Planning and Development Act 2000 (as amended)

Strategic Infrastructure Act 2006

Report to Elected Members as required by Section 37E(4) of the Planning and Development Act 2000 (as amended).

An Bord Pleanala Reference ABP 3098770-21- Coole Wind Farm – Coole Wind Farm Limited.

Application Details:

Applicant:	Coole Wind Farm Limited, Unit C, Building 4200, Cork Airport Business Park, Cork
Received	23 rd March 2021
Agent:	MKO, Planning & Environmental Consultants, Tuam Road, Galway, H91 VW84
An Bord Pleanala Reference Number:	ABP 3098770-21
Proposed Development (Summary):	Fifteen (15) wind turbines, electrical substation, 1 no. burrow pit, 26km underground electricity grid connection to 110kv substation, construction of a link road between the R395 and R396 along with junction improvements.
	10 year planning permission sought and a 30 year operating life.
Site Location:	Coole, Castlepollard Co. Westmeath.

1.	PURPOSE OF THIS REPORT:
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1. PURPOSE OF THIS REPORT:

Having regard to the nature and scale of the proposed development and following consultation pursuant to Section 182E of the Planning & Development Act 2000 (as amended), An Bord Pleanála has determined that this proposed development constitutes Strategic Infrastructure Development within the meaning of Section 182A of the Act. In such circumstances the normal mechanism of applying to Westmeath County Council for planning permission does not apply with the proposal requiring a planning application to be made directly to An Bord Pleanála. Accordingly, Coole Windfarm, as required, has applied directly to An Bord Pleanala for planning permission.

The purpose of this report is to set out the Planning Authority's required views on the effects of the proposed development on the environment and on the proper planning and sustainable development of the area, having regard in particular to the matters specified in section 34(2) of the Planning and Development Act, 2000 (as amended) (hereafter referenced as the PDA 2000). The matters specified in section 34(2) are:

- (i) the provisions of the development plan,
- (ia) any guidelines issued by the Minister under section 28,
- (ii) the provisions of any special amenity area order relating to the area,
- (iii) any European site or other area prescribed for the purposes of section 10(2)(c),
- (iv) where relevant, the policy of the Government, the Minister or any other Minister of the Government,
- (v) the matters referred to in subsection [34](4),
- (va) previous developments by the applicant which have not been satisfactorily completed,
- (vb) previous convictions against the applicant for non-compliance with this Act, the Building Control Act 2007 or the Fire Services Act 1981, and
- (vi) any other relevant provision or requirement of this Act, and any regulations made thereunder.
- (aa) When making its decision in relation to an application under this section, the planning authority shall apply, where relevant, specific planning policy requirements of guidelines issued by the Minister under section 28.

In the interests of clarification, there are no Special Amenity Area Orders (item ii above) in Co. Westmeath. The matters referred to in section 34(4) of the PDA 2000 are those matters which the Planning Authority takes account of and may attach conditions relevant to, during the consideration of a normal planning application.

This report will be submitted for the consideration of An Bord Pleanala as required under Section 37E(4) of the PDA 2000.

The Members may, by resolution, decide to attach recommendations to this report (as per Section 37E(6) of the PDA 2000). The views expressed at the meeting of the Council where this report is considered shall also be attached to this report (also per Section 37E(6) of the PDA 2000).

It should be noted that an Bord Pleanala has absolute discretion to request revised proposals or further information in advance of a decision being made under section 37F(1) of the PDA 2000.

2. DESCRIPTION OF THE PROPOSED DEVELOPMENT:

The proposed development comprises of the following components:

- i. Up to 15 No. wind turbines with a tip height of up to 175 metres and all associated foundations and hardstanding areas;
- ii. 1 no. onsite electrical substation including a control building, associated electrical plant and equipment, welfare facilities and a wastewater holding tank;
- iii. 1 no. temporary construction compound;
- iv. Provision of new site access roads, upgrading of existing access roads and hardstand areas;
- v. Excavation of 1 no. borrow pit;
- vi. All associated underground electrical and communications cabling connecting the turbines to the proposed onsite substation;
- vii. Laying of approximately 26km of underground electricity cabling to facilitate the connection to the national grid from the proposed onsite substation located in the townland of Camagh to the existing 110kV Mullingar substation located in the townland of Irishtown;
- viii. Upgrade works to the existing 110kV Mullingar substation consisting of the construction of an additional dedicated bay to facilitate connection of the cable;
- ix. Construction of a link road between the R395 and R396 Regional Roads in the townland of Coole to facilitate turbine delivery;
- Junction improvement works to facilitate turbine delivery, at the N4 junction with the L1927 in the townland of Joanstown, on lands along the L1927 in the townland of Culvin, the L1927 and L5828 junction in the townland of Boherquill and the L5828 and R395 junction in the townland of Corralanna;
- xi. Site Drainage;
- xii. Forestry Felling;
- xiii. Signage, and;
- xiv. All associated site development works.
- xv. This application is seeking a ten-year planning permission and 30-year operational life from the date of commissioning of the entire wind farm.

