.5.3.3.1 of EIAR '*The commitment outlined to control amplitude modulation (AM) from wind turbines are considered best practice. The proposed approach provides a clear commitment that additional adverse impacts from excessive amplitude modulation (AM) or tona*lity associated with the operation of the proposed project will be effectively managed and minimised by the operator.' A noise complaint monitoring programme will be agreed with the planning authority prior to commencement of development.

2.1.2.8.10 Statement 10 from KCC

'The applicant has not declared if piling required at turbine sites in areas with excessive soil depths nor has applicant declared need or potential need for explosives or use in extraction of material from borrow pits. Activities if required would void noise modelling data and trigger the requirement for remodelling. Should be confirmed in advance'.

Section 12.4.2 of the EIAR states '*Construction noise prediction calculations have been conducted using the assessment methodology outlined and discussed in Sections 12.1.7.1. The source noise levels referred to in this section are indicative of the type of plant items and activities associated with the construction of the proposed project*'. The assessment of construction noise has been undertaken based on the proposed construction activities. The type of plant and activities may change during the construction stage however the assessment findings of no significant effect remain valid in line with the appropriate construction noise and vibration thresholds are proposed in Section 12.1.7.1 of the EIAR.

In additional to this the following statement is contained in Section 12.5.2 of the EIAR '*To ameliorate any potential noise impacts that may present during the construction phase, a schedule of noise control measures has been formulated in accordance with best practice guidance, and the contract documents will require the Contractor to implement these measures'*. These are included in the Construction and Environmental Management Plan (CEMP) that has been prepared for the proposed project (see EIAR Appendix 2-6).

Based on the site investigation, blasting is unlikely to be required. In the unlikely event that blasting was used for extraction of materials from borrow pit the associated noise and vibration effects will be of no greater significance that described in Section 12.6.1.3 of the EIAR. The guidance documents discussed in Section 12.1.7.1 and 12.1.7.4 (BS 5228-2:2009+A1:2014 – *Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration* and The Transport Infrastructure Ireland (TII) (formerly National Roads Authority (NRA)) publication *Guidelines for the Treatment of Noise and Vibration in National Road Schemes* (2004) contain appropriate criteria for blasting activities and a detailed assessment will be undertaken by a specialist blast design engineer to determine the blast design parameters.

2.1.2.8.11 Statement 12 from KCC

'*Applicant has suggested in baseline noise assessment that agricultural noise, road noise and other anthropogenic sources were observed. Applicant would need to elaborate on anthropogenic noise sources and verify if assessment made allowances for existing wind turbines in locality and removal from baseline assessment.*'

The context of the statement in the EIAR confirmed that existing noise environment contained typical anthropogenic sources typically found in such rural settings, there is nothing additional specific to note that would be relevant to the assessment. Section 12.2.2.1 of the EIAR states the following and which should address the query '*In general, the significant noise sources in the area were noted to be local and distant traffic movements, activity in and around the residences, wind generated noise from local foliage and other typical anthropogenic sources typically found in such rural settings.*'

Section 12.2.2.1 of the EIAR also states that noise from existing wind turbines was audible to varying degrees. Section 2.8.2 of Appendix 12.4 confirms that noise from existing wind turbines have been addressed in accordance with the guidance in Section 5.2 of IOA GPG and provides details on the applied methodology.

2.1.2.1 Fire Chief Officer Submission

The applicant notes the conditions proposed by the Fire Chief Officer and accepts these. We also confirm, there is no battery energy system (BESS) proposed as part of this application.

2.1.2.2 Conservation Officer Submission

The applicant notes that the KCC Conservation Officer recommends that all groundworks shall be monitored under archaeology licence and supervision in line with Condition reference No. 3 within the Archaeology section of the October 2022 OPR Practice Note PN03 Planning Conditions shall be adhered to as part of these works. This is agreeable to the applicant.

2.1.3 HSE

The applicant has considered the HSE submission and the confirms all mitigations measures within the CEMP will be implemented in full. The additional mitigations noted by the HSE in the interest of public health, listed on page 17 of the submission, are agreeable to the applicant.

2.1.3.1 Noise

2.1.3.1.1 Applicable Guidelines

The methodology adopted for the assessment of wind turbine noise in the EIAR is in accordance with the applicable guidelines contained in the *Wind Energy Development Guidelines for Planning Authorities*, 2006 (*2006 WEDGs*), and supported by best practice guidance for the assessment of wind turbine noise, namely, *A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Turbine Noise (2013)* and its supplementary *Guidance Notes (2014)* (IOA GPG). Full details of guidance documents referenced for the assessment of operational wind turbine noise are presented in Section 12.1.7.5.4 of the EIAR.

The Draft Revised Wind Energy Development Guidelines (Draft Revised WEDGs (2019)) and the World Health Organisation (WHO) Environmental *Noise Guidelines for the European Region*

(2018) were considered in the EIAR in the context of the noise impacts assessment and are addressed in Section 12.1.7.5.4 EIAR.

AWN (project noise consultants) is aware of, and has reviewed, the court judgments cited within the HSE submission (and other submissions). The content of the judgments does not alter the assessment presented in the submitted EIAR. It is confirmed that the most up to date applicable guidelines, best practice guidance and standards have been applied to the assessment of wind turbine noise in the EIAR.

The following statement is reiterated from Section 12.1.7.5.4 of the EIAR:

"*The assessment of wind turbine noise presented in this EIAR chapter is based on the guidance outlined in the 2006 WEDGs and has been supplemented with best practice guidance from ETSU-R-97 and the IOA GPG. If updated Wind Energy Guidelines are published during the application process for the proposed project it is anticipated that any relevant changes affecting the noise will be addressed through an appropriate planning condition, or where a supplementary assessment is necessary, through provision of additional information*".

2.1.3.1.2 Comments on the Change in Noise Level

The National Environmental Health Service (NEHS) makes specific reference to British Standard BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound (BS-4142) to demonstrate that '*a change in noise level can have significant adverse effect and a magnitude of 10 dB would be considered significant*'.

Statements from BS-4142, if considered in isolation, fails to account for the context in which the noise levels occur and the overall level of noise, which are critical factors in the assessment.

The BS-4142 standard includes the follow statement with respect to context:

'*The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs. An effective assessment cannot be conducted without an understanding of the reason(s) for the assessment and the context in which the sound occurs/will occur. When making assessments and arriving at decisions, therefore, it is essential to place the sound in context.*'

'*The absolute level of sound. For a given difference between the rating level and the background sound level, the magnitude of the overall impact might be greater for an acoustic environment where the residual sound level is high than for an acoustic environment where the residual sound level is low. Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night.*'

As a point of clarification BS-4142 is not applicable to the assessment of wind turbines and this is acknowledged in the comments from the NEHS. This is confirmed in Section 1.3 of BS-4142 which contains the following statement:

'*The standard is not intended to be applied to the rating and assessment of sound from:*

[among other factors] *other sources falling within the scope of other standards or guidance*'.

The statement from BS-4142 therefore confirms that the standard is not applicable for the assessment of wind turbines noise.

The assessment of wind turbine noise and associated impacts and effects fall within the scope of other standard and guidance as discussed in detail in Section 12.1.7.5.1 of the EIAR.

The following comments are contained in the submission by the HSE:

'*In the opinion of the NEHS, tabulation of the predicted change in the noise environment from the proposed development and the cumulative change in the original baseline noise environment before any wind farm development in the area is the most informative way of reporting the likely effect of operational noise in an EIAR.*'

Appendices 12-6 and 12-7 of the EIAR present the predicted omni-directional turbine predictions at all NSLs in tabulated form.

The criteria for setting turbine noise limits, is outlined in Section 12.1.7.5 of the EIAR. This requires that background noise levels in the receiving environment be determined and that appropriate turbine noise limits be defined relative to the baseline noise environment.

Section 12.2.2 of the EIAR confirms the derived background noise levels which have been measured at six locations within the receiving environment. Section 12.3.2 of the EIAR discusses the applicable criteria and proposes operation noise limit for the wind turbines, which have been set with reference to the background noise environment at surrounding NSLs.

The likely significant effects of operational noise form the proposed development has been assessed in accordance with best practice guidance (IOA GPG) applicable guidelines (2006 WEDGs) and EPA Guidelines on the Information to be contained in Environmental Impact Statements, (EPA, 2022).

2.1.4 Failte Ireland

The Failte Ireland submission has been reviewed. For reference, tourism has been assessed in EIAR Chapter 5 (Population and Human Health) and landscape and visual has been assessed in EIAR Chapter 13 (Landscape and Visual Impact Assessment).

The principal observations in the submission relate to the potential effects on tourism and amenity assets within the surrounding landscape, specifically referencing tourism amenities such as Tory Hill, South Leinster Way, Brandon Hill, the River Barrow, and Slieve Coillte.

All of the above receptors have been fully considered within the submitted Landscape and Visual Impact Assessment (LVIA), with representative viewpoints included for assessment from each of these locations.

The nearest of these receptors is Tory Hill, which is represented within the visual impact appraisal. While the proposed turbines will be visible from this location, they will be viewed within the context of other existing turbines and are set back at a distance of approximately 2.8 km from the summit. The residual visual effect at this location, as set out in the submitted LVIA, was classified as Moderate, Long-term, and Negative in terms of quality.

A summary of the visual effects at the receptors outlined above is provided in the table overleaf.

VP Ref.	Representative of	Residual Significance of Visual Effect
VP1	Brandon Hill & South Leinster Way	**Slight/ Negative / Long-term**
VP4	South Leinster Way	**Slight/ Negative / Long-term**
VP6	The River Barrow	**Imperceptible/ Neutral/ Long-term**
VP17	South Leinster Way	**Moderate-slight / Negative / Long-term**
VP22	Tory Hill	**Moderate / Negative / Long-term**
VP28	Slieve Coillte	**Imperceptible / Neutral / Long-term**

As per the commentary and table above, the submitted LVIA, takes full account of all relevant tourism and amenity receptors within the study area. Indeed, as per the conclusions of the assessment, "the residual significance of visual effect at tourism, amenity, and heritage features ranges from Moderate to Imperceptible and, thus, visual effects are deemed **Not Significant".**

2.1.5 Inland Fisheries Ireland (IFI)

IFI's submission has included 30 suggestions. These are agreeable to the applicant. The applicant also confirms, upon a planning grant, they will liaise closely with the IFI during the detailed design and construction stages.

In relation to suggestion No. 7, we can confirm that the more southernly bridge crossing will be used for the delivery of turbine components and the construction of Turbine 6. This crossing is needed in this location due to the topography of the lands and the manoeuvrability required to deliver the turbine. This crossing will also be used for Grid Connection Option 2 should it progress.

2.1.6 Transport Infrastructure Ireland (TII)

The TII submission has been reviewed and the applicant in is agreement with the recommendations made. We have no further comment.

2.1.7 Uisce Eireann

Uisce Eireann have included two recommendations within their submission. The applicant is in agreement with these recommendations.

2.2 THIRD PARTY SUBMISSIONS

Within the third party submissions the concerns and themes have been reviewed and are addressed within the relevant sections herein.

2.2.1 The Wind Farm Planning Application and Grid Connection Application are linked

A submission notes that both the wind farm application and grid connection application are linked and the grid connection planning application number should be within the EIAR.

In response, a formal planning application number is unknown before submission and at the time of EIAR writing. The case reference for each application as issued by An Coimisíun Pleanála is stated within EIAR Chapter 4 (Policy, Planning and Development Context). The case numbers for each application are also presented on the An Coimisíun Pleanála correspondence within EIAR Appendix 1-3.

It is acknowledged that the two applications are linked because they relate to a single project. This fact was included in the statutory notices. Irish legislation also requires two separate planning applications under Sections 182A and 37E of the Planning and Development Act, 2000, as amended, respectively. The single EIAR is fully compliant with the EIA Directive given that they are functionally integral.

2.2.2 Inadequate and Fragmented Project Description

The Theresa Hendrick Foley and Others submission raised a concern regarding an inadequate and fragmented project description which describes the development through fragmented elements spread across multiple chapters, appendices, parallel applications, and future consents. That submission also states that the substation layout is described as conceptual and includes provisions for future expansions meaning the full scale and long-term extent of the infrastructure is not fixed or fully assessed at application stage. That submission also notes that the battery energy storage system (BESS) description is not clear.

In response, the description of the proposed project is detailed in EIAR Chapter 2 (Description of Proposed Project), the Statutory notices and Planning Statement. In relation to the substation having an area for future expansion; this is correct as it is an EirGrid requirement to include this as part of the standard design layout. The substation layout has been designed to fully comply with EirGrid's requirements for 110kV substations. It is also confirmed that this project application does not include for a BESS development and therefore no BESS description was provided in the EIAR.

2.2.3 Design Flexibility

Several submissions highlighted the applicant's use of "Design Flexibility" (Section 37CC of the Planning and Development Act, 2000, as amended). These submissions noted that the developer is seeking "Design Flexibility" under Section 37CC to decide on the final turbine specifications after permission is granted. They contend that it is impossible for the Commission to carry out a robust Environmental Impact Assessment (EIA) when the "worst-case scenario" remains a moving target, leaving residents in the dark about the true impact on their properties.

In response, design flexibility has been sought from An Coimisiún Pleanála for the turbine ranges used by the project (see EIAR Chapter 1 (Introduction), Section 1.10.1 and ACP's design flexibility opinion in Appendix 1-3). The 10 no. wind turbines on site will have a maximum blade tip height range from 170 m-180 m inclusive, a rotor diameter range from 149 m-163 m inclusive, and a hub height range from 95 m-105.5 m inclusive, and all associated foundations and hard-standing areas respective of each turbine.

The exact combination of tip height, rotor diameter and hub height will be dictated by the final selection of the turbine make and model at turbine selection stage/pre-construction. New turbine models or variants may be available, due to advancements in technology, that

are not on the market at the pre-planning stage, but which will fit within the parameters assessed within the EIAR. All parameters within the design flexibility range for the project have been assessed within the EIAR.

Design flexibility has also been sought from An Coimisiún Pleanála for the project grid connection (see EIAR Chapter 1 (Introduction), Section 1.10.1 and ACP's design flexibility opinion in Appendix 1-3). Two options for the grid connection are considered to connect the proposed project to the national grid.

GCO One proposes to install a 110kV underground cable from the proposed onsite substation to the consented Castlebanny Wind Farm 110kV substation approximately 12 km to the north.

GCO Two will connect the onsite substation with the existing 110kV Great Island-Kilkenny overhead line which crosses approximately 2.3 km to the east of the proposed wind farm site.

A single grid connection will be constructed for the proposed project. The GCO constructed is subject to receiving a grid connection offer following EirGrid/ESBN post planning system studies.

Design flexibility, as described above and discussed with An Coimisíun Pleanála at our project design flexibility meetings for both the wind farm application (ACP case number –322292-25) and the grid connection application (ACP case number –322293-25) on the 26th May 2025, was sought as these items cannot be confirmed prior to grant of planning. This is the purpose of Section 37CC (i.e. to facilitate the identification of details which are not confirmed at the application stage for large projects and to provide design parameters and associated assessment in respect of those). The provision of parameters, and the assessment of the likely significant effects of the various permutations within them allows ACP to undertake robust EIA and assess the full range of impacts, and reach a reasoned EIA conclusion. It is confirmed that all likely significant effects arising from the various arrangements provided by these parameters have been fully assessed in the EIAR.

2.2.4 Size and Location of Turbines in relation to neighbouring Wind Farms

Several submissions consider that the proposed wind turbines are inappropriate due to their scale, location within the community and proximity to residential properties. These submissions note that the Ballymartin and Rahora Wind Farms are prime examples of wind farms done correctly as their size and location are more in keeping with the area in which they inhabit.

In response, as noted in EIAR Chapter 2 (Description of the Proposed Project), the 10 no. wind turbines proposed on site will have a maximum blade tip height range from 170 m-180 m inclusive, a rotor diameter range from 149 m-163 m inclusive, and a hub height range from 95 m-105.5 m inclusive. These are the dimensions of turbines currently available on the procurement market.

Since Ballymartin and Rahora were constructed (more than 10 years ago), turbine technology has advanced. Turbine heights in Ireland have increased significantly, with onshore structures now often reaching over 180 m, driven by the need for higher energy output, better efficiency, land availability and the limitations of older technology. Taller turbine towers replace aging

technology to capture smoother wind called laminar flow, utilising stronger and more reliable winds to significantly increase power output. More efficient larger towers also reduce the number of turbines needed on site to produce the same amount of electricity.

During the design of the proposed Ballyfasy Wind Farm site layout, environmental constraints (including proximity to residential developments and neighbouring wind farm turbines) and technical constraints were considered (see EIAR Chapter 3 (Consideration of Reasonable Alternatives) which discusses the alternative layouts and designs considered). Along with adherence to legislation and guidance for wind farms as discussed in EIAR Chapter 4 (Policy, Planning and Development Context), these constraints informed the final site design and the positioning of turbines on site. It is of note that all turbines are positioned at a minimum of 720 m from residential properties (four times the maximum 180 m tip height, in compliance with the Draft Revised Wind Energy Development Guidelines (2019)), except for the property where an option agreement has been entered into with the landowner agreeing not to object to the development and required to sell the property if planning permission is granted (see Section 2.1.2.3)

It is acknowledged that wind energy developments are an existing part of the wider landscape. As noted within the EIAR, the Ballymartin Wind Farm and Smithstown Wind Farm are adjacent to the north of the proposed wind farm site with the nearest turbine being at Ballymartin Wind Farm approximately 587 m from proposed turbine T3. The Rahora Wind Farm is located to the north east with the nearest turbine being approximately 2.25 km from proposed turbine T5. The consented Castlebanny Wind Farm is located to the north west with the nearest turbine being approximately 3.9 km from proposed turbine T10.

Wind energy developments are present in this part of the country as this part of County Kilkenny has a known wind resource suitable for wind farm developments.

As noted in EIAR Chapter 3 (Consideration of Reasonable Alternatives), the Wind Atlas mean wind speed was determined for the proposed wind farm site and was considered to be suitable in the context of operational efficiency and the nature of modern-day turbine technology. The 2013 SEAI Wind Speed Atlas identifies the proposed wind farm site as having a wind speed of between 8.1 m/s and 8.4 m/s at 100 m above ground level, identifying the site as a candidate for wind energy. An onsite met mast (Pl Ref 2360360) which has been erected on site since July 2022 has also confirmed that a sufficient wind resource is present.

Wind energy developments in the area were cumulatively assessed as part of the EIAR assessments (see EIAR Section 1.8 and Figure 1-3) and no likely significant effects were noted.

2.2.5 Distance to Dwellings

Several submissions raised concerns with the distances from the proposed wind farm site, and more specifically from the wind turbines themselves to various dwellings in the surrounding area. In response, the current Wind Energy Guidelines 2006 requires a setback of 500 m from turbines to residential properties. The proposed design exceeds current requirements by adhering to the Draft Revised Wind Energy Development Guidelines (2019). Specifically, it incorporates a greater setback distance of a minimum of 720 m between turbines and residential dwellings except for the property where an option agreement has been entered into

with the landowner agreeing not to object to the development and required to sell the property if planning permission is granted (see Section 2.1.2.3). This separation distance of 720 m is four times the maximum tip height of 180 m.

2.2.6 Proximity of turbines to roads / adjacent land folios

Several submissions raised concerns that the turbines were overhanging public roads and neighbouring folios.

In Ireland, there is no legally mandated minimum setback distance specifically for roads. However, it is confirmed that no turbine blades on the proposed project overhang public roads.

In terms of oversail of turbines on adjacent land folios within the wind farm site, the applicant has oversail agreements in place with these landowners. This is a standard practice with wind farm developments. This has no impact on the EIAR.

2.2.7 Ice falling from turbine blades

Ice fall from turbines was raised as a concern in some submissions. EIAR Chapter 17 (Major Accidents and Natural Disasters) considers the potential for ice fall from the turbine blades, see EIAR Tables 17-6 and 17-7. As noted in Table 17-6 the Draft 2019 Wind Energy Development Guidelines refer to the very remote possibility of injury to people (or animals) from flying fragments of ice or from a damaged blade but notes that most blades are composite structures with no bolts or separate components and that most turbines are fitted with anti-vibration sensors, which will detect any imbalance caused by icing of the blades and prevent start-up.

Also modern wind turbine generators have incorporated advanced blade anti-icing solutions to their design. There are several methods and technologies currently available on the market.

Examples of these include:

- Blade heating solutions- this is the most common method currently. This method blows warm air down the interior of the blade to prevent ice forming, even during operation.
- Surface heating elements- Thin, carbon-fibre heating layers are embedded under the blade surface for fast, targeted, and long-lasting ice protection.
- Ice detection solutions – this uses a combination of temperature, humidity, air flow sensors, anemometers, cameras, and measurements to detect performance changes. Automated systems detect ice accumulation and, when necessary, shut down turbines to prevent damage or dangerous ice throw.
- Anti-ice coatings- While not a total anti-icing solution, this coating repels waterdrops significantly reduces ice adhesion. By allowing ice to "shed" more frequently in smaller amounts, it prevents heavy accumulation and grants crews a critical window to assess potential shutdowns. Furthermore, it enhances safety by ensuring ice is released before it becomes large enough to pose a hazardous "ice throw" risk.