This application contains the following documentation:

- Planning Application Form
- Site Notice
- Newspaper Notice
- Planning Application Drawings
- EIAR Portal Conformation (2021047)
- Planning Cover Letters (Westmeath County Council and An Bord Pleanála)
- Letters of Consent from Relevant Landowners
- Copy of Notification Letters Sent to Prescribed Bodies
- Environmental Impact Assessment Report (EIAR)
 - Volume 1a- Non-Technical Summary (NTS) and Main Report Chapters 1-8
 - Volume 1b- Main Report Chapters 9-16
 - Volume 2- Photomontages o Volume 3a- EIAR Appendices 2.1 6.4
 - Volume 3b- EIAR Appendices 7-1 14-3

• Natura Impact Statement (NIS)

3. SITE LOCATION:

The proposed development is located in the townlands of Camagh, Carlanstown, Coole, Clonrobert, Clonsura, Doon, Monktown, Mullagh, Newcastle, Boherquill, Corralanna, Culvin, Joanstown, Mayne, Fearmore (Fore by), Newtown (Fore by), Simonstown (fore by), Ballinealoe, Shrubbywood, Clonava, Lackan (Corkaree by), Soho, Ballynaclonagh, Abbeyland, Rathganny, Ballindurrow, Cullendarragh, Culleenabohoge, Ballynafid, Knightswood, Portnashangan, Culleen More, Farranistick, and Irishtown (Moyashel by), Co. Westmeath.



The wind farm element of the proposal is located adjoining and to the northeast of the R396 regional road, which connects Coole village with Granard, and to the southwest of the R394 regional road, which connects Finnea village with Castlepollard. It is stated to measure 530ha and much of the site is presently in use as peatlands (together with fringe areas of commercial forestry and agriculture pasture). It is stated in the Environmental Impact Assessment Report (EIAR) submitted with the application that peat harvesting has taken place on these lands since the 1940s with turf harvested on the site for supply to

Dublin in the late 1950s. The site topography is flat, ranging generally between 60-73m Ordnance Datum (based on OS Discovery Series).

The village of Coole, the nearest identifiable settlement to the proposed wind farm site, is located approximately 2.5km to the south. The largest settlements in the vicinity include Abbeylara, located approximately 5.5km to the northwest, Castlepollard, located 7.4km to the southeast, Granard, located 8.1km to the northwest and Edgeworthstown, located 14.2km to the west. According to the Central Statistics Office (CSO) data, the population density in 2016 of the two Electoral Divisions (EDs) comprising the main wind farm site ranged between 11 and 20 persons per square km. It is stated in the application that there are 18 houses within 1km of the proposed turbine locations.

The planning application includes for the construction of underground electricity cabling from the proposed onsite substation located in the townland of Camagh. This connection is carried out via an underground cable which is almost entirely contained within the public road corridor to the existing 110kV Mullingar substation located in the townland of Irishtown. Proposed upgrade works at the existing Mullingar substation will consist of the construction of an additional dedicated bay to facilitate connection of the cable. The total length of the proposed cable route is approximately 26 kilometres.

The borrow pit site is rectangular in shape, with a narrow strip of land 200m in length connecting the pit site with the L-5755 local road. The borrow pit site comprises open agricultural land measuring approximately 6.2 hectares, surrounded by mature hedgerows and trees.

The remaining elements of the application site comprise a winding linear strip of land adjacent to the west of Coole village, connecting with the R395 and R396 regional roads and bypassing the village for the purpose of an off-road haulage route to serve the proposed development. The proposed route passes through farmlands, peatlands and along agricultural tracks. This portion of the site is 1.6km to the south of the main turbine site.