The specific turbine model to be used for the Ballyfasy Wind Farm is currently unknown and will be procured post planning. The applicant is committed to selecting a turbine model which incorporates an anti-icing solution as part of their design. The applicant would accept this as a condition of planning, should planning permission be granted.

2.2.8 Disproportionate contribution to national targets from same rural areas

A number of submissions note that the local area and other areas in County Kilkenny already have wind energy developments and that there seems to be a disproportionate contribution to the national targets from County Kilkenny.

In response, not all areas in Ireland are suitable for wind energy development. The same can be said for other renewable technologies such as solar energy. Even those areas that are considered suitable for wind energy, may have environmental or technical constraints when further studied which deem them not feasible for development. As discussed in EIAR Chapter 3 (Consideration of Reasonable Alternatives), the project area in County Kilkenny is recognised as having a suitable wind resource for wind farm development. This is the reason why wind energy developments form part of the wider landscape.

The Sustainable Energy Authority of Ireland (SEAI) have produced a Wind Atlas which is a digital map of Ireland's wind energy resources. It provides detailed information on wind speeds in Ireland. This information is used in assessing the suitability of wind resources in specific areas.

SEAI state "*the goal of this map is to aid policy makers, local governments and community groups in the initial planning stages*"[5]. This approach ensures optimal utilization of available data to maximize Ireland's wind energy yield.

A wind speed above 7 m/s at turbine hub height is normally the minimum speed required for economic development[6]. The 2013 SEAI Wind Speed Atlas identifies the proposed wind farm site as having a wind speed of between 8.1 m/s and 8.4 m/s at 100 m above ground level, identifying the site as a candidate for wind energy. An onsite met mast (Pl Ref 2360360) which has been erected on site since July 2022 has also confirmed that a sufficient wind resource is present.

2.2.9 EIAR typographical Error

A submission has highlighted two spelling errors within the EIAR text. The word 'if' is written in Section 4.4 instead of 'of' and in Chapter 13 Bandon is misspelt instead of Brandon. We do not believe these typos mislead the reader in understanding the project application. In fact, the detection of the error itself shows an understanding of the typo.

2.2.10 Construction Phase Impacts - Duration, Intensity and Disruption

Potential impacts during the construction phase are a concern within some submissions particularly regarding noise, traffic and work hours (early starts). In response, construction phase impacts have been fully assessed throughout the EIAR including the noise and traffic chapters. A Construction Environmental Management Plan (CEMP) has also been developed (EIAR Appendix 2-6) which sets out the standard working hours for the site, the procedures for

[5] https://www.seai.ie/renewable-energy/wind-energy/wind-atlas-map
[6] https://teagasc.ie/rural-economy/rural-development/diversification/wind-energy/#:~:text=In%20Ireland%2C%20the%20average%20wind,speed%20required%20for%20economic%20development.

staff, best practice environmental protection measures and mitigation measures to be followed to ensure any potential impacts are eliminated or reduced. The CEMP is a live document and will be updated accordingly prior to works commencing to include any planning conditions relevant to the construction phase.

2.2.11 Landslides

Concern was raised in relation to potential impacts on water quality caused by landslides. Meenbog and other peat landslide areas are mentioned in the submissions.

In response, landslides and peat slippages can cause significant impacts on downstream water quality, and in the event that they reach streams and rivers this can be particularly impactful to aquatic ecology (as per the slippage at the Meenbog wind farm).

As described in EIAR Chapter 8 (Land, Soils and Geology) of the EIAR, the site is not underlain by peat deposits, and conditions do not pose significant landslide risks. Considering the above and information provided in the EIAR, it is not anticipated that landslides would pose any significant threat to water quality. EIAR Chapter 8 (Land, Soils and Geology) of the EIAR confirmed there would be no significant effects.

2.2.12 Fire Risk / Emergency Response Plan

Concerns regarding fire risk, structural failure and emergency response capability in a remote rural location, or the implications for nearby land, livestock, and dwellings were raised.

The risk of fire on site through causes such as wildfires and lightning strikes is discussed in EIAR Chapter 17 (Major Accidents and Natural Disasters). These are considered to have a low potential for risk to the proposed project, which are overall not significant.

EIAR Appendix 2-6 presents the project Construction Environmental Management Plan (CEMP). This CEMP is a live document and will be reviewed and updated, as necessary to incorporate any planning conditions. Upon appointment, the Contractor for construction of the proposed project shall update this document to produce an updated version of the CEMP (i.e. the Contractor's CEMP) which will account for any additional requirements set out in planning conditions.

Section 6 of the CEMP defines the project Environmental Emergency Response Plan / Procedures for the project including for fires, structure failures, spillages etc. It also includes details of procedures for site induction training, fire drills and site evacuations, spillage response and controls, emergency contact details and communication procedures in the case of incidents. As mentioned above, the appointed Contractor will update this Environmental Emergency Response Plan within the CEMP which will be active prior to construction works commencing on site and will form part of staff inductions.

Also, as noted in the Kilkenny County Council submission response, the applicant is agreeable the conditions suggested by the Kilkenny Chief Fire Officer.

2.2.13 Decommissioning and Drainage

A submission was raised into the decommissioning plans which suggest site drainage works upgraded during decommission works however the nature of this upgrading works is unclear.

Decommissioning will require a check on the drainage and where required cleaning of drains and installation of silt control measures. There are no additional measures other than those outlined in the EIAR required during the decommissioning.

The decommissioning plan will be reviewed and updated based on the relevant conditions of the planning permission and current environmental/health and safety standards. The decommissioning plan will be agreed in writing with the relevant authority prior to the commencement of the decommissioning phase.

2.2.14 Hydrogeology and hydrology – Private well queries

A large number of queries were raised in relation to private wells and the potential for contamination.

In response, no private wells are located within 720 m of turbines and >300 m from the borrow pits. Both properties X91 K7R7 and X91 P6K8 (see solicitor's letter submitted with the Planning Statement) have entered into option agreements and are required to be sold if planning permission is obtained. The owners have stated that they consent to and do not object to the wind farm development. They will not be in occupation if planning permission is granted and will therefore not be affected by the proposed development.

The aquifer potential of a bedrock unit is determined by the groundwater productivity, which in turn is determined based on hydraulic characteristics compiled from borehole data throughout the country. The GSI categorises the aquifer bodies into Regionally Important Aquifers, Locally Important Aquifers and Poor Aquifers. These are then subcategorised to create a total of seven bedrock aquifer categories and two sand and gravel aquifer categories.

As detailed in the EIAR Chapter 9 (Hydrology and Hydrogeology), the proposed wind farm is underlain by a poorly productive bedrock and short flow paths. The proposed wind farm is predominantly underlain by a Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones and partially by a Locally Important Aquifer (LI) - Bedrock which is Moderately Productive only in Local Zones. The subsoil deposits overlying the bedrock are not considered to be of sufficient lateral extent or depth to represent a significant aquifer body.

Permeability values in the bedrock aquifer are low (approx. 1 m/day), and specific capacities range between 2–10 m^3/d/m. Groundwater flow is shallow, localised, and typically discharges at lower elevations via springs or to surface water bodies. Permeability generally decreases rapidly with depth. In general, the Ordovician Metasediments transmissivities will be in the range 1- 10 m^2/d, with median values occurring towards the lower end of the range. Summer yields are

sometimes unsustainable. Aquifer storage[7] will be low in all rock units. Groundwater gradients are likely to be in the range 0.01 to 0.04.

Based on the aquifer data and permeability there are no significant effects envisaged in the absence of mitigation. There are no wells located downgradient of the proposed turbines. There is no predicted significant effect in relation to either boreholes or borrow pits. As detailed in the EIAR mitigation is proposed to monitor groundwater on the wind farm site pre, during and post construction.

Based on the low permeability bedrock, distance to wells and measures outlined in the EIAR, there are no predicted significant effects. Monitoring will be undertaken at the borrow pits as detailed in the SWMP (EIAR Appendix 2-8).

The main source of contamination for groundwater wells is local contamination from septic tanks and agriculture. These sources introduce harmful bacteria, viruses, and nitrates into groundwater, which can then enter poorly protected wells. The minimum recommended distance between a wastewater treatment system and well varies from 15 m to 60 m depending on the slope and soil type and is set out in the Code of Practice for new builds - Site suitability assessment[8]. The proposed development does not have a proposed septic tank and will not significantly alter agricultural practices.

2.2.15 Radon and ground water

Concerns were raised regarding the project being in a high radon area and the pollution of groundwater wells and likely pollution of waters to homes.

In response, radon is a naturally occurring gas in Ireland. The source of radon in the ground in Ireland is naturally occurring from the breakdown of uranium found naturally in rocks and soils. Data on radon is available on the EPA website - https://www.epa.ie/environment-and-you/radon/radon-map/ .

Radon risk depends on the underlying soils and geology underlying individual dwellings or workplaces. High Radon Areas are defined as areas where it is predicted that more than 10% of dwellings will have Radon gas concentrations above 200 Bq/m^3 . Over 40 % of Ireland is located in areas of potentially high radon.

The proposed wind farm will not result in any changes in the underlying conditions at dwellings located over 720 m from turbines or over 350 m from the borrow pits. Activities or changes to dwellings are the only way to influence Radon concentrations in dwellings. All new homes in a High Radon Area must have a radon membrane to meet the DHLGH (2023) Building Regulations[9]. These regulations apply to the substation building.

2.2.16 Microplastics

Submissions have expressed concern about the potential release of toxic compounds and microplastics, from wind turbine blades. These concerns mostly relate to a 2021 non-peer

[7] Storativity or specific storage is defined as the volume of water released from storage per unit surface area of the aquifer per unit decline in hydraulic head. Storativity is known by the terms *coefficient of storage* and *storage coefficient*.
[8] https://www.epa.ie/environment-and-you/drinking-water/faqs/
[9] Technical Guidance Document C - Site Preparation and Resistance to Moisture (2023 Amendment)

reviewed publication by "The Turbine Group" which incorrectly extrapolates data from peer-reviewed research carried out by Pugh & Stack from the University of Strathclyde (also in 2021) to suggest that each wind turbine can shed 62kg annually in microplastics. One of the authors of the original research, Professor Margaret Stack (Tribology Group, University of Strathclyde) has responded to this document stating that this figure "needs to be refined downwards quite significantly" as the experiment was carried out to simulate worst-case scenarios on uncoated material at a centimetre sized blade segment in a laboratory, and the extrapolation to the real-world and full sized turbine was incorrectly carried out.

More recent scientific research which has been peer-reviewed and published by Mishnaevsky *et. al.* in 2024 indicates that wind turbines do not shed significant amounts of microplastics or BPA into the environment[10]. The primary concern regarding microplastic release from wind turbines centres on blade surface erosion, a process that occurs over time due to environmental exposure. However, quantitative estimates show that the mass of plastic eroded from wind turbine blades is relatively low—ranging from 8 to 50 grams per year per blade for onshore turbines. The Mishnaevsky study scales this to the national level for Denmark, where the total annual plastic loss from all wind turbine blades is about 1.6 tons, which is an order of magnitude less than the microplastic emissions from sources like footwear, and three orders of magnitude less than those from tyre wear.

Studies of microplastic pollution in and around wind farm areas further support these findings. For example, a 2018 peer-reviewed scientific publication by *Wang et. al.* found microplastic concentrations in water and sediment samples collected from an offshore wind farm were actually lower than those found outside the wind farm area, suggesting that wind turbines are not a major source of microplastic pollution in these environments[11]. The detected microplastics were mainly attributed to other sources, such as garments and ropes, rather than turbine materials.

Wind turbines are designed to withstand severe weather over long periods of time. They have a non-toxic protective coating which minimises leading edge erosion and minimises the risk of damage and erosion to the main structural material of the blades. In the unlikely event that this protective coating is compromised, the blade structural material contains only very small amounts of residual BPA. The shed material is also mostly limited to the paint and non-toxic coatings on the turbines. Newer turbines also have more durable coatings than older ones and the technology has improved over time meaning that modern turbines can operate for several decades in normal circumstances without any significant issues. Turbine components are regularly inspected to assess for any damage and in the event that such damage was found to occur the turbine component would be repaired or in an extreme case, replaced. Protective tapes can be applied to turbine blades in the event that leading edge erosion is becoming an issue for any given turbine.

The main sources of microplastics in rural Ireland is agricultural practices[12] as well as localised plastic use around dwellings. Based on the above, the proposed project will not result in a

[10] https://www.mdpi.com/1996-1073/17/24/6260
[11] https://www.sciencedirect.com/science/article/abs/pii/S0025326X18300614?via%3Dihub
[12] https://epawebapp.epa.ie/ebooks/soe2024/160/

significant effect in terms of contamination of microplastics, and will be similar to any other Irish wind farm in that regard.

2.2.17 Cumulative Downstream Flood Risk Impacts and Lack of Cumulative Effects Assessment Across the Castlebanny, Ballymartin, and Ballyfasy Wind Farm Sites

The Flood Risk Assessment (FRA) (see EIAR Appendix 9-3) provides a detailed evaluation of downstream flood behaviour, including hydraulic capacity testing under a 1 in 1,000-year High-End Future Scenario (HEFS) to assess resilience under extreme climate-adjusted conditions. The hydraulic modelling confirms that peak HEFS flows in the Smithstown Stream (5.9 m^3/s) and the Smartscastle Stream (5.7 m^3/s) remain substantially lower than the available channel capacities at the assessed locations, which range from 17.345 m^3/s up to 170.8 m^3/s. As the receiving channels are capable of conveying flows far in excess of those predicted under this extreme scenario, no overtopping is expected, and the FRA concludes that the proposed development would not result in any increased downstream flow or additional flood propagation. Because the HEFS allowance reflects the maximum cumulative upstream contribution, the modelling inherently satisfies cumulative impact considerations.

The FRA also applies a catchment-based, cumulative effects approach in accordance with the Planning System and Flood Risk Management Guidelines and the Kilkenny County Development Plan. The assessment therefore considers all relevant fluvial, pluvial and groundwater flood mechanisms within the full catchment area and evaluates flood extents, stream capacities and available freeboards using LiDAR and site-specific hydraulic estimates. PFRA mapping and GSI datasets were reviewed to confirm the absence of any potential for amplified downstream risk, and the assessment incorporates worst-case HEFS +30% climate allowances. Although the watercourses associated with the Ballyfasy site are located within isolated catchments, the FRA demonstrates that their characteristics do not give rise to cumulative flood impacts with neighbouring developments.

In addition to the hydraulic modelling, the FRA identifies a series of site design measures that ensure the proposed development does not alter natural hydrology or increase downstream loading. Surface water management will limit runoff to greenfield rates in accordance with SuDS principles, no local depressions that could contribute to ponding have been identified, and natural exceedance flow paths will be maintained. Where access tracks cross watercourses, clear-span bridges will be installed and Section 50 consents obtained to ensure that the crossings do not alter hydraulic behaviour or increase flood risk.

2.2.18 Requirement for a Comprehensive Schedule of Works Demonstrating Seasonal Flood Risk Avoidance for Grid Connection Option One

The Flood Risk Assessment (FRA) (see EIAR Appendix 9-3) acknowledges that while the wind farm site itself is not at risk of flooding, certain access routes and local roads associated with the project may be affected during flood events. The assessment identifies both fluvial and pluvial flood extents along sections of the access tracks and Grid Connection Option One, noting that

although turbine and substation locations have adequate freeboard and lie outside mapped flood zones, some portions of the access infrastructure intersect areas classified as flood-prone within the PFRA datasets. The FRA confirms that where tracks cross watercourses, a Section 50 consent will be required to ensure these crossings are designed so that they do not alter existing hydraulic conditions or contribute to increased flood risk.

The FRA further recognises that construction access should not take place during an active flood event and that temporary flooding along local roads may, on occasion, restrict access to certain parts of the works. However, given the low maintenance requirements associated with the operational wind farm, any temporary access limitations can simply be deferred until floodwaters have naturally receded. In addition, the stormwater drainage design for the project incorporates SuDS measures to maintain greenfield runoff rates, ensuring that the development does not exacerbate existing flooding on surrounding roads or within the access network.

The FRA demonstrates that flood risk affecting access routes has been appropriately assessed and that the identified mitigation and operational measures effectively address the potential for temporary inundation, even though the development site itself remains outside areas susceptible to flooding.

2.2.19 Requirement for a Detailed Schedule of Works Demonstrating Seasonal Flood Risk Avoidance for Both Ducting Options, Including Specific Measures for Option One Near the River

The Flood Risk Assessment (FRA) acknowledges that elements of the grid connection, specifically Grid Connection Option One (GCO One), intersect areas identified within PFRA mapping as being subject to fluvial flood extents. In doing so, the FRA explicitly states that construction works in these locations should not be undertaken during a flood event, thereby establishing an avoidance-based approach to construction in flood-prone areas. This requirement confirms that works within the flood-affected sections of GCO One must be scheduled for periods when flood conditions are not present.

In addition to these avoidance measures, the FRA identifies that all watercourse crossings associated with access routes or cable routes will be required to obtain Section 50 consent. This regulatory process ensures that the design, timing and methodology of any in-channel or near-channel works comply with OPW standards, including the requirement that both the soffit level and construction approach do not interact with elevated river levels. Where Horizontal Directional Drilling (HDD) techniques are used, these further avoid direct in-channel disturbance and reinforce the need for timing that aligns with periods of low hydrological risk.

Although the FRA does not provide a fully detailed schedule of works or specify seasonal timing windows, the combined requirements: to avoid undertaking works during flood events, to comply with OPW constraints imposed through Section 50 approval, and to employ construction methodologies that are sensitive to water level conditions, mean that the final construction programme for the ducting option and access to site must inherently be aligned with periods when flooding is not anticipated. Accordingly, the FRA already establishes that the implementation schedule for both ducting options will need to be compatible with

flood-risk-dependent timing constraints and will necessarily avoid high-risk seasonal periods as part of the consenting and design process.

2.2.20 HSE and EPA Consultation

A submission by Daniel McLaughlin and others suggests that the HSE and EPA were not consulted regarding the project. This is incorrect. The HSE and EPA were consulted as part of the project Scoping exercises carried in 2023 and 2024 (see EIAR Section 1.10.3). On both occasions the EPA did not respond (as noted with the EIAR). The HSE responded on both occasions as noted in EIAR Table 10-1 and their response is included within EIAR Appendix 1-6. As a prescribed body, the HSE were also consulted regarding the submission of the application to which they responded to An Coimisiún Pleanála.

2.2.21 UN Convention on the Rights of the Child (UNCRC)

A submission by Deirdre Lindy suggests that the proposed wind farm raises significant concerns in relation to Ireland's obligations under the UN Convention on the Rights of the Child (UNCRC). The main concerns noted are the scale and siting of the development, including large turbines in close proximity to family homes, meaning that foreseeable impacts on children's health, wellbeing, and daily living environment have not been adequately addressed, contrary to Article 3 of the UNCRC, which requires that the best interests of the child be a primary consideration in all decisions affecting them. Article 24 further obliges the State to protect children's right to the highest attainable standard of health, including by preventing environmental harm; unresolved issues relating to noise, visual dominance, and impacts on mental wellbeing indicate a failure to properly assess child-specific health and developmental risks. In addition, Article 12 of the UNCRC requires that children have the right to be heard in matters affecting their lives, yet there is no clear evidence that children in the affected communities were meaningfully consulted or that their views were considered within the planning and environmental assessment process.

In response, the scale and siting of turbines in relation to residential developments is addressed in Section 2.2.5 of this response document. Health, Noise and Landscape and Visual impacts are assessed within the relevant chapters of the EIAR. Further responses to concerns around these specific topics are included within this report. In terms of community engagement, this is discussed in EIAR Section 1.10.1 and a Community Engagement Report was presented as Appendix 1-7. It is further explained herein within Section 2.2.24. There was no age limit on consultees participating in the consultation process and some children attended the in person consultation clinic with their guardians.

2.2.22 Loss of Agricultural Lands

Concern was raised regarding the loss of agricultural lands in the area.

The footprint of the proposed wind farm infrastructure will require approximately 53 hectares (ha). Approximately 20 ha of the required footprint are owned by Coillte and approximately 33 ha are under third party land ownership. All landowners, (including landowners of agricultural lands), involved in the proposed wind farm site development have consented to the planning applications (see consent letters submitted with the planning application).

The planning application boundary for the wind farm only includes for the development, not the entire site folios. Any agricultural lands surrounding the infrastructure can continue to be used for agriculture if the landowner so wishes. When the wind farm is decommissioned those lands will also be available again for agriculture. This project also enables those landowners the opportunity to diversify their income from their land for the lifetime of the project.

2.2.23 Grid Capacity Constraints

A submission by Deirdre Maddock and Daithi Murphy raises concerns regarding the grid capacity as neighbouring wind farms are curtailed due to grid capacity especially in high winds. That submission also states operators are compensated for non-generation, representing a significant and ongoing cost to the public.

In response, the South East of Ireland is seen as a good area of the grid in terms of having very low constraints for wind. EirGrid are responsible for planning, developing and operating the grid and where they see issues they are best placed to manage grid constraints. They are progressing projects, including new and upgraded infrastructure along with operational improvements, to add capacity. At the end of last year they got approval for the revenue allowance to proceed with a number of projects under CRU's PR6 which adds more grid capacity, and they can look for a higher revenue allowance if they need to carry out more projects beyond those already identified.

In terms of the constraints and curtailments of the neighbouring Ballymartin and Smithstown wind farms, we cannot comment on those specific projects other than to say that they are connected to the Distribution System electrically and connect to the 38kV Rosbercon substation outside New Ross which has different and lower operating thresholds capacity constraints. In terms of the proposed Ballyfasy Wind Farm project, it is proposed to connect to the 110kV Transmission System which has a much higher capacity and lower constraints in this area.

It is also of note that grid constraints should not be seen as an impediment to granting permission for windfarms since a critical mass of projects with consent is a key enabler for further grid investment (and that there are various strategies in respect of the latter being advanced at present).

2.2.24 Community Engagement

Several submissions raised concerns regarding the lack of or inadequate public consultation. Public consultation is detailed in EIAR Section 1.10.5 and a Community Engagement Report detailing the consultation process is included as EIAR Appendix 1-7. Please refer to pages 12-17 of the Community Engagement Report which summarises the community engagement process which took place from December 2024 to December 2025. Post planning submission, the two designated Community Liaison Officers remain available on the ground as key points of contact should any queries arise.

In relation to why a public consultation clinic (held on the 11th of November 2025) was selected over a town hall event it is because previous team experience has shown that these are more effective at fostering widespread participation and allowing everyone an opportunity to speak (rather than a few people, including non-residents, taking over the floor) and get their concerns

voiced with the applicant team members. Everyone that sought a meeting with the applicant at the public clinic was accommodated.

A number of submissions have stated that the location of the clinic was c. 13 km away from Ballyfasy and not in the local area. The public consultation clinic was held in Belview Port which is involved in the proposed project as the port location to where the turbines will be delivered and the beginning of the project turbine delivery route. Belview Port also has suitable parking and facilities for holding such events.

Regarding traffic, community engagement during the construction stage with local residents was also raised within submissions. During the construction phase, communication with local stakeholders will be maintained regarding planned construction activities and traffic management measures. Advance notice will be provided where significant deliveries or temporary traffic management measures are required, ensuring that local residents and road users are informed of construction activities.

2.2.25 Aarhus Convention

Several submissions mention a potential breach of the Aarhus Convention. The Aarhus Convention protects a person's right to a healthy environment by guaranteeing three core rights: access to environmental information, participation in environmental decision-making, and access to justice. As noted in Section 2.2.24, community engagement regarding the project commenced 12 months before the application was submitted with the delivery of the first information leaflet and setting up of the project website. Please refer to pages 12-17 of the Community Engagement Report (EIAR Appendix 1-7) which summarises the community engagement process. During this timeframe the public had access to environmental information on the project and the opportunity to contact the two project Community Liaison Officers and applicant.

2.2.26 Radon and Air Quality

Several submissions have raised concerns over potential radon impacts during the construction works. Section 14.2 of Chapter 14 (Air Quality and Climate) of the EIAR assesses impacts of the proposed project with the potential for significant effects on air quality. These impacts include construction dust during the construction phase and the savings of nitrogen oxides (NO_X) emissions due to the displacement of power generation from fossil fuels by the renewable electricity produced by the proposed project. The assessment concluded that there are no significant effects on air quality associated with these impacts. There are no other impacts with the potential for significant effects on air quality associated with the proposed project.

The impact of radon release due to the construction works associated with the proposed project will not have a significant effect on air quality, as it is only considered a significant risk to human health in confined spaces such as homes or workplaces[13,14,15], where it is then readily controlled via heavy duty plastic radon membranes. There is no significant risk to human health as a result

[13] Geological Survey of Ireland (https://www.gsi.ie/en-ie/geoscience-topics/environmental-health/Pages/Radon.aspx)
[14] EPA (2024) Ionising Radiation National Dose Report
[15] Benà, E. et. al (2025) From collective to individual radon risk exposure: An insight into the current European regulation. Environment International, Volume 196, https://doi.org/10.1016/j.envint.2025.109264.

of radon exposure out in the open due to atmospheric dispersion and natural ventilation[13,16], and the proposed project will not result in an increased risk of exposure in existing properties in the vicinity of the project.

2.2.27 Greenhouse gas (GHG) emissions and savings

Concerns were raised in submissions regarding the carbon impact of the project over its lifetime. Section 14.3 of Chapter 14 (Air Quality and Climate) of the EIAR assesses the on climate of the potential greenhouse gas (GHG) emissions during the construction, operational and decommissioning phases of the development (also known as a carbon balance assessment), as well as the offsetting of GHG emissions through renewable electricity generation, which will contribute to reducing national GHG emissions and Ireland's reliance on fossil fuels. The assessment takes into account the grid connection, which is required to deliver this renewable energy to the national grid and is therefore considered essential enabling infrastructure for renewable energy production.

The methodology for quantification of GHG emissions associated with the proposed project is detailed in Sections 14.3.3.1.1 of Chapter 14 (Air Quality and Climate), and describes the sources of GHG emissions during the construction, operational and decommissioning phases of the proposed project. The primary sources of GHG emissions associated with the proposed project include:

- Materials required during the full construction period (such as concrete) and their associated transport, as well as construction staff transport. Details of vehicle movements are provided in Chapter 16 (Traffic and Transportation) and are incorporated into the GHG assessment as part of Chapter 14 (Air Quality and Climate).
- The GHG emissions associated with the manufacture of the wind turbines themselves have been considered in the GHG assessment as follows. Due to the flexibility sought regarding the range of design parameters associated with the wind turbines for the proposed project the make and manufacturer of the turbines to be installed has not yet been decided at this stage of the project and will be decided post consent should permission be granted. As a result, indicative information from Life Cycle Assessments (LCAs) from various wind turbine manufacturers (based on experience of similar projects and publicly available information from manufacturers such as Nordex and Vestas) has been considered in the GHG assessment.
- These LCAs are produced by the manufacturer at one specific site for specific turbine models, and consider variables such as project lifespan and local wind conditions. An LCA is not produced by the manufacturer on a project by project basis i.e. not for this proposed project. The GHG emissions are typically presented as an overall value, and detailed information for each stage is not provided. It is therefore not possible to extract only the relevant elements (such as materials for the turbines) for the proposed project and incorporate them quantitatively into this assessment. However, LCAs do provide an indication of the payback period for the turbines, which ranges from 5-8 months based on the LCAs reviewed. The proposed project is therefore expected to offset the GHG

[16] Dublin City Counctil (2026) Radon Information for Homeowners, Builders, and Employers. https://www.dublincity.ie/construction/building-control/radon-information-homeowners-builders-and-employers

emissions associated with the turbine manufacture in a similar time frame. This has been considered qualitatively as part of GHG assessment for the proposed project.

- Changes to forestry area as part of site clearance and excavation works during construction. The total area of forest and the methods by which it will be affected are described in EIAR Appendix 2-3 and are incorporated into the GHG assessment as part of Chapter 14 (Air Quality and Climate).
- The GHG emissions associated with the construction and decommissioning phases are overall short term in nature, due to the length of the phases and the activities involved (e.g. material manufacture and site clearance).

The 57-72 MW capacity wind turbines assessed for the purposes of the GHG assessment will contribute to the Climate Action Plan 2025 (CAP25) key targets of producing 80% of energy from renewable sources by 2030. CAP25 is a statutory road map of actions necessary for Ireland to comply with legally binding economy-wide carbon budgets and sectoral GHG emissions ceilings. Without the actions identified by CAP25 (and future CAPs), Ireland will not meet its national climate objective of "*pursuing and achieving, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy*". Decarbonising energy production will not be achieved by a single form of renewable energy production, and will require a variety of technologies, including wind turbines and associated grid infrastructure. Meeting the 80% renewable energy production target will require at least 9 GW of onshore wind capacity, 8 GW of solar capacity, 5 GW of offshore wind capacity and 2 GW of new flexible gas plant. Onshore wind energy production and its associated grid infrastructure is a large component of meeting the 80% renewable energy target, and the proposed development is therefore fully aligned with national climate policy.

The proposed development will offset GHG emissions (both its own and total national emissions) during its operation. This offset is primarily due to the renewable electricity generated by the wind turbines over the 35 year lifespan of the proposed development.

The GHG emissions offset from the operation of the wind turbines (approx. 52,606 tonnes of CO_2 equivalent (tCO_2e)) as well as the construction and decommissioning phase emissions (approx. 11,533 tCO_2e from materials, change in forestry area, site clearance and excavation and energy use) associated with the project (turbines and grid connection), and the alignment of the proposed development with Ireland's trajectory to net zero by 2050 and CAP25 are taken into account in determining the significance of effect of the proposed development on climate. The annual GHG operational emissions offset (which has taken the construction phase emissions into account) from the proposed project is equivalent to 1.8% of the total carbon budget for the electricity sector in 2030 i.e. the proposed project has the potential to reduce Ireland's GHG emissions in this sector by this percentage.

The proposed development is therefore predicted to have a direct, long term, positive and slight effect on climate, which is overall not significant in Environmental Impact Assessment terms.

2.2.28 Health Effects

Several submissions raised concerns surrounding general health effects to the population as a result of the proposed project, and wind energy in general.

As highlighted in Section 5.4.3 of EIAR Chapter 5 (Population and Human Health), the health assessment conducted as part of the EIAR concluded that for the construction phase of the proposed project, there will be no likely significant effects. Section 5.4.3 of the submitted EIAR also assessed the potential human health effects that may occur during the operational phase. The following areas were assessed:

- Air quality and Dust;
- Noise and Vibration;
- Water Quality;
- Land and Soil;
- Traffic; and
- Wind Turbine Health Effects (including noise and infrasound, electromagnetic interference, and shadow flicker).

It was concluded for each of these items that no likely significant adverse human health effects will occur as a result of the proposed project following the implementation of the proposed mitigation measures. Furthermore, the contribution of the proposed project to a decrease in reliance on fossil fuel combustion will have a moderate positive long-term effect on the health and well-being of the general population.

Section 5.3.3.4 of Chapter 5 (Population and Human Health) of the EIAR provided an overview of relevant research, including a review of studies from Australia, Canada, the UK and other European countries. The research found that wind farms have no associated direct pathological effects on human health, and that any potential impact can be minimised by following planning guidelines. Notable studies discussed in Chapter 5 (Population and Human Health) of the EIAR include a 2014 meta study by Knopper *et al*,. in 2014 and a study by Health Canada in 2014 which both found no links between wind farms and numerous health conditions. In addition to the above, a longitudinal study in Germany by *Krekel et al*. in 2025 found no evidence of negative effects on general, mental, or physical health, nor on doctor visits or suicide rates, in populations living near wind turbines[17]. As outlined in Section 5.6.2 of Chapter 5 (Population and Human Health) of the EIAR, based on the literature reviewed, there is currently no reliable evidence to link wind turbines to adverse health impacts.

2.2.28.1Vulnerable groups

Several submissions raised concerns specifically relating to health effects of vulnerable groups, and the omission of specific individual receptors within the human health assessment. As outlined in Chapter 5 (Population and Human Health) of the EIAR, every community will have vulnerable individuals, however, the health status of the community can only be established to a certain level (i.e., small area statistics). It is not possible or necessary to identify every vulnerable individual. As stated in the Health Service Executive observation of the proposed

[17] https://cep.lse.ac.uk/pubs/download/dp1950.pdf

project, *"A Population Health approach to the sensitivity of receptors would not consider individual specific sensitivity of a human receptor, but the sensitivity of the established land use or service provision. For example, a school would be considered a sensitive receptor within a Population Health approach, but an individual student who was particularly sensitive to noise attending the school would not be specifically considered in the assessment criteria. A health care facility that provided services for people with recognised noise sensitivity would be considered in its entirety as a particular noise sensitive location. The Population Health approach therefore has important differences in how likely significant effects on Population and Human Health are considered in EIA. The assessment should consider established land development and use and service provision and activities within communities and not individual members of communities."*

As described in Chapter 5 (Population and Human Health) of the EIAR, it is important to note that the Health Standards are set for the vulnerable and not for the robust. Emission limits and management, such as for noise or dust, allow for the protection of the most vulnerable, so as long as the limits are met, vulnerable individuals and the wider community are protected. Emissions arising from the operational phase of the proposed project (i.e., air, dust, noise and vibration) are predicted to fall below the limits and/or thresholds set, therefore it is anticipated that significant adverse effects on health, even amongst the vulnerable, are unlikely.

Several submissions raised concerns surrounding the potential for shadow flicker to adversely affect the health of vulnerable individuals, including those with epilepsy. As described in Chapter 5 (Population and Human Health) of the EIAR, the UK Wind Energy Guidance Note, prepared in the UK for the Renewables Advisory Board and Department for Business, Enterprise and Regulatory Reform (BERR) in 2007, addressed the question whether the shadow flicker from wind turbines can cause effects on human health. It was found that the frequency at which photosensitive epilepsy may be triggered generally is between 2.5 and 30 flashes per second (hertz). Most commercial wind turbines in the UK rotate at between 0.3 and 1.0 hertz, giving health effects arising from shadow flicker little potential to occur. The proposed project has committed to a near-zero shadow flicker (see EIAR Chapter 10 (Shadow Flicker)) which will virtually eliminate that potential effect from dwellings in the surrounding areas through the use of screening measures and turbine control mechanisms.

2.2.28.2Noise and Health

A number of submissions refer to potential impacts as a result of noise emissions during the construction and operational phases of the proposed project.

As described in Chapter 5 (Population and Human Health) of the EIAR, in general, the distances between the construction activities associated with the proposed project and the nearest noise sensitive locations (NSL's) are such that there will be no significant noise and vibration effects at NSL's. There will be works required at the proposed turbine delivery route (TDR) works areas and along the route of the proposed Grid Connection Option One (GCO One) during the construction phase, however, these will be short-term in nature and they will not result in significant noise and vibration effects.

With regards to the operational phase, the distances between the proposed wind farm infrastructure and the nearest property receptors are such that significant noise and vibration effects at these receptors are unlikely. Furthermore, based on the outcomes of the wind turbine

noise assessment undertaken in Chapter 12 (Noise and Vibration) of the EIAR, the predicted noise levels associated with operational wind turbines at the proposed wind farm will be within best practice noise criteria. Chapter 12 (Noise and Vibration) of the EIAR states that low frequency noise and infrasound associated with wind turbines is expected to be below perceptibility thresholds and are not likely to result in any significant effects at NSLs. There are no criteria proposed to assess low frequency noise or infrasound as part of the EIAR.

As such, it is predicted that wind turbine noise associated with the proposed project will be not significant. It is therefore concluded that human health effects cited as an outcome of wind turbine noise and infrasound (such as nausea, disturbance of sleep, and tinnitus) generated during the operational phase of the proposed wind farm is unlikely. The referenced publications and studies outlined within Chapter 5 (Population and Human Health) of the EIAR indicate that there is little scientific evidence of the effects of "Wind Turbine Syndrome" effects. The studies show that wind farms are not a significant source of noise and infrasound, and that traffic and everyday human activity are likely to be more relevant.

With regards to vulnerable people, emission limits, including for noise, are set to protect the most vulnerable in a community rather than the robust. Compliance with the limits set out in best practice guidelines (detailed in EIAR Chapter 12 Noise and Vibration) will ensure that individuals and communities are protected. Mitigation measures detailed in EIAR Chapter 12 (Noise and Vibration) will be put in place to ensure that the emissions and effects from the proposed project are in compliance with the standards to ensure that there will be no significant adverse effects on health, even amongst the most vulnerable.

2.2.29 Noise and Vibration

Third party submissions that had comments or raised issues relating to noise and vibration are addressed here. The comments have been dealt with under several headings or themes below which cover the main topics raised in the observations.

2.2.29.1Assessment Methodology

2.2.29.1.1.1Adopted Guidelines for the Assessment of Wind Turbine noise

EIAR Section 12.2.4 describes in detail methodology adopted for the assessment of operational turbine noise. The methodology and calculation setting are in full accordance with best practice guidance.

2.2.29.1.1.2Low Frequency Noise and Infrasound

Section 12.1.7.5.6 of the EIAR presents a discussion on the evidence for low frequency noise and infrasound associated with the operation of wind turbines. The EIAR confirmed that 'low frequency noise and infrasound associated with wind turbines is expected to be below perceptibility thresholds and are not likely to result in any significant effects at NSLs.' The EIAR has considered the potential for low frequency noise and infrasound associated with wind turbine noise.

2.2.29.1.1.3Amplitude Modulation and Tonality

Sections 12.1.7.5.7 and 12.1.5.7.8 of the EIAR address the potential for Tonal characteristics and Amplitude Modulation (AM) from the operation of the wind turbines. In addition to this,

Section 12.5.3.3.1 of the EIAR confirms commitments by the Applicant to 'investigate complaints indicating potential excessive amplitude modulation or tonality associated with the proposed project'. The following statement is reiterated from Section 12.5.3.3.1 of the EIAR '*The commitment outlined to control amplitude modulation (AM) from wind turbines are considered best practice. The proposed approach provides a clear commitment that additional adverse impacts from excessive amplitude modulation (AM) or tonality associated with the operation of the proposed project will be effectively managed and minimised by the operator.*'

The applicant has provided a commitment *that 'prior to the commissioning of the wind farm; the developer will submit a Noise Compliance Monitoring Programme (NCMP) to the planning authority for written agreement. The NCMP will include a detailed methodology for all noise measurements, the frequency of monitoring, procedures for recording results and a protocol for managing complaints.'* This can be secured through an appropriate planning condition by ACP.

2.2.29.1.1.4Stakeholders in the Proposed Project

A submission claimed '*Two stakeholder dwellings associated with the Ballymartin Wind Farm (H270, H271) have incorrectly been designated as 'stakeholders' for the Ballyfasy Wind Farm. These two dwellings should be classed like other NSLs. Their predicted cumulative noise exposure is an unacceptable 45.2 dB(A) and 44.4 dB(A) respectively*'.

It is confirmed that H270 and H271 have not been identified as stakeholders in the proposed project. Section 12.3.2.1.1 of the EIAR address the application of the cumulative turbine noise limits at H270 and H271. The approach adopted is in line with Best Practice Guidance. The following statement from Section 12.3.2.1.1 of the EIAR is reiterated:

'*In the scenario where Ballymartin Smithstown wind farm were decommissioned, the increased cumulative turbine noise of 45 dB L_{A90} for both day and night time periods at Locations H270 and H271 would no longer apply.*'

In addition to this statement from the EIAR, it is confirmed that the residual turbine noise from in the absence of any contribution from the Ballymartin Smithstown Wind Farm would be within the proposed criteria at H270 and H271.

2.2.29.1.1.5Locations H268 and H269 Omitted from Operational Noise Assessment

A submission noted that '*Two noise sensitive locations (H268 and H269) have not been assessed in the NVA* [Noise and Vibration Assessment]'.

Refer to response in Section 2.1.2.3 in this report.

2.2.29.1.1.6 Ballyfacey National School

A submission from Ballyfacey National School (BNS) raised a concern that predicted turbine noise levels could cause internal ambient noise within teaching spaces to exceed the recommended limits set out in SDG 02-05-03: *Acoustic Performance in New Primary & Post Primary School Buildings*, issued by the Department of Education and Skills.

The maximum predicted worst-case omni-directional turbine noise level at BNS (EIAR Location Ref: H540) is 36.1 dB L_{A90}, corresponding to an L_{Aeq} level of 38.1 dB. Under SDG 02-05-03, the recommended upper limit for internal ambient noise in classrooms is 35 dB L_{Aeq}.

The SDG noise criterion applies to internal noise. Assuming a naturally ventilated classroom with open windows, an outdoor-to-indoor attenuation of 15 dB can be applied. On this basis, the contribution of turbine noise within the classroom, even under maximum turbine power output, is expected to be approximately 23 dB L_{Aeq}.

This predicted internal level is well below the 35 dB L_{Aeq} threshold recommended in SDG 02-05-03. Therefore, turbine noise is not expected to give rise to exceedances of the internal ambient noise criteria at BNS.

2.2.29.1.1.7 Construction Noise and Vibration

Several observations highlighted concerns regarding the impacts of noise during the construction phase of the proposed project.

Section 12.4.2 of the EIAR presents a detailed assessment of the potential effects of noise and vibration during the construction phase. The EIAR confirms that for all elements of the construction phase, the likely significant effects are short-term and classified as 'Not Significant', with predicted impacts remaining within the recommended threshold and limit values contained in the best practice guidelines presented in Section 12.1.7.1 of the EIAR.

With respect to statements in the observations regarding the impact of construction noise, it is acknowledged that construction noise will be audible at some Noise Sensitive Locations (NSLs). The following statement is reiterated from Section 12.6.1 of the EIAR:

'During the construction phase of the proposed project, there will be some impacts on nearby NSLs due to noise emissions from site traffic and other construction activities. However, given the distances between the main construction works and the NSLs, the short-term duration of the construction phase, and the assessment's findings that the expected noise and vibration emissions will be below the identified threshold and limit values, the impacts will not be significant.'

In conclusion, the EIAR demonstrates that while the short-term construction noise may be audible at certain NSLs, the predicted levels remain within acceptable thresholds. With the implementation of best practice mitigation measures, the associated impacts are not expected to be significant, ensuring that the construction phase can proceed without undue adverse effects on nearby NSLs.

2.2.29.1.1.8Health Impacts (Noise and Vibration)

The assessment of noise and vibration has been undertaken in accordance with the applicable guidelines (2006 WEDGs) and best practice guidance and standards for construction, demolition and operational phases of the proposed development as described in Section 12.1.7 of the EIAR. The assessment of potential effects presented in Section 12.4 of the EIAR confirm that all elements of the proposed development will be with the appropriate threshold values and noise and vibration limits identified.

Any additional responses addressing health concerns related to noise and/or vibration are provided under separate headings within this document.

2.2.30 Connection to the Environment

Several submissions suggested that the presence of a wind farm would disconnect people in the area from nature and the local environment. The assertion that wind farms disconnect people from nature and the environment is not supported by research. On the contrary, multiple peer-reviewed studies demonstrate that wind farms do not inherently diminish people's connection to nature, and in many cases, they can actually enhance environmental awareness and place attachment. A number of publications relating to public and tourist perceptions of wind turbines were discussed in Chapter 5 (Population and Human Health) of the submitted EIAR. A number of additional studies are discussed in the following paragraphs.

A comprehensive study by Penneman *et al.* (2022) examining public opinion on Belgium's offshore wind farms found that acceptance increased markedly after turbines became operational[18]. This research documented a significant shift from pre-construction scepticism to post-construction acceptance, suggesting that direct experience with wind farms actually strengthens rather than weakens people's relationship with their environment.

Frantál *et al.* (2017) conducted on-site evaluations at Iceland's proposed Búrfell wind farm and found that perceived compatibility between turbines and landscape was the dominant predictor of acceptance[19]. Importantly, the study showed that turbines could coexist with perceptions of beauty and wildness, directly contradicting claims of environmental disconnection. Participants who viewed the landscape as open and resilient were more likely to accept turbines as compatible with the natural setting.

López-Martínez's (2023) analysis of Spanish Mediterranean landscapes found that wind turbines were not generally perceived negatively, and in some degraded landscapes, turbines actually improved scenic ratings[20]. This research demonstrates that turbines can enhance rather than detract from landscape aesthetics, particularly when carefully integrated into the environment.

2.2.31 Community Life

Concerns relating to community life, in particular the potential reduction in the local population as a result of the proposed project, were raised in multiple submissions. These concerns referred to potential relocation of the existing population away from the area, potential discouragement of future settlement in the area, and the potential subsequent disenrollment in local amenities (e.g. local national school and GAA club) resulting in the 'slow death' of the local community.

Whilst these concerns are acknowledged, the proposed project has in fact the potential to bring significant positive benefits to local communities through the provision of a Community Benefit Fund (proposed in line with industry best practice, which is in accordance with the terms and conditions of the Government's Renewable Electricity Support Scheme (RESS)). The Ballyfasy Wind Farm Community Benefit Fund proposal is set out in Appendix 1-7 Community Engagement Report of the submitted EIAR. Support from the Community Benefit Fund has the

[18] https://doi.org/10.1080/09640568.2022.2079078
[19] https://doi.org/10.1515/MGR-2017-0020
[20] https://doi.org/10.1007/s10980-023-01698-8

potential to make the local area attractive for people to move to, which may result in a marginal increase in local population numbers.

As described in Chapter 5 (Population and Human Health) of the EIAR, the establishment of a Community Benefit Fund will be a long-term positive contribution to the local community. The impact of the Community Benefit Fund is likely to enhance the local economy, with potential for substantial funding for local projects in support of relevant UN Sustainable Development Goals (SDGs), clubs, charities and near neighbours, which will be invested in the local area. This aspect of the proposed project will have a positive long-term effect on the individuals living in the local community, including contributing to a positive effect on individuals' physical and psychological health through the development of community led projects and maximising the level of local involvement in terms of influencing how the funds are spent.

It is not anticipated that the proposed project will have a significant effect on population trends locally or in County Kilkenny. Considering the other projects in the area, it is also not anticipated that the proposed project will have a significant cumulative effect under the topic of population trends. There is a potential positive cumulative effect in terms of population trends in the event of increased investment in the area from the Community Benefit Fund.

2.2.32 Tourism

Several submissions raised concerns regarding potential impacts on tourism as a result of the proposed project. As detailed in Chapter 5 (Population and Human Health) of the EIAR there are a number of relevant tourist attractions and public amenities in County Kilkenny and in the wider area surrounding the wind farm site (attractions have been noted within 10 km). The nearest visitor site identified is approximately 4 km away. The closest trails/walks identified to the proposed wind farm site is approximately 4.5 km. No existing designated tourist sites or walkways/trails were identified as intersecting with or within the wind farm application boundary.

With regards to construction phase effects, as outlined in Section 5.4.2.1.6 of the EIAR, intermittent and temporary traffic effects due to movement of vehicles, plant and machinery related to the proposed project, and the requirement for abnormal loads related to the delivery of the turbines to site, may impact local road traffic as a result of increased road traffic movements. Therefore, there is potential for effects to local and tourist road users in the area during these periods. However, as described in Chapter 5 (Population and Human Health) of the EIAR, these are not considered to be significant. No other direct effects on tourism activity are anticipated during the construction phase.

With regards to the operational phase, the proposed wind farm will be visible from a number of features in the area (as discussed in Chapter 13 (Landscape and Visual Impact Assessment) of the EIAR). However, as noted in Chapter 5 (Population and Human Health) of the EIAR, Fáilte Ireland surveyed tourists' perceptions in relation to wind farms in the Irish landscape in 2007 and 2012, and the results were positive, with approximately 80% of tourists considering the presence of wind farms to either have no impact or a positive impact on their sightseeing. In addition, when asked if further wind farm development in Ireland would influence their decision to holiday in Ireland again, over 70% of responses cited no impact or a positive impact on their return to Ireland. Similarly, the 2017 study carried out by BiGGAR Economics examined the link,

if any, between onshore wind energy development and the sustainable tourism sector in Scotland and did not find a direct relationship between tourism and the wind energy sector in itself. However, it did conclude that the increase in wind farm development did not negatively impact employment in the sustainable tourism industry in Scotland (BiGGAR, 2017).

As such, the proposed project is not anticipated to have a significant impact on tourism in the local area or wider region.

2.2.33 Devaluation of Property

Concerns were raised in several submissions regarding the potential devaluation of property as a result of the proposed project. Based on the relevant literature discussed in Chapter 5 (Population and Human Health) of the submitted EIAR, it is reasonable to conclude that neither the construction phase nor the operational phase of the proposed project will have any significant effect on local property values.

As detailed in Chapter 5 of the EIAR, presently, there is one Irish based study that has looked at the effect of wind farms on property values within the Irish context (Gillespie & McHale, 2023). This study concluded that there are "*no significant reduction in house prices beyond 1 km"* and that the effects seen within the 0-1 km radius were not persistent and were seen to diminish over the operational lifetime of the wind turbines.

Additionally, a study carried out by McKenna *et al.* (2025), which was referenced in the third party submission by Martin Lavelle, analysed the impacts of wind energy through the review of over 400 scientific articles globally[21]. Mckenna *et al.* (2025) stated that *"Although some studies show a decrease in property prices of at least 2%, more recent research shows either minor impacts with limited statistical significance or cases of positive impact on real estate prices, the local economy, and incomes."*

2.2.34 Risk of Accidents

Several submissions raised concerns regarding fire risk management. Concerns included the management of the spread of fire, the risk of falling debris during a turbine fire, and emergency response timing, access, and consultation.

With regards to the construction phase, the Environmental Emergency Response Procedures are outlined in detail in the Construction Environmental Management Plan (Appendix 2-6 of the EIAR). A detailed environmental Emergency Response Plan (ERP) will be developed as part of the Health and Safety Plan for the proposed project in line with the proposed measures set out in the CEMP. The ERP will be activated in the event of an environmental emergency, including in the event of a fire, and will ensure that the correct safety procedures are followed with maximum efficiency. The ERP will include the contact names and telephone numbers for the relevant local authorities (all sections/departments) including the fire brigade. Additionally, as outlined in Chapter 16 (Traffic and Transportation) of the EIAR, during the construction phase, in advance of any road closures/diversions, the appointed Contractor will consult and comply with the Roads Authority, An Garda Síochána and other Emergency services (including the Fire Brigade) to agree a suitable diversion route prior to implementing a road closure.

[21] https://doi.org/10.1016/j.joule.2024.11.016

With regards to the operational phase, the risk of fire as a result of lightning strikes is addressed in Chapter 17 (Major Accidents and Natural Disasters) and Chapter 14 (Air Quality and Climate) of the EIAR. As described in Section 14.3.6 of the EIAR, due to their nature, wind turbines attract lightning strikes and are therefore designed with this in mind and protection has been built in. Design mitigation has been put in place in order to alleviate the known vulnerability to future climate change increasing lightning storms. EC 61400-24:2019 provides guidance regarding lightning protection of wind turbine generators and wind power systems. It defines requirements for protection of blades, other structural components and electrical and control systems against both direct and indirect effects of lightning.

As outlined in Chapter 17 (Major Accidents and Natural Disasters), extensive and detailed confirmatory ground investigation will be undertaken by the appointed Contractor to inform the detailed design and appropriate construction technologies and plant to be deployed. Contractors with a proven track record in delivering work of the scope required by the works will be appointed. In relation to extreme winds, the turbines shall be designed to the appropriate standards to account for the relevant wind loadings. Auto shut off technology is installed within the turbines if wind speed is too high (i.e. above 26 m/s) and has the potential to damage the turbines. Given the nature of their use, the turbines are designed to be placed in high wind environments and therefore significant research has gone into their ability to withstand extreme wind loadings.

As detailed in Chapter 5 (Population and Human Health) of the EIAR, there is a minimum setback distance of 720 m (i.e., four times the tip height) from the proposed turbine locations to sensitive receptors which is in excess of the minimum setback requirements in the 2006 WEDGs and in compliance with the Draft Revised WEDGs (2019). Therefore the risk to residential receptors from turbine collapse is not considered significant. The proposed maximum blade tip height range from 170 m-180 m, therefore all residential dwellings are significantly removed from any area of a potential turbine collapse. Furthermore, as outlined in Chapter 2 (Description of the Proposed Project) of the EIAR, each turbine will be subject to a routine maintenance programme.

2.2.35 Animal Health

Several submissions raised concerns relating to the potential health impacts on their domesticated animals and livestock. In response we note that the lands adjacent to and surrounding many wind farms across the country are utilised by animals. There is no scientific evidence that wind turbines have a negative impact on domesticated animals or farm animals grazing in close proximity. Wind farms and livestock farming frequently coexist, with cattle grazing safely around turbine bases. Additionally, as outlined in Chapter 5 (Population and Human Health) of the EIAR, no health agency has concluded that exposure to Electromagnetic fields (EMF) from power lines and other electrical sources is a cause of any long-term adverse effects on human, plant or animal health.

The proposed project will adhere to all applicable animal welfare and environmental protection standards, and the applicant remains committed to ongoing engagement with local farmers and stakeholders to address any concerns.

2.2.36 Electromagnetic Interference

Concern regarding electromagnetic interference and potential health implications was mentioned in a few submissions.

Electromagnetic Fields (EMF) together with optical radiation, which includes infrared (IR), visible light (and laser), and ultraviolet radiation, collectively make up the non-ionising radiation (NIR) spectrum. This type of radiation does not have enough energy to break up (ionise) atoms or molecules. It is therefore different to ionising radiation such as X-rays or radioactive substances, that can break up molecules and is known to cause damage to human cells.

EMF are generated by everyday items such as mobile phones and electrical appliances. EMF are intentionally produced and used to transmit information or to heat things such as food. So, we use EMF every time we listen to the radio, watch television, warm up food in a microwave oven or use our mobile phone. EMF are also generated when electricity is produced (e.g., power plants) and distributed (e.g., power lines), and whenever we use an electric appliance at home or in work. EMF sources also occur in nature and include the earth's magnetic field, that causes compasses to point North, or the electric fields produced in the atmosphere during lightning storms. EMF are also emitted by the Sun and even by our own bodies.

Electromagnetic Compatibility (EMC) relates to the ability of different electromagnetic devices to function properly when they are situated in the same environment, i.e., it relates to the compatibility between different devices. Electromagnetic devices can generate and propagate energy causing electromagnetic interference (EMI). Devices can also receive and be interfered with by energy generated and propagated by other devices in the same environment. If an electromagnetic device is not compatible with other devices in the same environment, EMI can lead to the device not functioning properly.

2.2.36.1Guidelines

The EU Council 'Recommendation on the limitation of exposure of the general public to electromagnetic fields' (0Hz to 300GHz) 1999/519/EC outlines a set of both 'reference' and 'restriction' levels for limiting overall exposure to electromagnetic fields and ensuring an increased level of protection.

This recommendation is based on the International Commission on Non-Ionising Radiation Protection 'Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300GHz)'. Health Physics 74 (4): 494-522; 1998.

The electric and magnetic fields associated with Ireland's transmission grid do not exceed the recommendations of EU1999/519/EC.

EirGrid, who is responsible for Ireland's electricity grid operates to stringent safety recommendations set out by the EU as well as national and international agencies. These recommendations are based on peer-reviewed medical and health studies, independent of any grid operator.

EirGrid has reviewed the current and voltage of every transmission circuit in the country every hour for a year. These averages were then used to determine the typical electric and magnetic fields near our lines. The results are shown in Table 2-2 herein and on EirGrid's website[22].

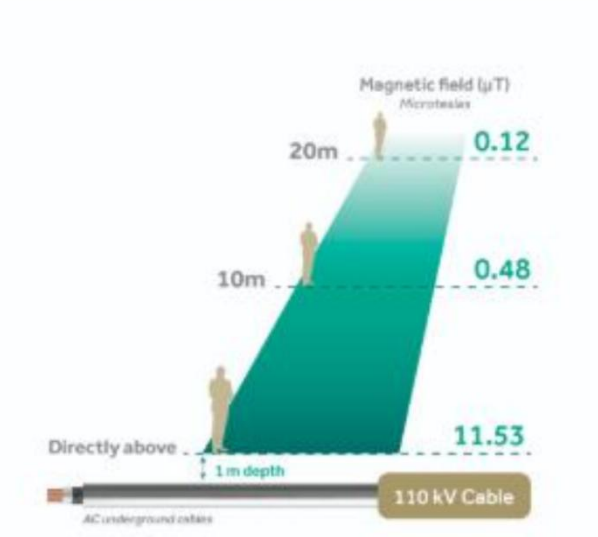
Magnetic flux densities for AC magnetic fields are reported using units of microtesla (μT) and AC electric fields are reported as Volts per metre (V/m).

Table 2-2 shows that the restriction level for electric fields is 9000 V/m. With regards to 110kV cables the result is negligible. Table 2-2 also shows that the magnetic field restriction level is 360 μT, whereas 110kV cables is 11.53 μT when standing directly above the circuit. This is still well below the 360 μT restriction level.

Table 2-2: Electromagnetic Fields in Ireland (Source: https://www.eirgrid.ie/EMF)

Type of field	EU/ICNIRP restriction level	Highest level calculated for 400 kV	Highest level calculated for 220 kV	Highest level calculated for 110 kV
Electric field (V/m)	9,000	N/A	N/A	N/A
Magnetic field (μT)	360	43.27 (1m above the ground directly above the circuit)	30.74 (1m above the ground directly above the circuit)	11.53 (1m above the ground directly above the circuit)

It is also important to note that the strength of both magnetic and electric fields drops significantly with distance (away from the source) as shown in the image below. Standing directly above the cable has a 11.53 μT magnetic field (below recommended restriction levels) which significantly reduces further to 0.48 μT at a distance of 10 m.



[22] https://www.eirgrid.ie/EMF

As described in EIAR Chapter 5 (Population and Human Health), the proposed underground electrical cables will adhere to the international guidelines for ELF-EMF (Extremely Low Frequency Magnetic Field) which are described by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). This is a formal advisory agency to the WHO. The proposed wind farm will also adhere to the EU guidelines for human exposure to EMF (Electric Magnetic Field). As the ICNIRP guidelines will not be exceeded, even directly above the underground cables, there will be no associated operational effects on Human Health.

2.2.36.2Pacemaker Interference

"The likelihood of an adverse impact to a pacemaker of other implanted cardiac device from a power line is extremely small give the low levels of electric and magnetic fields typically measure so close to the line, where the fields would be highest".[23] As noted in Table 2-2, the levels associated with a 110kV cable which is proposed for this project, are well below the guidance thresholds when standing above, decreasing further with distance.

110kV cables and overhead lines are also located through Ireland and generally are not considered to pose a risk to pacemakers, as EMF levels around such infrastructure are within international safety guidelines. Also modern implanted cardiac devices are equipped with multiple design features and internal circuitry specifically engineered to mitigate electromagnetic interference.

2.2.37 County Development Plan Policy

A number of submissions raise concerns relating to the policy context for renewable energy development in County Kilkenny. These issues are addressed in detail herein.

A submission has expressed the view that a moratorium should be imposed on all future wind farm development within the County. We would respond to argue that this is a matter of personal opinion rather than established planning policy.

The proposed wind farm is located within the administrative boundaries of Kilkenny County Council and the siting of the proposed project is compliant with the relevant corresponding provisions of Kilkenny County Development Plan 2014. A recent court judgement has determined that this is the most relevant Count Development plan (2014 CDP) to consider when looking at the principle of the proposed project[24]. Otherwise, the remaining parts of the Kilkenny City and County Development Plan 2021 (2021 CDP) are still in force and the project is found to be compliant with this too. Please refer to the Planning Statement submitted with the application.

The Kilkenny City and County Development Plan 2021–2027 (CDP) contains no provision, objective, or policy imposing a moratorium on wind energy development, nor any mechanism that would prevent the assessment or progression of wind farm applications. Moreover, the Minister's Draft Direction issued on the 15th October 2021 under Section 31 of the Planning and Development Act, which caused certain parts of Chapter 11 of the CDP not to come into effect, does not introduce any form of prohibition or temporary suspension on wind energy

[23] https://www.eirgrid.ie/EMF
[24] High Court Judgment ([2023] IEHC 577) – *Save The South Leinster Way & Anor v An Bord Pleanála & Ors" Save The South Leinster way and Another v an Coimisiún Pleanála and Others - vLex Ireland*

development. It states that specific sections of the renewable-energy chapter must be reconsidered due to inconsistencies with national policy. It does not state or infer that wind projects should be halted. Accordingly, while individual opinions calling for a moratorium are noted, they do not reflect the operative policies of the CDP nor national legislative requirements relating to renewable-energy delivery.

Some submissions refer to Section 11.5.1 of the Draft Kilkenny City and County Development Plan 2021–2027 (CDP), which states that Kilkenny's renewable-energy targets were expected to be met by a mix of renewable sources with solar playing an increasingly significant role. They argue that this implies wind energy should be reduced and that additional wind farms represent a "proliferation" inconsistent with the CDP. In response, we wish to confirm and make clear that Section 11.5.1 of the Draft Kilkenny City and County Development Plan 2021–2027 (CDP)has not come into effect. It was among the provisions explicitly withheld under the Minister's Direction, referenced above. Thus, the policy basis cited by observers is not part of the operative CDP. As such it cannot be relied upon as a rationale to limit wind development or favour solar as a substitute.

Four submissions suggest that wind energy should be developed offshore instead of onshore, or that greater emphasis should be placed on solar energy developments. These submissions imply that further onshore wind development is unnecessary or inappropriate in County Kilkenny. In response, it is important to clarify both the wider national policy context for renewable energy and the status of the relevant Development Plan provisions.

In the context of Ireland's energy transition, onshore wind remains a critical pillar, alongside offshore wind and solar in delivering the Climate Action Plan targets and Ireland's binding 2030 climate commitments. While Ireland has significant offshore wind potential, particularly along the Atlantic coast, the timeline for large-scale offshore deployment is lengthy due to complex consenting processes, substantial grid-infrastructure requirements, and high capital costs. Solar energy, though expanding rapidly, began from a very low baseline and still represents a modest share of Ireland's renewable electricity. As recently as 2023, solar provided just 4.4%[25] of national renewable energy generation. By contrast, onshore wind is a mature, cost-effective, and readily deployable technology capable of providing significant renewable capacity in the short to medium term.

Under the Climate Action Plan 2025, Ireland must deliver 9 GW of onshore wind, 8 GW of solar PV, and at least 5 GW of offshore wind by 2030. Achieving this balanced mix is critical for maintaining grid stability, meeting interim emissions-reduction milestones, and ensuring energy security on the path to net zero by 2050. Onshore wind also offers important regional benefits, including local investment, employment, and community benefit funds. Its generation profile complements solar production, delivering renewable electricity during darker, windier periods when solar output is low. Without continued onshore wind development during the offshore build-out phase, Ireland risks falling short of its legally binding 2030 targets and increasing reliance on fossil fuels.

[25] First-Look-Energy-Supply-and-Security-of-Supply.pdf

The Israel-Iranian-US war which started on the 28th of February 2026 has exposed Ireland's vulnerability to external geopolitical risk and the overreliance on imported energy sources. Energy is the life blood of economies and modern economies run on electricity and renewable energy. Energy is not just a technical resource but a fundamental driver of social stability, economic growth, and overall quality of life.

Ireland maintains strategic fuel reserves of 90 days of net oil import primarily through the state body National Oil Reserves Agency (NORA), which are designed strictly for emergency use—such as major global supply disruptions or geopolitical crises as being experienced at the moment in the Middle East. However, Ireland does not maintain strategic reserves of natural gas, making it very exposed and vulnerable in that area, as most gas is imported via pipelines from the UK.

The Middle East geopolitical crisis is escalating daily and reserves are not sustainable in the long-term. This situation reinforces the strategic importance of energy independence for Ireland and accelerating the diversification of energy sources and accelerating the transition to renewable energy for greater long-term security of energy supply.

Some submissions further argue that the absence of active renewable-energy targets or wind-strategy mapping in the Kilkenny City and County Development Plan 2021–2027 (CDP) renders onshore wind development premature or inappropriate. However, this interpretation is incorrect. Certain elements of Chapter 11, specifically Section 11.4 (Kilkenny Targets), Section 11.5.1 (Current Status and Targets), and Figure 11.4 (Wind Strategy Areas) did not come into effect due to the Minister's Draft Direction under Section 31 of the Planning and Development Act. The Direction did not remove or invalidate the entire Renewable Energy chapter; it simply required revision of specific parts that were considered insufficient in demonstrating how Kilkenny would contribute to national renewable-energy and climate obligations. This reflected a need for greater policy support for renewable energy, including wind.

The suspension of effect of these sections does not render renewable-energy development inconsistent with the CDP. Instead, applications are assessed on their merits under the operative policies of the CDP, national legislation, EU renewable-energy directives, and the corresponding provisions of the 2014–2020 County Development Plan, which remain in effect where the corresponding provisions in the new plan did not come into effect. This approach is supported by the High Court decision in Save The South Leinster Way & Anor v An Coimisiún Pleanála [2025] IEHC 541, which confirmed that where a Section 31 Draft Ministerial Direction prevents parts of a new plan from taking effect, the corresponding provisions of the earlier development plan continue to apply.

Accordingly, the following elements of the 2014 CDP are relevant to the assessment of the proposed development:

- Section 10.5.3 (Development Management Guidance);
- Appendix J (Wind Energy Development Strategy); and
- Figure 10.2 (Wind Strategy Map).

Under the 2014 Wind Energy Strategy and its associated strategy map, the Ballyfasy site lies partly within a "Preferred Area," defined as a location deemed most suitable for wind-energy

development due to strong wind resources, low landscape and heritage sensitivity, feasible grid access, and limited risk of conflict with residential or community interests. The proposed Ballyfasy Wind Farm is therefore fully capable of being assessed within the existing statutory and policy context and is consistent with both national and local renewable energy objectives.

The principle of the proposed development is supported by the operative elements of the 2014 CDP, which remain in force for the purposes of planning assessment, due to the Draft Ministerial Direction. As such, the project is being assessed within a clear and established planning-policy framework. Assertions that onshore wind should be deprioritised in favour of offshore or solar energy, or that the proposed site is inappropriate, are not supported by national policy, regional obligations, or the applicable development plan provisions.

2.2.38 Future Planning Applications

Five submissions raise concerns that the proposed project would preclude the submission of future planning applications for housing in the area immediately around the proposed wind farm. In response, it is important to note that a comprehensive planning search was undertaken for the project, covering a 10 km radius around the proposed development site and including all relevant planning applications lodged between January 2013 and November 2025. All extant permissions and all live planning applications identified within this search area and timeframe were fully incorporated into the EIAR assessments. It is not known where future planning applications will be made, but this should not be considered as a valid reason not to grant permission for the proposed project, given the current climate emergency, the national climate objective and the need to construct more renewable energy projects to achieve the binding 2030 target of 80% of electricity from renewable sources. Without a formal application, in line with best practise guidelines for environmental assessment as listed in Chapter 1 (Introduction) of the EIAR, the applicant submits that hypothetical future planning applications are not an appropriate factor in An Coimisiún Pleanála's assessment of the proposed project and cannot sterilise land from development. For the purposes of the cumulative assessment, proposed and existing developments were assessed.

2.2.39 Validity of the Wind Energy Guidelines 2006

Submissions have been made stating that the Wind Energy Guidelines 2006 is out of date and unfit for purpose. In response, the design of the proposed wind farm was prepared fully in accordance with the Wind Energy Guidelines 2006, which remain the operative planning guidelines. In addition, the following guideline documents have been consulted with respect to the wind farm design:

- DoHPLG, Draft Revised Wind Energy Development Guidelines (December 2019);
- Irish Wind Energy Association, Best Practice Guidelines for the Irish Wind Energy Industry 2012;
- Irish Wind Energy Association, Community Engagement Strategy March 2018; and
- European Commission, Guidance document on wind energy development and EU nature legislation (November 2020).

The provisions set out in the Draft 2019 WEDGs have been considered in the design of the proposed project in terms of noise, shadow flicker, visual amenity setback, environmental

assessment, consultation obligations, community dividend and grid connections. The application of the draft guidelines is discussed in more detail in individual chapters in the submitted EIAR.

2.2.40 Typographical and Scaling Errors

A typographical error in the site notice, whereby the term "Lightening Masts" appeared instead of "Lightning Masts", is acknowledged; however, this minor spelling mistake did not compromise the clarity or validity of the notice, nor did it impede public understanding of the proposed works or participation in the planning process. The site notice for a Section 34 planning application must provide a brief description of the nature and extent of the development (regulation 18(1)(d) of the Planning and Development Regulations 2001 (as amended)). Even though this application was lodged under Section 37E, the site notice provided such a description. The minor typographical error did not impede public participation, as demonstrated by the significant number of observations received.

With respect to the drawing-scale annotations, the notation of "50:1" and "100:1" on three turbine-foundation drawings is recognised as a labelling error only; the underlying drawings, dimensions, included measurements, and engineering details remain accurate, fully dimensioned, and consistent with the scales agreed with An Coimisiún Pleanála as confirmed in Addendum 1. This clerical mislabelling does not alter the content of the drawings, misrepresent the scale of the development, or prejudice the assessment of the application, and corrected scale labels will be provided to the Commission if required.

2.2.41 Applicable Townlands

An observation received states that the townlands of Ballinlammy, Ballynooney East, Ballyquin and Darbystown are missing from the application documents. In response, we wish to clarify that there are no planned physical works proposed under the planning application, or any associated application as part of the project, that will take place within these townlands. For this reason, and in accordance with standard planning requirements, which requires the listing only of townlands containing physical works they have been omitted from the site notice and other statutory planning application documents. Their exclusion does not indicate omission from assessment of any receptors within these townlands. All relevant receptors have been appropriately considered within the EIAR, and residents located in these townlands were fully able to engage in the planning process, as demonstrated by the submissions received.

2.2.42 Project Splitting

The wind farm and its associated grid connection were submitted to ACP as two separate planning applications, as is required under the Planning and Development Act, 2000:

- The wind farm is submitted under Section 37Eof the Planning and Development Act; and
- The grid application is submitted under Section S182A.

This does not constitute project splitting which is defined as *"A tactic where a larger project is divided into smaller parts to evade comprehensive environmental assessments."*[26]

The Ballyfasy planning application documents and specifically, the submitted EIAR assesses the wind farm and the full grid connection as a single, integrated project, including all combined and cumulative effects. The EIAR contains a full cumulative assessment of other existing, permitted and proposed energy projects in the region, ensuring complete transparency on turbine concentration and overall impacts. The proposal therefore meets the NPF's requirement for plan-led, appropriately assessed renewable-energy development, and the use of two ACP applications does not undermine cumulative assessment nor conflict with national planning principles. This approach was confirmed as appropriate by ACP under pre application references ACP 320900-24 and ACP 321814-25.

Th proposed project was also cross referenced in both applications, statutory notices and within the EIAR.

2.2.43 Access / Site Entry and Road Suitability

A number of submissions comment on the adequacy of the local road network to accommodate construction traffic, the suitability of L-roads for construction vehicles and turbine deliveries and the potential encroachment onto private lands and road modifications along the delivery route.

In response, the site access arrangements have been designed in accordance with Transport Infrastructure Ireland geometric design standards, with appropriate visibility splays provided at all site entrances.

The proposed access arrangements are described in EIAR Chapter 16 Section 16.4.

A detailed review of the haul route and surrounding road network was undertaken as part of the Traffic and Transport Assessment. This review included site inspections, analysis of carriageway widths, junction geometry, and swept path analysis to confirm that construction vehicles can safely access the site.

Where required, localised temporary works will be implemented to facilitate vehicle movements, including:

- Temporary hardstanding areas;
- Temporary signage removal where required;
- Widening at specific junction locations; and
- Temporary passing opportunities.

All such works will be temporary in nature and will be reinstated following completion of construction.

Mitigation measures relating to junction visibility and vehicle manoeuvring are outlined in:

- EIAR Section 16.9.2.3 – Junction Visibility.
- EIAR Section 16.9.2.4 – Junction Swept Path Analysis.

[26] Coyne v An Bord Pleanala: A Landmark Judgment on Environmental Impact Assessment and Project-Splitting in Ireland: High Court of Ireland | CaseMine

- EIAR Appendix 1-1.

In addition, a Stage 1 Road Safety Audit (RSA) has been undertaken for the proposed site access arrangements and relevant temporary works. The audit provides an independent safety review of the proposed access design and associated temporary works, and the audit report is included in EIAR Appendix 16-2.

2.2.44 Construction Traffic Volumes

Submissions raised concerns regarding the potential increase in traffic volumes associated with the construction phase of the development and the potential for congestion or disruption on the local road network. In response, traffic surveys were undertaken as part of the Traffic and Transport Assessment, including Automatic Traffic Counts (ATCs) and Junction Turning Counts, as described in EIAR Section 16.3.3.

These surveys confirmed that baseline traffic volumes on the surrounding road network are relatively low, particularly on local rural roads.

During the peak construction period, the proposed development is estimated to generate approximately 304 two-way vehicle movements per day, distributed across a 12-hour working period.

Importantly, the majority of these movements relate to light vehicles associated with construction personnel, while heavy goods vehicles represent only a small proportion of total traffic. HGV traffic is estimated to account for approximately 34 two-way movements per day during the peak construction phase.

This equates to only a small number of HGV movements per hour on average, and traffic will be distributed throughout the working day rather than concentrated within short peak periods.

The most intensive phase of construction is expected to last for approximately three months, after which daily construction traffic levels reduce to approximately 182 two-way vehicle movements per day.

Given the relatively modest scale of these traffic volumes and the low baseline traffic conditions, the Traffic and Transport Assessment concludes that the existing road network has sufficient capacity to accommodate the temporary construction traffic associated with the proposed development.

2.2.45 Vehicles Passing on Narrow Roads

Several submissions raised concerns that some sections of the local road network are narrow and that vehicles may not be able to safely pass each other.

The surrounding road network includes rural local roads where carriageway widths vary, which is typical of rural areas in Ireland. However, the overall traffic volumes on these roads are low, and the additional traffic associated with the proposed development is relatively modest.

As outlined above, the majority of construction traffic movements consist of light vehicles associated with construction personnel, while heavy goods vehicles represent only a small proportion of total traffic.

Given the limited number of HGV movements and the distribution of construction traffic throughout the day, the likelihood of two large vehicles encountering each other on narrow sections of road is considered to be low.

It is also recognised that rural roads in Ireland commonly operate with informal passing opportunities, including:

- Field entrances;
- Farm accesses;
- Junction widenings; and
- Verge areas

which allow vehicles to safely pass when required.

In addition, the proposed development includes design measures to facilitate safe vehicle movements, including passing bays along internal access tracks and widened site entrances, allowing vehicles to wait clear of the public road where necessary.

Some sections of the haul route access the site via the R704 regional road, which is of a higher standard and capable of accommodating two-way traffic movements.

2.2.46 Road Safety and Vulnerable Road Users

A number of submissions raised concerns regarding potential risks to pedestrians, local residents, schools and other vulnerable road users.

Construction traffic will be managed through the implementation of the Traffic Management Plan (TMP) included in EIAR Appendix 16-1. The TMP includes a range of measures to ensure that construction traffic is managed appropriately and interactions with vulnerable road users are minimised. These measures include:

- Scheduling HGV movements to avoid school drop-off and pick-up periods where practicable;
- Avoiding Routes near schools;
- Temporary traffic management near areas where interaction with vulnerable users cannot be avoided;
- Night-time AIL deliveries to avoid interaction with school traffic;
- Appropriate signage, speed management and traffic control measures; and
- Coordination with local authorities and local stakeholders, where required.

These measures will ensure that construction traffic is carefully managed throughout the construction phase.

A Road Safety Audit (RSA) has also been undertaken as part of the project design process and is included in Appendix 16-2 of the EIAR. The RSA provides an independent review of the proposed access arrangements and associated works to identify potential safety issues and recommend mitigation measures where required.

2.2.47 Abnormal Indivisible Loads (AIL)

Submissions raised concerns regarding the delivery of turbine blades and other large components and the potential disruption along the delivery route.

In response, a Turbine Delivery Route Assessment was undertaken for the entire route from Belview Port to the site entrances. This assessment included swept path analysis at key junctions and constrained locations, which confirmed that turbine delivery vehicles can safely navigate the route and identified any localised temporary works required to facilitate deliveries.

Temporary measures such as localised hardstanding, temporary signage removal, and junction adjustments will facilitate the safe movement of turbine components where required.

Abnormal load deliveries will occur infrequently and under controlled conditions, during night-time periods, and will be accompanied by Garda escort and appropriate traffic management measures, thereby minimising disruption to the road network.

The design of temporary works required to facilitate turbine deliveries has also been reviewed as part of the Road Safety Audit process (EIAR Appendix 16-2) to ensure that the proposed measures can be implemented safely on the public road network.

2.2.48 Potential Road Damage

Some submissions raised concerns regarding the potential for construction traffic to damage local roads. In response, a pre-construction road condition survey will be undertaken along the construction haul routes prior to the commencement of works. A post-construction survey will also be undertaken following completion of construction.

Where any damage to the road network is identified as being attributable to construction traffic associated with the proposed development, this will be reinstated at the applicant's expense in agreement with the relevant local authority.

The management of construction traffic and road protection measures are set out in the Traffic Management Plan (EIAR Appendix 16-1).

2.2.49 Cumulative Traffic Impacts

The issue of interactions with other committed or permitted developments and potential effect on the road network was highlighted within some submissions. In response:

- The TTA follows TII PE-PDV-02045 guidance on cumulative (committed) developments. A 10 km planning search was completed to identify relevant developments (Chapter 1, Appendix 1-4).
- Cumulative construction traffic is low, with the largest developments generating minimal daily movements (e.g., 60 LV + 18 HV for Castlebanny Wind Farm).
- Peak additional traffic from these developments is brief and imperceptible. Combined with Ballyfasy Wind Farm traffic, the cumulative effect on network performance is insignificant.

2.2.50 Traffic and Transportation – Summary of Issues Raised

The observations received in relation to traffic and transportation matters have been reviewed and addressed in the preceding sections. The issues raised primarily relate to construction traffic volumes, road safety, suitability of the local road network, abnormal load deliveries, potential impacts on schools and other vulnerable road users, road condition, and cumulative traffic impacts.

The Traffic and Transport Assessment (TTA) undertaken as part of the EIAR demonstrates that the existing road network has the capacity to accommodate the temporary construction traffic associated with the proposed development. The assessment also confirms that appropriate access arrangements, mitigation measures, and traffic management procedures will be implemented to ensure the safe operation of the road network during the construction phase.

In addition, a Traffic Management Plan (TMP) has been prepared (EIAR Appendix 16-1), which outlines the procedures that will be implemented to manage construction traffic, coordinate deliveries, minimise potential disruption to local road users, and protect the condition of the road network.

A Road Safety Audit has been undertaken for the proposed access arrangements, the findings of which are provided in Appendix 16-2 of the EIAR, ensuring that the proposed access design has been independently reviewed from a road safety perspective.

The traffic effects associated with the proposed development occur primarily during the temporary construction phase. The most intensive construction activities are expected to occur over a relatively short period of approximately three months, during which peak construction traffic is estimated at approximately 304 two-way vehicle movements per day. Of these movements, the majority relate to light vehicles (LVs) associated with construction personnel, while heavy goods vehicles (HGVs) represent a relatively small proportion, estimated at approximately 34 two-way HGV movements per day during the peak construction period. Following this peak period, construction traffic reduces to approximately 182 two-way vehicle movements per day.

Once construction is complete, the operational wind farm will generate very limited traffic, generally limited to occasional maintenance visits. As such, the traffic impacts associated with the proposed development are temporary and short-term in nature, and no permanent changes to traffic conditions on the surrounding road network are anticipated.

For ease of reference, the main topics raised in submissions and the relevant sections of the EIAR where these matters are addressed are summarised in Table 2-3.

The applicant is also agreeable to all of TII's recommendations in it observation on this application.

Table 2-3: Summary of Traffic Issues and EIAR Reference

TOPIC RAISED IN SUBMISSIONS	SUMMARY OF ISSUES RAISED	RELEVANT EIAR REFERENCE
Access / Site Entry & Road Suitability	Concerns regarding the adequacy of the local road network and specific roads (including L3417, L3424 and L7499) to accommodate construction traffic and turbine deliveries, and queries regarding access arrangements.	EIAR Section **16.4 – Proposed Access Arrangements**; Section **16.9.2.3 – Junction Visibility**; Section **16.9.2.4 – Junction Swept Path Analysis**; **Appendix 1-1 Drawings; EIAR Appendix 16-2 - Road Safety Audit**

TOPIC RAISED IN SUBMISSIONS	SUMMARY OF ISSUES RAISED	RELEVANT EIAR REFERENCE
Construction Traffic Volumes	Concerns regarding the level of construction traffic during peak periods and the potential for congestion or disruption on local roads.	EIAR Section **16.6 – Construction Traffic Generation**; Section **16.7 – Traffic Impact Assessment**; Section **16.3.3 – Traffic Surveys**
Vehicles Passing on Narrow Roads	Concerns that some rural roads are narrow and may not allow vehicles to safely pass each other.	EIAR Sections **16.4**, **16.6**, **16.7**, **16.9 – Mitigation Measures**
Road Safety & Vulnerable Users	Concerns regarding the potential impact of construction traffic on pedestrians, residents, schools and other vulnerable road users.	**Traffic Management Plan (Appendix 16-1; EIAR Appendix 16-2 - Road Safety Audit**
Abnormal Indivisible Loads (AIL)	Concerns regarding the delivery of turbine components from Belview Port and potential disruption along the haul route.	EIAR Section **16.5 – Turbine Delivery Route Assessment**; **Appendix 16-1 –Traffic Management Plan; EIAR Appendix 16-2 - Road Safety Audit**
Potential Road Damage	Concerns regarding the potential for damage to local roads as a result of construction traffic.	EIAR Section **16.9 – Mitigation Measures**; **Appendix 16-1 –Traffic Management Plan**
Community Communication	Requests for communication with residents regarding construction activities and traffic management.	**Traffic Management Plan (Appendix 16-1)**
Cumulative Impacts	Concerns regarding cumulative traffic impacts associated with other developments in the surrounding area, including wind farm developments.	EIAR Section **16.11 – Cumulative Impact Assessment**
National Road Network (Prescribed Body Submission)	Submission from **Transport Infrastructure Ireland** noting that the turbine delivery route uses sections of the **N29 national road**, **N25 national road**, and **N9/M9 motorway** and advising that abnormal loads and any temporary works should be coordinated with the relevant road authorities and comply with TII standards.	EIAR Section **16.5 – Turbine Delivery Route Assessment**; **Appendix 16-1 TMP; EIAR Appendix 16-2 - Road Safety Audit**
Local Road Network Management	Submission from **Kilkenny County Council** highlighting the need to manage construction traffic on the local road	EIAR Sections **16.6 – Construction Traffic Generation**, **16.7 – Traffic Impact Assessment**, **16.9 –**

TOPIC RAISED IN SUBMISSIONS	SUMMARY OF ISSUES RAISED	RELEVANT EIAR REFERENCE
(Prescribed Body Submission)	network and protect road infrastructure during the construction phase.	**Mitigation Measures**; **Appendix 16-1 TMP**

2.2.51 EIAR inadequately addresses some ornithology effects

Habitat loss, displacement of species recorded foraging or breeding on site was assessed within the EIAR which followed CIEEM (2018)27 and EPA (2022)28 guidance. The potential for cumulative significant effects, including in relation to collision risk, was assessed for each Important Ornithological Feature (IOF) in Chapter 7. Given that effects for all species were considered negligible when assessed for the proposed project in isolation, it is unlikely that the proposed project would contribute to any significant cumulative effects. There is no requirement to assess turbine wake turbulence and altered flight behaviour unless there would be significant barrier effects, which were considered when undertaking the assessment, however were scoped out for all receptors.

2.2.52 Concerns for bird species, particularly hen harrier, curlew, buzzard, kestrel, plover, snipe, lesser black-backed gull and kingfisher noted.

The impact assessment within EIAR Chapter 7 (Ornithology) concluded there would be no significant effects to bird species during the construction, operation or decommissioning phases of the proposed development. The EIAR was prepared in accordance with CIEEM (2018) and EPA (2022) guidance. The impact assessment was undertaken using the most up to date data available which included any relevant studies of disturbance and displacement arising from onshore wind developments.

Hen harrier activity was very low across the two years of surveys. Due to the very low activity of the species within the site and wider survey area it was assessed that the potential for significant effects is negligible.

Lesser black-backed gulls were recorded using multiple survey methods. The species was scoped into the impact assessment which considered displacement during the construction phase and displacement, collision risk and barrier effects during the operational phase. Impacts on this species were considered not significant when assessing against both national populations and those associated with the Great Saltee SPA.

Curlew were recorded on a single occasion during all surveys, with one bird commuting over the Site. Species-specific surveys for curlew are not recommended within NatureScot (2025) guidance, with methods used suitable to record any breeding wader species. During Breeding Bird Surveys, no curlew were identified and there was no evidence of this species breeding (or foraging) within the survey area.

[27] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.
[28] EPA (2022) Guidelines on the information to be contained in Environmental Impact Assessment Reports

No kingfisher were recorded on site and therefore scoped out of the assessment.

Snipe were considered a target species for surveys on site. They were however only recorded on a single occasion across all surveys. Due to the very low activity of snipe within the site and wider survey area it was considered that the potential for significant effects was negligible.

Buzzard was recorded during surveys however, as the species is green listed in Ireland and not considered of conservation concern, along with being considered a common species, buzzard was scoped out of the assessment as any potential for significant effect on the species is considered negligible.

2.2.53 Concerns for loss of breeding raptor habitat

Raptor surveys were undertaken in line with NatureScot (2025)[29] guidance, the industry standard. No raptors were recorded breeding during breeding bird surveys or wider hinterland surveys, that focused on breeding raptors, during the two years of surveys. Therefore, raptors were scoped out of the impact assessment and no impacts were predicted within the impact assessment.

2.2.54 Loss of hedgerows and nesting sites for small birds

Removal of any vegetation would take place during the non-breeding season to avoid nesting birds where possible. Mitigation has been proposed to protect any breeding birds, with any vegetation removal that is required during the breeding season subject to a nesting bird check to ensure there are no breeding birds are present. Where any nesting birds are present, consultation will be undertaken with the National Parks and Wildlife Service (NPWS).

In line with NatureScot (2025) guidance, passerine species were scoped out of the impact assessment, as guidance states that "*Surveys of farmland passerines especially on more intensive arable habitat are generally not required*" and "*passerine species are not generally considered to be significantly impacted by wind farms*".

2.2.55 Cumulative impacts ornithology

An assessment of cumulative effects was undertaken in line with CIEEM (2018) and EPA (2022) guidance. Given that the assessment concluded that the proposed project is not predicted to result in significant effects on any of the IOFs, accordingly, no cumulative impacts were identified.

2.2.56 Impacts on nearby SPAs and their features

Nearby SPAs were also considered within the EIAR, including the River Nore SPA which is 9.1 km from the site and therefore it was determined that there was no potential connectivity between the SPA kingfisher population and the site. Kingfisher were not recorded on site during any survey and therefore scoped out of the impact assessment.

[29] NatureScot (2025) Recommended bird survey methods to inform impact assessment of onshore wind farms, Version 2.

2.2.57 Threat of turbine blades to birds

Collision Risk Modelling was undertaken in line with NatureScot (2025) guidance, which is the industry standard. This modelling was informed by a robust dataset, collected over two years of ornithology surveys. Results are presented within EIAR Chapter 7-Ornithology where no significant collision risk effects were determined for any species.

2.2.58 Concerns about birds of prey and cuckoo which have recently returned to the region

No significant effects on bird species were concluded during impact assessment for the proposed development following two years of baseline surveys and impact assessment which followed guidance by CIEEM (2018) and EPA (2022).

Cuckoo were not recorded during breeding bird surveys, as there is no evidence that the species is present within the site, there is no potential for impacts. Owls were considered target species during surveys, however none were recorded, therefore as there is no evidence that owl species are present within the site, there is no potential for impacts. Buzzard was recorded during surveys however, as the species is green listed in Ireland and not considered of conservation concern, along with being considered a common species, buzzard was scoped out of the assessment as any potential for significant effect on the species is considered negligible.

2.2.59 Biodiversity (excluding birds and bats)

Submissions relating to biodiversity (excluding birds and bats) are addressed hereunder. The concerns raised in third party submissions with regard to designated sites, habitats and flora and fauna (excluding bats) can be broadly grouped into five key themes. A number of additional submissions that do not fit into one of these themes are also included and addressed hereunder. These have been addressed by TOBIN, as authors of Chapter 6 (Biodiversity) of the EIAR and the Natura Impact Statement (NIS).

Theme A - submissions raise concerns regarding potential effects on biodiversity and protected species in the area. Submissions refer to a wide range of wildlife including mammals such as otter, badger, red squirrel, deer, pine marten and hedgehog, amphibians including smooth newt and common frog, and fish including salmon and lamprey that may be affected by construction activities and operational disturbance associated with the proposed project.

Theme B - submissions raise issues regarding the adequacy of the biodiversity assessment and baseline surveys. Some submissions question whether surveys are sufficiently comprehensive, citing potential gaps in species surveys, aquatic monitoring and the mapping of watercourses. These comments reflect concerns about whether the ecological assessment provides complete evidence base and whether potential impacts have been fully evaluated.

Theme C - submissions raise concerns regarding hydrology, water quality and potential impacts on Natura 2000 sites. Submissions highlight hydrological connections between the site and downstream designated areas, including the Lower River Suir SAC, River Barrow and River Nore SAC and the River Nore SPA. Concerns raised in the submissions

focus on potential pollution pathways during construction and the need to demonstrate that the proposed project would not adversely affect the integrity of these protected sites.

Theme D - Submissions refer to habitat loss and landscape fragmentation, particularly the removal of forestry, woodland, hedgerows and treelines. These features are noted as important wildlife habitats and ecological corridors, and concerns are expressed regarding the potential for long term habitat loss and reduced ecological connectivity.

Theme E - Submissions highlight cumulative ecological effects, noting the presence of existing and consented wind farm developments in the wider area. Submissions emphasise the importance of considering impacts in combination with other developments.

Each theme is addressed in below, which set out responses to the issues raised in submissions and cross references the relevant assessments in Chapter 6 (Biodiversity) of the EIAR and the NIS. The sections also summarise the key findings of these assessments in relation to biodiversity (excluding bats and birds), having regard to the ecological concerns noted in Themes A to E.

2.2.59.1Theme A - Biodiversity and Protected Species

Submissions raise concerns about potential effects on a range of fauna species including mammals such as otter, badger, red squirrel, deer, pine marten and hedgehog, amphibians including smooth newt and common frog, and fish including salmon and lamprey during construction and operation of the proposed project. Chapter 6 (Biodiversity) of the EIAR evidences the presence or likely presence of these receptors and evaluates the significance of potential effects and proposes mitigation measures where required.

The EIAR describes the baseline ecological conditions of the proposed project and study area. Baseline information was collected according to the methodologies outlined in Section 6.7 and results are included in Section 6.10 of Chapter 6 (Biodiversity) of the EIAR.

In brief, the mammal species confirmed or likely to be present include badger (foraging signs near T6; no setts recorded), otter (no signs recorded but assumed to be present based on habitat suitability and connectivity to the River Barrow and River Nore SAC), pine marten (one scat recorded near the proposed substation suggesting infrequent use), fallow deer (droppings recorded in conifer plantation/recently felled woodland), hedgehog (likely present, based on the desktop study) and red squirrel (likely present based on the desktop study). The only amphibian species recorded as present is the common frog (observed at three locations; likely widespread). Habitat suitability was noted for smooth newt, however, no evidence of this species was returned from the desktop study or recorded during field surveys and therefore was not considered in the assessment. Fish species which were raised in the submissions, which are confirmed or likely to be present include salmon and lamprey species.

The EIAR identifies potential impacts on the fauna species identified as important ecological features. During the construction phase, these potential impacts include habitat loss, habitat fragmentation, disturbance/displacement, habitat degradation as a result of water quality and dust deposition impacts and construction mortality. Potential impacts during the operational

phase of the proposed project include habitat degradation as a result of water quality impacts. These potential impacts are assessed in Section 6.12 of Chapter 6 (Biodiversity) of the EIAR. Where required, mitigation measures have been prescribed to avoid/reduce potential impacts on fauna species.

Having regard to the baseline surveys, the impact assessment set out in Chapter 6 (Biodiversity) of the EIAR, and the mitigation measures incorporated, the assessment concludes that no significant residual effects are predicted for any fauna species (excluding bats which are discussed separately).

2.2.59.2Theme B - Adequacy of the Ecological Assessment and Baseline Surveys

Submissions question whether surveys and mapping were sufficiently comprehensive.

A range of ecological field surveys were undertaken within the study area in September 2022, September 2023, August 2024, April and August 2025 to inform the impact assessment of the proposed project. These included surveys for habitats, mammals, amphibians and reptiles, marsh fritillary, and aquatic surveys. These are detailed in Section 6.7 of Chapter 6 (Biodiversity) of the EIAR, and throughout the NIS, as relevant to European sites.

A robust suite of ecological surveys was carried out to inform Chapter 6 (Biodiversity) of the EIAR and NIS, over a period of three years from 2022-2025. These surveys covered a range of ecological receptors including habitats, fauna and aquatic surveys with regard to best practice guidance, as detailed in Section 6.7 of Chapter 6 (Biodiversity). The baseline data also incorporated a range of desktop data to produce a robust dataset to inform the assessments carried out in Chapter 6 (Biodiversity) of the EIAR and the NIS for the proposed project.

2.2.59.3Theme C - Hydrology, Water Quality and Potential Connection to Natura 2000 Sites

Submissions emphasise hydrological connections to the Lower River Suir SAC, River Barrow & River Nore SAC and River Nore SPA, and seek assurance that the integrity of these European sites would not be adversely affected.

The EIAR and NIS confirm that the headwaters of the Arrigle River and Smartcastle Stream originate within the site, and that the Arrigle_010/020, Smartscastle Stream_010 and Blackwater (Kilmacow)_020 form the principal downstream pathways to the Lower River Suir SAC, River Barrow & River Nore SAC and the River Nore SPA. These hydrological linkages are described in Section 6.10.2.1.7 and the impact assessment is included in Section 6.12.2.1.1 of Chapter 6 (Biodiversity) of the EIAR and Section 6.1.1 of the NIS. They are also discussed in EIAR Appendix 9-1 Water Framework Directive Assessment. In the absence of mitigation there is a potential risk to the Lower River Suir SAC, the River Barrow and River Nore SAC and the River Nore SPA due to a reduction in water quality and subsequent effects on QI and SCI species (e.g., habitat loss, reduction in food biomass).

Embedded mitigation was implemented at the design phase of the proposed project to reduce the potential impacts on ecological receptors and included measures such as turbines and construction compounds being sited over 50m from watercourses, the use of clear-span bridges to avoid instream works, and use of horizontal directional drilling for watercourse crossings by the grid connection cable. Mitigation measures to prevent habitat degradation as a result of

water quality impacts are outlined in Chapters 6 (Biodiversity) and 9 (Hydrology and Hydrogeology) of the EIAR, the NIS and the Surface Water Management Plan accompanying the planning application. These stringent mitigation measures will be implemented in full, under supervision of an ECoW.

The EIAR and NIS identify downstream hydrological connectivity to European sites and assess the potential pathways through which construction activities could affect water quality and aquatic receptors. Mitigation and water management measures, including avoidance of in-stream works, controlled crossing methods, surface water management measures and a structured monitoring regime etc., are incorporated into the project design and are included as mitigation measures.

Having regard to the assessment presented in Chapter 6 (Biodiversity) of the EIAR and the NIS, potential impacts on downstream watercourses, and associated European sites and aquatic species have been assessed in full. Chapter 6 (Biodiversity) of the EIAR concludes that there are no significant residual effects in relation to habitat degradation as a result of water quality impacts on any ecological receptors. The NIS concludes there would be no adverse effects on the integrity of any European sites during the construction, operational and decommissioning phases of the Proposed Project, either alone or in-combination with any other plans or projects.

2.2.59.4Theme D - Habitat Loss and Landscape Fragmentation

Submissions note the importance of habitats such as forestry, woodland, hedgerows and treelines to wildlife, and raise concerns about long term habitat loss and reduced ecological connectivity.

The EIAR quantifies the extent of permanent and temporary habitat loss that will occur as a result of the proposed project. Potential impacts arising from habitat loss are assessed throughout Section 6.12 in Chapter 6 (Biodiversity) of the EIAR on the habitats themselves, and in relation to potential effects on fauna species arising from habitat loss and fragmentation.

The EIAR quantifies permanent removal of 2,228.28 m of hedgerows, 589.48 m of treelines, 298.46 m of stone walls and other stonework/scrub mosaic, 340 m of drainage ditches, 0.62ha of wet grassland, 0.32ha of mixed broadleaved woodland and 1.86ha of scrub. These losses are described and assessed in Section 6.12.2.3 of Chapter 6 (Biodiversity), in relation to habitats.

Mitigation and enhancement measures outlined in Chapter 6 (Biodiversity) of the EIAR propose replanting of 1,022.93 m of hedgerow, 2.39ha of native woodland, 229 m² of pond creation, and the retention of 1.76 ha of scrub, which will be fenced off and allowed to naturalise. While these measures will mitigate biodiversity losses and create new opportunities for wildlife, Chapter 6 (Biodiversity) of the EIAR acknowledges that permanent significant residual effects at a local geographic scale will remain for wet grassland and stone walls and other stonework, hedgerows, treelines, scrub and their mosaics, as set out in EIAR Table 6-11.

Despite the above, the EIAR concludes no significant residual effects for any fauna species as a result of habitat removal, because these receptors are mobile and the surrounding landscape provides extensive alternative habitat. These findings are set out in Section 6.12.2.4 of Chapter 6 (Biodiversity) of the EIAR.

The EIAR identifies permanent losses of certain habitats, including hedgerows, treelines and small areas of scrub, wet grassland and woodland, and assesses the significance of these losses within the context of the wider landscape. Habitat creation and reinstatement measures, including hedgerow planting, native woodland establishment and pond creation, are incorporated to offset and enhance ecological diversity within the site.

While some localised residual habitat effects are acknowledged in the EIAR in relation to the loss of linear habitat features, the assessment concludes that no significant residual effects are predicted on fauna species, having regard to the availability of alternative habitats in the surrounding landscape and the mobility of the relevant species. These conclusions are set out in Chapter 6 (Biodiversity) of the EIAR.

2.2.59.5Theme E - Cumulative Ecological Effects

Submissions raise concerns regarding cumulative effects on biodiversity. These may arise from the proposed project interacting with other proposed and existing projects, particularly other wind farms. Chapter 6 (Biodiversity) of the EIAR assesses cumulative effects in Section 6.12.5, and the NIS addresses in-combination effects in Section 6.3.

Projects with potential to interact cumulatively/in-combination with the proposed project to result in likely significant effects on biodiversity/European sites were identified from a search of the local authorities planning registers (KCC, 2025), the EIA portal (EIA, 2025), planning applications (MyPlan, 2025), EIAR documents and planning drawings which facilitated the identification of past and future projects, their activities and their potential environmental impacts. All projects listed in Chapter 1 (Introduction) of this EIAR were reviewed as part of the cumulative effects assessment.

The EIAR's cumulative ecological assessment evaluates the proposed project together with other operational, permitted and proposed projects in the wider area, including other wind farms. The assessment considers:

- shared impacts, such as habitat loss/fragmentation, disturbance, and hydrology/water-quality effects etc.
- spatial overlap in zones of influence for ecological receptors
- temporal overlap in construction periods where relevant.

The NIS's in-combination assessment follows the same broad approach as described above for the EIAR, in relation to European sites.

The cumulative assessment carried out in Chapter 6 (Biodiversity) of the EIAR identified six projects with potential for cumulative effects with this proposed project, five wind farms and one flood relief scheme. It was concluded that no significant cumulative effects are anticipated in relation to habitats or fauna (excluding bats).

The in-combination assessment carried out in the NIS identified same six projects for consideration. However, it was concluded that there is no potential for the proposed project to act in-combination with any other project to result in adverse effects on the integrity of any European site.

2.2.60 Additional Observations

One submission received raised a concern about post-construction monitoring lacking guarantees of independent ecological oversight. As noted in Section 6.12.8 of Chapter 6 (Biodiversity), the contractor is required to engage an Ecological Clerk of Works (ECoW). As defined by British Standard BS 42020:20131, it is the ECoW's role to be the '*person who has the ecological qualifications, training, skills and relevant experience to undertake appropriate monitoring and to provide specialist advice to 'development' site personnel on necessary working practices required to i) safeguard ecological receptors on site and ii) aid compliance with any consents and relevant wildlife legislation related to the works'*.

One submission raised a concern about the proposed enhancement pond located at turbine T8, and the potential for sedimentation, disturbance to aquatic species and disruption of existing habitat connectivity. This proposed pond will be constructed within an area of existing wet grassland. This is a biodiversity enhancement measure designed to create new opportunities for wildlife within the proposed project and will not disrupt existing habitat connectivity. This pond will be ephemeral (i.e. seasonal) and will not be naturally fed by any existing watercourses, therefore it is unlikely that sediment-laden runoff from the construction of the proposed project could enter this pond. However, the surface water quality protection measures outlined in Chapter 9 (Hydrology and Hydrogeology) of the EIAR and within the Surface Water Management Plan (SWMP) will prevent surface water quality impacts. Disturbance to amphibians and other pond-dependent species is not considered a likely potential impact. This pond will represent a new refuge for aquatic and semi-aquatic species and is likely to have a positive effect on biodiversity.

One submission raised a concern about the Glenmore River which is noted as being located 'downhill' of the proposed project and a 'special area of conservation in its own right'. A full and complete assessment of all waterbodies was completed as part of the EIAR and Water Framework Directive Assessment (EIAR Appendix 9-1). The Glenmore River (also known as the Oaklands_010 waterbody as per the Water Framework Directive) is located in a separate subcatchment to the proposed project i.e. the Glenmore River is located within the Nore_SC_140 subcatchment, and the proposed project is located across the Nore_SC_130 and Blackwater[Kilmacow]_SC_010 subcatchments. Therefore, there is no downstream hydrological connectivity between the proposed project and the Glenmore River. It is acknowledged that the Glenmore River is part of the River Barrow and River Nore SAC. Potential effects relating to this European site have been fully assessed in the NIS and Chapter 6 (Biodiversity) of the EIAR

2.2.61 Bats

Submissions relevant to bat ecology have been reviewed and categorised based on their topics as follows:

- Survey methods and limitations.
- Data interpretation.
- Impact assessment.

2.2.61.1Survey Methods and Limitations

The Bat Conservation Trust (BCT) (Collins, 2023)[30] and NatureScot (2021)[31] have developed guidance for the purpose of assessing impact on bats as a result of projects and specifically wind farm projects that is relevant to Ireland. The field survey methodology for the habitat suitability assessment, potential roost assessment (PRA), ground level tree assessment (GLTA), aerial/close inspection, emergence surveys, and automated detector surveys. It should be noted that the results of the initial habitat suitability assessment informed the GLTA and PRA, which subsequently informed the aerial/close inspections and emergence surveys.

The limitations on the following field surveys have been raised in various submissions and will be discussed below:

- Automated detector surveys;
- Aerial/close inspection; and
- Emergence surveys.

The limitation on automated detector surveys was recognised in paragraph 2.6.10 of the Bat Survey Report (Appendix 6-5 of the EIAR). This limitation arose due to health and safety constraints related to the presence of livestock and was therefore unavoidable. The original location of the detector was along the hedgerow immediately south of proposed Turbine 8. The relocation of the static detector is not considered significant because the detector was relocated along the same linear feature and thus was functionally connected to and similar in nature to the original detector location. There was no obstruction along the linear feature or other evidence to suggest that bats would have a preference between the original location of the detector or the relocation areas. As such the data collected is representative of the bat activity in the vicinity of Turbine 8.

The limitation on aerial/close inspection and emergence surveys is recognised in paragraph 2.6.9 of the Bat Survey Report (Appendix 6-5 of the EIAR). The limitation was that potential roost features (PRFs) were only assessed once between May and September due to a delay in obtaining access for these assessments. This limitation was not considered significant for the aerial/close inspections in relation to the proposed development. All trees scheduled for removal to facilitate turbine buffers were classified as PRF-I during the GLTA. PRF-I features are only suitable for individual bats or occasional use and are not of a type typically associated with maternity or hibernation roosts (Table 6.2, Collins 2023). No confirmed roosts were recorded during aerial/close inspection. As such, impacts on PRF-I trees can be assessed using the precautionary principle without requiring additional survey effort as per the BCT guidance (Collins, 2023).

Conversely, this limitation is considered relevant for the assessment of PRF-M features, which are suitable for use as maternity roosts. Although this limitation is acknowledged, the impact assessment incorporates it by adopting a precautionary approach. As stated in paragraph 3.2.6

[30] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1.

[31] NS (2021) Bats and Onshore Wind Turbines – Survey, Assessment and Mitigation, NatureScot, https://www.nature.scot/doc/bats-and-onshore-wind-turbines-survey-assessment-and-mitigation.

of the Bat Survey Report (EIAR Appendix 6-5), if more than 18 months elapse between the original GLTA and proposed vegetation removal, an updated GLTA will be undertaken to confirm the current status of PRF-M features and identify any requirement for further survey. Should any PRF-M feature subsequently be confirmed as supporting roosting bats, a derogation licence would be required at that stage before any works take place. However, as no roosts were identified and only PRF-I trees are scheduled for removal, a derogation licence is not required at this time.

2.2.61.2Data Interpretation

The purpose of the automated detector surveys was to evaluate the bat activity within the survey area. This data provides information about the habitat being assessed such as the value it has for the local bat population and the proximity of roosts. It should be noted that the number of passes alone is not indicative of population size. The total of 52,100 bat passes recorded across the automated detector network represents the number of echolocation files triggered during the survey period rather than the number of individual bats present. Bat passes represent feeding and commuting patterns and are influenced by repeated foraging loops and species-specific call rates, which means it is not possible to determine population size without manual surveillance or the use of night vision aides in conjunction with the automated detectors.

Similarly, the Bat Landscape Project, used during the desk study, provides landscape-scale habitat suitability rather than predicted population density or activity levels. Suitability indices do not provide a measure of bat numbers or roost density and are not directly comparable to recorded acoustic activity. The purpose of this data is to provide context for the field survey results in order to understand the value of the habitat being used by bats within the survey area.

2.2.61.3Impact Assessment

A number of submissions have raised concerns regarding the robustness of the impact assessment. It should be noted that the significance of potential effects was evaluated using a systematic approach, based upon identification of the importance/value of receptors and their sensitivity to the proposed wind farm activity, together with the predicted magnitude of the impact in accordance with relevant guidelines including:

- CIEEM (2018) Guidelines for Ecological impact Assessment in the UK and Ireland Terrestrial, Freshwater, Coastal and Marine. Version 1.3. https://cieem.net/wp-content/uploads/2018/08/EcIA-Guidelines-v1.3-Sept-2024.pdf.
- NRA (2009) Guidelines for Assessment of Ecological Impacts of National Road Schemes, National Roads Authority (NRA), https://www.tii.ie/media/kzldoawo/guidelines-for-assessment-of-ecological-impacts-of-national-road-schemes.pdf.

After careful consideration, several themes within the third-party submission were recognised and further discussion on these topics are provided below.

2.2.61.3.1 Zone of Influence

Concerns were raised regarding areas that were considered outside of the Zone of Influence (ZoI) for the proposed wind farm. The ZoI is defined by CIEEM (2018) as '*the areas/resources that may be affected by the biophysical changes caused by activities associated with the project*'. It is

highlighted that ZoI often extends outside the boundaries of the project and that the ZoI varies depending on the sensitivity of different ecological features to environmental change. The guidance also states that scoping should be proportionate to potential effects of ecological features. This requires the professional knowledge and experience of an ecologist to judge the resources required to complete an adequate and effective assessment.

Custom ZoIs for the desk study and field surveys were used, taking into consideration the potential effects posed by wind farms:

- collision mortality, barotrauma and other injuries;
- loss or damage (including effects of lighting) to commuting and foraging habitat;
- loss of, or damage to, roosts; and
- displacement of individuals or populations (due to wind farm construction and operation including noise and human activity).

For the desk study aspect of the assessment, the maximum core sustenance zones (CSZs) for bat species known to occur in Ireland were use. The BCT guidance defines CSZ as '*the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience of the colony using the roost.*' As such it is a good proxy for ZoI. This ZoI was extended to 10 km for the cumulative impact assessment on a precautionary basis only.

Given no records of bat species were identified within 4 km of the proposed wind farm within the last ten years, it was not considered disproportionate to survey all habitat within this ZoI and a new ZoI was required. The ZoI for field surveys set to 250 m in areas around proposed turbine location which is where the most potential for significant effects were predicted. This was calculated based on the Equation 1 at 217.26 m (since recalculated at 107.67 m due to a blade length value error, see Section 2.1.1.6.) and was extended on a precautionary basis to ensure no ecological features of importance were missed and the impact assessment was based on data that was representative of habitat available to the local population of bats.

2.2.61.3.2 Specific Impacts

2.2.61.3.2.1 Removal of Linear Features

It is recognised that the proposed wind farm has potential to impact the foraging and commuting habitat for bats. The effects of the removal of linear features on the ability of bats to forage has been raised as a concern within the third-party submissions. It is noted that connectivity between linear features within the site has not been addressed directly but are indirectly discussed as loss of foraging and commuting habitat. Although this should have been discussed clearly, the direct discussion would not ultimately change the results of the assessment of the impact on commuting and foraging habitat which are that there are long-term negative significant effects on the local bat population associated with the permanent loss in habitats of value for foraging and commuting bats including scrub, treelines and hedgerows.

2.2.61.3.2.2 Displacement of Individuals or Populations

It is also recognised that displacement is a potential impact on bats as a result of the construction and operation of the proposed wind farm. The duration of these impacts has been raised as a concern in some of the third-party submissions. For construction, the impacts are considered short-term, while the operational phase impact is expected to be long term. Neither of which are

permanent. It should be noted that the impact of displacement as a result of construction was considered not significant due to the availability of alternative habitat within the wider landscape with extensive suitable habitat for foraging and commuting bats, including woodland, hedgerows and riparian features. As this enables redistribution of activity the effects of displacement are considered reversible following completion of construction and decommissioning in the absence of repowering.

2.2.61.3.3 Cumulative Impacts

The lack of available bat activity data for wind farms within 10 km was raised as a potential issue for the impact assessment of cumulative effects. In the absence of this data, a precautionary approach was adopted which assumed there would be a long-term negative cumulative effect to the local bat population as a result of loss or damage to commuting, foraging, and roosting habitat as well as mortality and displacement of individual bats. This approach is in line with CIEEM (2018) guidance.

2.2.62 Landscape and Visual Impact

Given the high number and consistent nature of the issues raised, these will be addressed by way of themes rather than on an individual basis. The themes addressed herein are:

1. The scale of the proposed turbines and their perceived visual dominance at surrounding receptors;
2. Impacts at surrounding amenity and tourism receptors – perceived effects at Tory Hill;
3. Perceived cumulative impact of the proposed project; and
4. Perceived inadequate setbacks from the nearest surrounding residential receptors

2.2.63 The scale of the proposed turbines and their perceived visual dominance at surrounding receptors

Concerns have been raised regarding the scale and height of the proposed turbines, with some observers suggesting that they will “dominate the skyline,” be “excessively large,” or appear “extremely visually intrusive.”

The proposed turbines will not appear out of scale or incongruous within this landscape. The site occupies a broad, rolling, elevated plateau that is already strongly defined by large-scale landform patterns and land uses. The central and wider study area is traversed by extensive commercial forestry which forms a spine-like pattern across the central and wider study area. The wider landscape is further characterised by large-scale landscape features such as Brandon Hill, Slieve Coillte, and Tory Hill, while the River Barrow valley provides a notable linear landform through the eastern extent of the study area. These large-scale natural and land cover features mean that the landscape already operates at a large spatial scale, providing a landscape and visual context that can comfortably visually accommodate tall vertical elements.

This combination of large-scale landform, broad land-use patterns, and existing vertical landscape elements provides an appropriate setting for turbines of the proposed height. This design approach is fully consistent with the Wind Energy Development Guidelines (WEDG, 2006) and the Draft Revised WEDG (2019), which state:

> *"Turbines should relate in terms of scale to landscape elements and will therefore tend not to be tall. However, an exception to this would be where they are on a high ridge or hilltop of relatively large scale."*

In this case, the proposed turbines are located along a broad plateau of rolling hills and ridges between the River Barrow to the east and the M9 motorway corridor to the west. The surrounding landscape, characterised by extensive areas of commercial conifer plantations, further aids in assimilating the scale of the turbines into this context, without undue conflicts of scale.

Overall, the proposed project is well integrated into this robust, working, elevated landscape, which is already heavily influenced by productive land uses, including pastoral farmland transitioning into commercial conifer plantations and existing wind energy development. Importantly, the draft WEDGs specifically provide for taller turbines in rural areas where a sense of spatial overbearing is avoided through the application of a height-based buffer from residential properties equivalent to four times the turbine tip height. For the proposed 180 m turbines, this requires a minimum setback of 720 m from the nearest residential receptor. The nearest dwelling to any proposed turbine is 720 m, fully complying with both the 2006 Guidelines (>500 m) and the Draft Revised WEDG (2019), with the exception of the property for which there are legal agreements in place (see Section 2.1.2.3).

The proposed turbine scale also reflects established industry trends, where taller turbines facilitate higher efficiency, reduced turbine numbers, and lower overall landscape clutter. This balancing of turbine size and turbine quantity is recognised in independent research commissioned by Fáilte Ireland (2007, updated 2012), which found that:

> *"…if both produced the same amount of electricity, tourists preferred wind farms containing a small group of large turbines (55%) to a large group of smaller turbines (18%)."*

Overall, while the proposed turbines are substantial built structures, they are well assimilated in terms of scale and function within this relatively robust landscape, which is already strongly influenced by working land uses and existing wind farm developments. Precedent for turbines of a similar scale and context exists nearby with the consented Castlebanny Wind Farm, comprising 21 turbines with tip heights of up to 185 m

In summary, while the proposed turbines are sizable structures, they are appropriately scaled within a robust, elevated, working landscape already characterised by large-scale land-use patterns and surrounding large-scale landscape features. The proposed projects meets all required residential setback distances as per the WEDGs (current and draft revised), reflects contemporary best practice in wind energy design, and sits comfortably within a landscape previously found capable of accommodating turbines of similar or greater height.

2.2.64 Impacts at surrounding amenity and tourism receptors – perceived effects at Tory Hill

Several of the observations also refer to the potential effects on nearby tourism and amenity receptors, specifically Tory Hill, which lies to the south of the proposed turbine array. The summit of Tory Hill is located approximately 2.8 km from the nearest proposed turbines. It is important to note that Tory Hill was identified from the outset of the project as a key and

sensitive visual receptor due to its locally elevated position, which affords 360-degree views across the surrounding landscape, as well as its historical associations.

Given its sensitivity, a representative viewpoint for assessment was included from the summit of Tory Hill. The view from this location affords sweeping panoramic views across the surrounding working landscape. While the immediate landscape surrounding Tory Hill comprises areas of scrub transitioning into conifer forestry, some of which has been recently harvested, the principal land use in the wider area is pastoral farmland bounded by mixed hedgerow vegetation. In addition to the predominance of pastoral lands, extensive areas of commercial forestry are evident, principally to the north, while existing turbines are visible to the north and northeast. It should be noted that, although pleasant views are available from this location, they are not views of an unspoilt landscape but rather of a typical working rural landscape characterised by a range of traditional agricultural land uses alongside other anthropogenic elements.

In terms of visual effects arising from the proposed turbines, it is acknowledged that the development will introduce a noticeable degree of visual change. However, the proposed turbines would represent an intensification of an already established land use, being viewed in proximity to the existing Ballymartin turbine and within the same viewing arc as the existing, albeit slightly more distant, Rahora turbines. While the proposed turbines will result in some degree of detraction from the visual amenity experienced at this location, they would be perceived within the context of the broad 360-degree panoramic views available from the summit of Tory Hill. The proposed turbines also benefit from a relatively dispersed layout, allowing a degree of visual permeability through their slender forms towards more distant landscape features such as Brandon Hill and the Blackstairs Mountains. Although the turbines will marginally interrupt views towards these features, their slender built form do not noticeably block views towards these distant elevated lands.

Overall, while the increase in the intensity and scale of development will result in some degree of visual detraction from this viewpoint, the proposed turbines will not appear incongruous within the landscape, nor will they present as highly dominant features within the open panoramic views available from Tory Hill. As a result, the residual visual effect at Tory Hill is assessed in the EIAR as **Moderate – Negative and Long-term.**

With regard to other tourism and amenity features within the study area, the most prominent are those referenced in the response from Fáilte Ireland. One of the nearest tourism and amenity receptors relates to sections of the South Leinster Way, which are represented by several viewpoints within the assessment, including the nearer sections illustrated by Viewpoint VP4. The nearest sections of the South Leinster Way within the study area pass through typical working rural landscapes and do not traverse highly distinctive or particularly sensitive landscape units. The more sensitive and visually susceptible sections of the route within the study area tend to occur further north, in the vicinity of Brandon Hill and the River Barrow corridor.

The nearest sections of the route (represented by VP4) are assessed as experiencing a Slight residual visual effect, where the proposed turbines will be perceived in the context of the existing Ballymartin turbines and the surrounding pattern of traditional rural land uses. In this

context, the proposed development would not materially detract from the scenic amenity experienced along this section of the route. Furthermore, the proposed turbines are well offset from the more visually sensitive sections of the South Leinster Way.

In summary, aside from Tory Hill, the majority of tourism and amenity receptors within the study area are located at considerable distances from the proposed development, typically within the outer extents of the 20 km study area. At such distances, the proposed development has limited potential to generate notable landscape or visual effects. Overall, landscape and visual effects arising from the proposed project are therefore assessed as **Not Significant** in respect of tourism and amenity receptors within the study area.

2.2.65 Perceived cumulative impact of the proposed project

With regard to potential cumulative effects generated as a result of the proposed project, these are considered throughout the EIAR report as several of the surrounding wind farm developments are operational and form part of the baseline landscape context. A full analysis of potential cumulative effects is also included within section 13.11.1 of the submitted LVIA report. The photomontages provided as part of the LVIA also include wireframes of all existing and consented wind farm development in addition to the proposed Ballyfasy turbines. This presentation of cumulative wind farm development is in full compliance with the best practice guidance for the presentation of photomontages for wind farm developments as set out in the NatureScot guidance. In addition to the wireframe views contained within the photomontage booklets, cumulative Zone of Theoretic Visibility (ZTV) mapping is also included within the LVIA report, which provides an analysis of the potential combined visibility of wind farm developments based on a bare-earth scenario within the study area. A summary of the potential cumulative effects generated by the proposed project is included below.

Within the 20 km study area, there are three operational wind farms (Ballymartin, Rahora, and Beallough) and one consented development (Castlebanny). The existing Ballymartin turbines lie immediately north of the site and are smaller in scale (approximately 120 m in height), while the Rahora array is located about 2.25 km to the northeast and comprises turbines up to 80 m in height. The consented Castlebanny Wind Farm, the largest wind farm development in the study area, will consist of 21 turbines up to 185 m in height and is located approximately 3.9 km northwest of the proposed turbine array. The cumulative ZTV indicates that the proposed turbines would be visible in isolation across only 1.4% of the study area, largely due to their proximity to the existing Ballymartin turbines, with which they will most frequently be seen in combination, as indicated in the submitted photomontage booklet. Notably, 21.4% of the study area will have no visibility of any turbines due to screening by topography and vegetation, particularly across the western hills, parts of the River Blackwater valley, and areas around Waterford City.

Approximately 52.7% of the study area may afford combined visibility of the proposed turbines with existing and consented developments, while a further 24.5% may see only the existing or consented schemes. The principal in-combination relationship is with the nearby Ballymartin turbines; however, existing forestry and vegetation frequently screen these from view except in their immediate surroundings.

The consented Castlebanny development may also be visible from some locations due to its elevated ridgeline position, although it is clearly separated from the proposed array by several kilometres and appears as a distinct development. In many viewpoints, particularly those where higher visual sensitivity is identified, terrain and vegetation limit or prevent combined visibility, and where it does occur it tends to be partial and distant, resulting in negligible or low cumulative effects. Combined visibility of the proposed turbines and consented Castlebanny turbines is more apparent at some elevated viewpoints such as Brandon Hill and Tory Hill. In these instances, both wind farms may be visible within panoramic views, but they appear as clearly separate arrays and generally as distant background features. Sequential views of the developments may also occur along certain linear receptors, including sections of the South Leinster Way, some scenic routes and along the M9 motorway to the west of the proposed project. However, given the distances involved and the broad landscape context, such sequential views are limited and are not considered to give rise to notable adverse visual effects.

Overall, the proposed Ballyfasy Wind Farm would contribute a **Medium–low** cumulative landscape and visual impact, and cumulative effects associated with the development are therefore assessed as **Not Significant**. No other large-scale developments are present within the vicinity of the site. While forestry harvesting may locally increase visibility of turbines or access tracks at times, such activities are temporary and rotational in nature, and are not expected to result in significant cumulative landscape or visual effects.

2.2.66 Perceived inadequate setbacks from the nearest surrounding residential receptors

Several observations raise concerns regarding the perceived inadequate setback distances from nearby residential receptors. In this regard, it is important to note that the assessment of visual amenity with regard to the proposed project has been undertaken with reference to both the current (2006) and Draft Revised (2019) WEDGs.

Section 6.18 of the Draft Revised WEDG (2019) refers to appropriate setback distances for visual amenity purposes. The guidelines outline a mandatory minimum setback distance of *"500 meters"* or the distance of *"4 times the tip height"* of the proposed *turbines "between the nearest point of the curtilage of any residential property"*. This is set out in Specific Planning Policy Requirements (SPPR) 2 of the Draft Revised WEDGs (2019). Whilst it is noted that these guidelines are still in draft form, out of an abundance of caution and as per current best practice, the applicant has designed the proposed project in full compliance with this policy.

The proposed turbine array has been designed to comply fully with the recommended setback standard. The proposed turbines have a maximum tip height of 180 m, resulting in a recommended setback distance of 720 m (4 × tip height) from the nearest residential receptors. The layout of the proposed turbine array ensures that all turbines are located at or beyond this 720 m setback distance, thereby fully complying with the recommended separation distance contained within the Draft Revised WEDGs (2019) with the exception of a property for which legal agreements are in place and have provided letters confirming they do not object to the development (see Section 2.1.2.3 and the Planning Statement

With regard to visual effects on surrounding local community receptors, including residential properties, 17 representative viewpoints were included in the assessment (VP2, VP4, VP5, VP7, VP8, VP9, VP10, VP11, VP12, VP13, VP14, VP15, VP16, VP17, VP19, VP21, and VP24). The significance of effects varies across these viewpoints, ranging from Slight to Substantial–moderate, with receptors located closest to the proposed turbines generally experiencing the most notable visual effects.

It should be noted that several of the representative viewpoints located closest to the proposed turbines, were classified as experiencing Substantial–moderate residual visual effects. However these effects are assessed as **Not Significant** in EIA terms. As outlined in the submitted LVIA, the proposed development will introduce a noticeable degree of visual change within the immediate and central study area. However, while the proposed turbines, by virtue of their scale, will result in some detraction in visual amenity afforded from nearby receptors, the proposed turbines can be appropriately accommodated within the existing landscape context, which is characterised by extensive areas of conifer forestry, working agricultural lands, and existing wind energy infrastructure.

2.2.67 The setting of archaeological and cultural heritage within the wider Ballyfasy area

Concerns were raised regarding the setting of archaeological and cultural heritage within the wider Ballyfasy area. Chapter 15 (Archaeology and Cultural Heritage) of the submitted EIAR assessed the predicted impacts of the proposed project on the archaeological, architectural and cultural heritage resource. The assessment considered the sensitivity of the heritage receptor and the magnitude of the potential impact, and assigned a predicted significance of effect. The assessment concluded that although residual effects will remain with regards to the setting of archaeological, architectural and cultural heritage sites, these effects will not be significant or permanent, and will be removed following the decommissioning of the turbines.

2.2.68 Archaeological Mitigation

A submission questions whether the "preservation by record" approach is an appropriate form of mitigation. Although Chapter 15 (Archaeology and Cultural Heritage) has confirmed that no known archaeological remains are located within the footprint of the proposed wind farm, the potential remains for previously unknown archaeological remains to survive below the current ground level. The mitigation measures described in Chapter 15 (Archaeology and Cultural Heritage) include archaeological test trenching and archaeological monitoring, which will ensure that potential sub-surface archaeological remains are identified. The "preservation by record" approach is outlined in Framework and Principles for the Protection of the Archaeological Heritage (Department of Arts, Heritage, Gaeltacht and the Islands 1999). The approach ensures that archaeological remains are excavated under licence by suitably qualified archaeologists, and "ensures that, as a minimum, a complete and meaningful record is preserved of all archaeological deposits, features and information likely to be damaged as a result of the development" (DAHGI 1999, 25).

The submission notes that the Irish language continued to be spoken in Glenmore until the late 19th century (which can be applied to many areas of rural Ireland in the 19th century). The area

is not a designated Gaeltacht today and Glenmore falls outside the 2 km study area for cultural heritage (defined in EIAR Table 15-1), as do the locations in Jamestown and Ballinclare referred to in the submission. The construction and operation of the proposed wind farm will not diminish the area's associations with the Irish language.

The submission refers to the School's Collection (Duchas.ie). A record is available for one school (roll number 9880) within the 2 km study area for cultural heritage. This record dated 1937–1938, describes the less tangible cultural heritage of area surrounding Ballyfasy Lower. Much of the information relates to areas outside the 2 km study area, including references to sites in Gaulstown, Glenpipe, Glenmore and New Ross. Entries relating to sites within the 2 km study area include references to hedge schools in Ballyfasy, Bishopsmountain and Kilbride and fairy forts in several townlands. No further location information was given, and it is not possible to identify these with specific features, although several raths are located within the study area (outlined in Chapter 15 (Archaeology and Cultural Heritage)). Additionally, several placenames and field names are noted although these are not associated with location data. One local churchyard is described within the 2 km study area, in the townland of Kilbride. This likely relates to the church recorded as AH51/BH25. Although the Schools Collection confirms the cultural heritage of the study area, and the connection between cultural heritage and the 1930s population, it is difficult to relate these to the existing landscape without more accurate location information. Based on the information available, it is not predicted that the proposed project will have significant negative effects on the less tangible cultural heritage recorded in the School's Collection

The submission states that the proposed project will result in a loss of population, which will in turn result in a loss of local knowledge. Chapter 15 (Archaeology and Cultural Heritage) does not assess the potential loss of population as it is beyond the remit of the assessment.

The submission notes that the townland of Ballyfasy Upper was the scene of a failed eviction in 1885, when Tighe of Woodstock, Inistigue, the landlord, moved to evict six tenants. A group organised by the local Land League branches and local clerics resisted the eviction party at the home of Mrs. Anastasia Dollard. It is acknowledged that this is an important facet of the local history of Ballyfasy. The submission notes that the site of the failed eviction should be remembered, although a location for the specific house where the event occurred is not given. Griffith's Valuation records Dollards living in parcels 11A–E, although no historic buildings survive within these parcels apart from one included in CH18 in Chapter 15 (Archaeology and Cultural Heritage). It is predicted that the proposed project will have an indirect negative effect to CH18, although this is assessed as Not Significant.

The submission questions that Chapter 15 (Archaeology and Cultural Heritage) has not identified significant residual effects. The effects of the proposed project on the archaeological, architectural and cultural heritage resource range from imperceptible to moderate, prior to the application of mitigation. The assessment has followed the methodology defined in Chapter 15 (Archaeology and Cultural Heritage), with the combination of a receptor's sensitivity and the magnitude of impact resulting in the significance of effect.

2.2.69 Ballyfacey National School - Local Heritage

A submission also notes that the Ballyfacey National School is part of the local heritage. The school is recorded in EIAR Chapter 15 (Archaeology and Cultural Heritage) with the designation BH15. Following the methodology outlined in Chapter 15(Archaeology and Cultural Heritage), the proposed project is predicted to have slight indirect negative effects on BH15. This is a combination of the high sensitivity of BH15 and the low magnitude of the indirect impact.

The submission also describes Glenmore GAA, although the club is located outside the 2 km study area for cultural heritage.

2.2.70 Archaeologically rich area

A submission notes that the area is archaeologically rich and subject to statutory protection. EIAR Chapter 15 (Archaeology and Cultural Heritage) has included both recorded and unrecorded archaeological, architectural and cultural heritage in its assessment, including sites subject to statutory protection. The submission notes that impacts are predominantly managed through monitoring rather than avoidance. This statement is incorrect. As part of the embedded mitigation, the proposed wind farm has avoided all recorded heritage receptors. The proposed wind farm will have one direct impact to a previously unrecorded cultural heritage site (CH35). This will be subject to a detailed photographic and written record. Further mitigation includes archaeological test trenching across greenfield locations of the proposed wind farm and cable route. This will mitigate impacts to potential sub-surface archaeological remains that may be present. If any archaeological remains are present, further mitigation will implemented as required and agreed with the National Monuments Service.

The submission also includes comments relating to Ballyfacey National School. Comments relating to the school have been responded to above.

2.2.71 General Concerns of Potential Impacts from Shadow Flicker

A number of concerns regarding shadow flicker related to the general potential impacts there may be on households. The applicant is committed to minimising any significant adverse effects from the proposed project on the local community and is committing to ensuring a near-zero shadow flicker at the shadow flicker receptors identified within 1.63 km (ten rotor diameters) of the proposed wind turbine locations. As described in Section 10.5 of the submitted EIAR, these measures include turbine shutdown and screening, the latter of which will only be considered if the property is either naturally screened (by topography, buildings, vegetation, etc.) or where the homeowner is happy to accept such measures. These proposed mitigation measures are proven and widely used in the wind energy industry.

2.2.72 Shadow Flicker Mitigation

Several concerns were raised surrounding the shadow flicker mitigation measures including ‘near-zero’ and concerns regarding reliance on automated software.

As described in EIAR Section 10.5.2 it is proposed that a shadow control system will be installed on each of the wind turbines that have the potential to cause shadow flicker for sensitive receptors. The control system will detect and calculate, in real-time:

- Whether shadow flicker has the potential to affect nearby properties, based on pre-programmed co-ordinates for the properties and turbines outlined in this assessment;
- Wind speed (can affect how fast the proposed turbine will turn and how quickly the flicker will occur); and
- The intensity of the sunlight.

When the sunlight is strong enough to cast a shadow, and the shadow falls on a property or properties, then the proposed turbine will automatically shut down; and will restart when the potential for shadow flicker ceases at the affected properties.

If there is sufficient existing screening at a shadow flicker receptor, the Turbine Shutdown Scheme may not be necessary for that receptor. The Applicant will engage with any affected residents to investigate options for new or additional screening measures (such as planting vegetation to act as a screen or installation of suitable window blinds in the affected rooms of the residence) where appropriate and agreeable to the affected residents. If screening is not acceptable and/or will not be effective the Turbine Shutdown scheme will be implemented to ensure 'near zero shadow flicker'.

The term 'near-zero' shadow flicker was used in Chapter 10 (Shadow Flicker) of the submitted EIAR to ensure full transparency. As soon as the correct set of parameters is in place for a potential occurrence of shadow flicker, the turbine would immediately undergo a stopping procedure. The time it takes for a wind turbine to safely stop spinning depends on several factors, including wind conditions, turbine size and braking systems. As mentioned in Section 10.5.1 of the submitted EIAR, this can take anywhere up to 1-2 minutes and will often take less time than that if the wind speed is not very strong. As discussed in EIAR Section 10.6 this would have an imperceptible long-term effect. Following the implementation of mitigation measures no significant effects are anticipated.

This form of mitigation represents sector-wide best practice and is widely implemented across the Irish wind energy industry, with automatic shadow flicker control systems routinely incorporated into turbine operational controls.

2.2.73 Shadow Flicker Assessment

Several submissions raised concern that the shadow flicker assessment does not model and adequately reflect lived experience and that the reliance on predicted compliance rather than real-world impacts is insufficient.

As described in EIAR Section 10.2.4 the shadow flicker analysis has been undertaken using WindPRO: Shadow – Version 3.3.294 (by EMD International) which is one of the leading industry software packages for carrying out a shadow flicker simulation. The model incorporates wind turbine configuration, terrain mapping, sun path throughout the year at the development latitude and defined receptors.

Furthermore, an updated model will be run at the pre-construction phase once the detailed specifications of the chosen turbine model are confirmed, on account that design flexibility has been sought for the proposed Ballyfasy Wind Farm. That will be used for the basis of the turbine control programme used should the wind farm become operational.

2.2.74 Shadow Flicker Monitoring

Several submissions asked that shadow flicker effects be independently monitored.

As stated within the EIAR in Section 10.5 the Community Liaison Officer (CLO) will establish a formal system of engagement with local residents, including a point of contact for queries or concerns related to shadow flicker. All correspondence and follow-up actions will be monitored and recorded by the Applicant to ensure effective communication.

Where agreed screening measures are implemented, the effectiveness of the measures will be monitored. If these measures do not operate to the satisfaction of the property owner or occupant, the property will be incorporated into the Turbine Shutdown Scheme. If existing or newly installed screening changes over time (or example due to damage, removal, or reduced effectiveness) ongoing engagement will continue between the Applicant, the CLO, and the affected residents. In such circumstances, appropriate alternative or replacement mitigation measures will be agreed and implemented to ensure that shadow flicker remains fully mitigated and maintained at the 'near zero' standard.

All concerns raised will be investigated by the applicant and the turbine shutdown software adjusted as necessary, to ensure that the turbines shut down at the appropriate time. Following any software adjustments, flicker occurrence will continue to be monitored where residents report ongoing issues. This monitoring will help determine whether further refinements to the shutdown timings for any specific turbine are required.

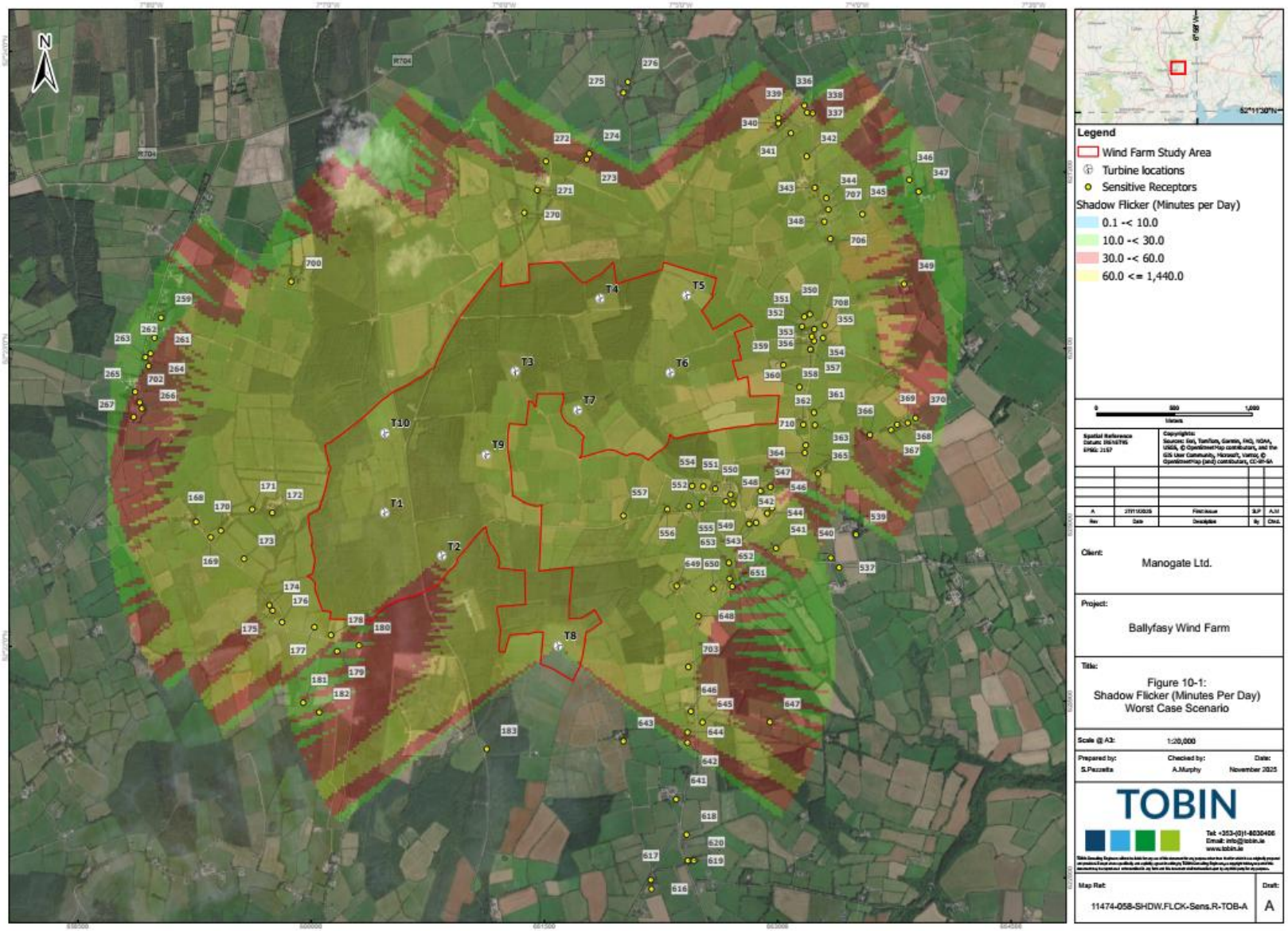
2.2.75 Cumulative Shadow Flicker Assessment

Several submissions raised concern regarding the shadow flicker cumulative impact, noting the existence of other wind farms within the locality.

This is addressed within EIAR Section 10.7 of Chapter 10 (Shadow Flicker). Given that the Applicant has committed to near-zero shadow flicker for the proposed wind farm the contribution from the proposed project is considered negligible and would not result in any perceptible cumulative impact. Any temporary turbine shutdowns required to achieve this outcome are subject to the technical capabilities of modern turbine control systems, which typically involve a controlled and safe slowdown of blade rotation lasting between one and two minutes. This operational measure would have an imperceptible long-term effect.

2.2.76 Shadow Flicker Impacts on National School

Several submissions raised concerns surrounding the potential shadow flicker impacts on the local national school, Ballyfacey National School. EIAR Figure 10-1 included with Chapter 10 (Shadow Flicker) (and presented overleaf) displays Ballyfacey National School as receptor 540. Ballyfacey National School is outside the predicted shadow flicker area.


N
T1
T2
T3
T4
T5
T6
T7
T8
T9
T10
Legend
Wind Farm Study Area
Turbine locations
Sensitive Receptors
Shadow Flicker (Minutes per Day)
0.1 -< 10.0
10.0 -< 30.0
30.0 -< 60.0
60.0 <= 1,440.0
Client:
Manogate Ltd.
Project:
Ballyfasy Wind Farm
Title:
Figure 10-1:
Shadow Flicker (Minutes Per Day)
Worst Case Scenario
Scale @ A3:
1:20,000
Prepared by:
S.Pazzella
Checked by:
A.Murphy
Date:
November 2025
TOBIN
Map Ref:
11474-058-SHDW.FLCK-Sens.R-TOB-A
Draft:
A

2.3 THIRD PARTY SUBMISSION - MARTIN LAVELLE

This third party submission has been separated out due to the size of the submission provided and as some other third party submissions refer to it. The sections herein have focused on the key points raised in this submission where we feel a response is warranted and may be helpful for ACP in making a determination on the application. Some themes in the Martin Lavelle submission are also already addressed in Sections 2.1 and 2.2.

2.3.1 Strategic Infrastructure Development

This submission raises concerns that this project is not valid as an SID project due to output below 50MW. However, as noted within the planning documents and previous consultations with An Coimisiún Pleanála the installed output capacity range for this project is 57-72MW. The SID determination letter from An Coimisiún Pleanála was submitted as EIAR Appendix 1-3.

2.3.2 Separation distance between turbines

In Ireland there is no mandated single distance between turbines on site. Turbine positioning on the proposed site is site specific and has taken into consideration technical and environmental requirements including optimal spacing to avoid turbulence, wake effects, wind take, consideration of turbine position on the adjacent existing wind farm, turbine set back from sensitive receptors (e.g. residential properties), avoidance of environmental constraints, and land availability.

2.3.3 Drawing colouring/ Statutory Undertaker / Private lands along Grid Connection Option One

This submission raises concerns regarding the drawings showing the grid connection as a red colour. The red colouring for Grid Connection Option One indicates the planning application red line boundary, within which the grid connection works will be constructed within the public road. It is confirmed, works will be in the public road, and no trespassing will occur on private properties adjacent. A letter confirming these works will be undertaken by a Statutory Undertaker was submitted with the planning application. Where Grid Connection Option One crosses private lands (for example, as it approaches Castlebanny substation), landowner permissions have been granted and a letter of consent was submitted with the planning application.

2.3.4 Planning Application Area

It is confirmed the figures within the submitted application and observed in the submission are correct. The planning application area is 94.4 hectares (ha). The area of the proposed wind farm infrastructure is 53 ha.

2.3.5 Planning Drawing Scales / Landowners

This submission queries the planning drawing scales. It is confirmed that the scales on the Statutory planning drawings submitted are correct and in compliance of scales agreed with ACP. It is believed the viewer may be reviewing printouts at A4 or A3 page size, not the submitted A1

planning drawings submitted as part of the application which are legible to the naked eye and scaled correctly.

The proposed wind farm planning application area is shown within the red line boundary and the relevant landowner consent letters for these lands was submitted with the planning application.

2.3.6 Turbines on Coillte lands

The submission notes that up to six turbines are located on Coillte lands. This is incorrect. Only turbine nos. T2 and T4 are located on Coillte lands. As noted by the submission, a landowner letter of consent was submitted by Coillte as part of the application. Landowner consent has also been submitted with the planning application from the private landowners for the other eight turbines.

2.3.7 Swept Path Analysis/ Blade length

This submission queries the blade length used in the swept path analysis. As per EIAR Appendix 2-1, it is confirmed that the maximum blade length is 81.5 m. As detailed in Appendix 2-1, this blade length was used for the swept path analysis assessment for the TDR and site access.

2.3.8 Turbine Delivery Route (TDR) Works

This submission raises concerns regarding the TDR works and accessing private lands. In response it is confirmed TDR works will not trespass on private lands. Legal easement agreements are in place with each landowner as required for the identified pinch points. Submitted EIAR Appendix 2-1 presents the TDR report and highlights the pinch points along the route.

2.3.9 Site Layout

In response to Issue 8, EIAR Chapter 3 (Consideration of Reasonable Alternatives) details the iterative site layout design process and the consideration of alterative layouts.

2.3.10 Wake effects

Wake effects describe the situation where one wind farm reduces the wind speed (and hence energy production) of a second wind farm. In designing the proposed Ballyfasy Wind Farm layout, wake effects from proposed turbines and from existing neighbouring turbines were considered.

This submission has queried the wake effects in relation to livestock. Livestock, including cattle, are generally considered safe around wind turbines and frequently use them for shelter. Livestock in Ireland have been grazing, and raising their young around wind turbines for over two decades without issue.[32] The lands surrounding the proposed Ballyfasy Wind Farm will continue to be used by grazing cattle (should the landowners wish). In terms of horses, potential impacts are more likely to be related to noise, shadow flicker and visual rather than wake effects. The British Horse Society (BHS) recommends a minimum separation distance of 200 m or three times the turbine blade tip height (whichever is greater) between a wind turbine and any route

[32] https://www.agriland.ie/farming-news/livestock-perfectly-happy-and-safe-around-wind-turbines-iwea/

used by horses or businesses with horses. Three times the maximum proposed tip height would be 540 m. As noted in EIAR Chapter 1 (Introduction), the nearest stud to the proposed wind farm is located at approximately 2 km.

2.3.11 Noise

The following issue raised in the third-party submissions by Martin Lavelle pertain to noise and a response to each item is provided below.

2.3.11.1Issue 13

'*Failure to provide turbine separation distances to achieve noise levels below 30dbA in low noise areas as required by the County Development Plan.*'

Refer to the response provided in Section 2.1.3.1.1.

Additionally, it is reiterated from Section 12.6.2.1 of the EIAR '*The residual turbine noise levels associated with the proposed project will be within best practice noise criteria curves recommended in line with Irish guidance 'Wind Energy Development Guidelines for Planning Authorities', it is not considered that a significant effect is associated with the project.*'

2.3.11.2Issue 16

'*The Existing negative effects of Infrasound/Seismic & future effects is not addressed*'

Refer to the response provided in Section 2.2.29.

There is no evidence for any likely seismic noise effects at noise sensitive receptors. Section 12.1.7.7 of the EIAR considers operation phase vibration from the proposed project.

2.3.11.3Issue 17

'The issue from noise nuisance as determined in the Webster/Rollo v Meenacloghspar Windfarm High Court Case at separation distance of 369m is ignored.

Refer to the response provided in Section 2.1.3.1.1.

2.3.11.4Issue 21

HSE require WHO 2018 Standard & 37dBa. In 2024, Dr. John Cuddihy, HSE National Director for Public Health [who are the National Competent Authority on Public Health] stated "Environmental noise could potentially be a health issue, hence the (2018) World Health Organisation advises keeping wind turbine noise less than 45Lden. Less than 45Lden converts to less than 37Db LA90. This Wind Farm planning application targets 43/45dB LA90. A difference of 6dBa is double the distance, where 800m = 43Db LA90, 1600m = 37DB LA90. The applicants & Agents are deceiving ACP. The granting of applications at 43/45Db LA90 is corporate negligence & is a criminal offence.'

Refer to the response provided in Section 2.2.29.

2.3.11.5Issue 40

'The increasing turbine noise levels, over time with bearings wear, is not identified.'

Refer to the response provided in Section 2.1.2.8.8.

2.3.12 Case C24/19

- In response to the submissions from both No to Ballyfasy Windfarm and Mr. Martin Lavelle, we note that the CJEU judgment in Case C-24/19[33] does not apply to the WEDGs. Case C-24/19 concerns Flemish instruments (an order and a circular) that imposed binding regulatory conditions on wind turbine development and were held to be "plans and programmes" requiring Strategic Environmental Assessment(SEA) under Directive 2001/42/EC. With respect, the applicant disagrees with the application by the objector of case C-24/19 to WEDGs, as there are distinguishing factors. In any event, the WEDGs are adopted under section 28 of the Planning and Development Act 2000 (As amended) and are currently in force (i.e. they have not been subject to successful judicial review). ACP is required to have regard to the WEDGs and any points raised in relation to case C-24/19 cannot be used as a collateral attack to the assessment of WEDGs as part of a planning application determination.

[33] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:62019CJ0024

www.tobin.ie