Junction works on lands at Boherquill townland, 4.9km to the southwest of the main turbine site, at the junction of the L-1927 and the L-5828 local roads, also forms part of the proposal. This area currently comprises the southwest corner of an agricultural field that is bounded by mature hedgerows.

Road improvement works at the fifth area comprises a narrow wedge of the roadside verge at the junction of the N4 national road and the L-1927 local road, 0.6km southeast of Rathowen village.

The Glore River flows through the turbine site, draining in a northwest direction before flowing into the River Inny, which marks the county boundary between Longford and Westmeath and the western boundary of the turbine site lands. Approximately 2.2km to 4.2km upstream to the north of the site, the River Inny drains from Lough Sheelin, Lough Kinale and Derragh Lough, before ultimately draining into the Shannon at Lough Ree, approximately 35km to the southwest of the site.



Wind Farm – Site Layout

4. RELEVANT POLICY

4.1 International Energy Policy Framework

Ireland is a party to the UN Framework on Climate Change (UNFCCC) and the Kyoto Protocol which provide an international legal framework to address climate change. On November 4th 2016 Ireland and the EU ratified and made effective the Paris Agreement which aims to keep global temperature rise this century to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C. This is a legally binding agreement to achieve net zero emissions by the second half of this century, through increasing national determined contributions (NDCs) over time. The NDC for Ireland and all member states will be determined by the EU which has committed to reduce GHG emission by at least 40% by 2030 compared to 1990 levels.

In September 2015, Ireland adopted the non-legally binding United Nations' 2030 Agenda (Transforming Our World, the 2030 Agenda for Sustainable Development) along with all 193 Member States of the UN, which aims to deliver a more sustainable, prosperous and peaceful future for the entire world, and sets out a framework for how to achieve this by 2030. It sets out 17 Sustainable Development Goals (SDGs) covering the social, economic and environmental requirements for a sustainable future, including, inter alia mitigating climate change and providing affordable clean energy.

4.2 European Energy Policy European Green Deal (2019)

2020 Climate and Energy Package – This policy set three key targets -20% cut in greenhouse gas emissions (from 1990 levels); 20% of EU energy to be from renewables; and 20% improvement in energy efficiency, which was agreed in 2007 and enacted in legislation in 2009.

The EU's Effort Sharing Decision addresses the emissions including from housing, agriculture, waste and transport (excluding aviation) through binding annual national targets to 2020. Under the 2030 Climate and Energy Policy Framework (European Council, adopted 24/10/14, with targets revised 2018) binding EU targets of at least 40% reduction in GHG emissions and at least 23% share of renewable energy for all energy consumed in the EU by in 2030, and at least 32.5% improvement in energy efficiency. The EU's Effort Sharing Regulation (EU) 2018/842 lays down obligations on Member States with respect to their minimum contributions for the period from 2021 to 2030 to fulfilling the Union's target of reducing its greenhouse gas emissions by 30% below 2005 levels in 2030 in the various sectors and contributes to achieving the objectives of the Paris Agreement. A GHG reduction target of at least 30% applies to Ireland.

Renewable Energy Directive 2009/28/EC (23/04/09) – Concerns the promotion of the use of energy from renewable sources. Article 4 requires each member state to produce a national renewable energy plan to achieve an overall reduction in GHG emissions of 20%, a 20% increase in energy efficiency and 20% of energy consumption across the EU to come from renewable energy by 2020. Member states are to achieve their individual binding target across the heat, transport and electricity sectors and apart from a sub-target of a minimum of 10% in the transport sector that applies to all Member States. There is flexibility for each country to choose how to achieve their individual target across the sectors. Ireland's overall target is to achieve 16% of energy from renewable sources by 2020.

Revised Renewable Energy Directive 2018/2001/EU (January 2019) – Sets new target for share of energy from renewable sources in the EU of at least 32% for 2030, with a view to increasing the target through legislation by 2023. Member States are required to set national targets to meet, collectively, the binding Union target through integrated national energy and climate plans. The final share of energy from renewable sources for Ireland's gross final consumption of energy from 1st January 2021 must not be lower than 16% and Ireland will be obliged to take the necessary measures to ensure compliance with same.

4.3 National Energy & Climate Policy

National Mitigation Plan (DCCAE, July 2017) – Specifies the policy measures that are required to manage GHG emissions and the removal of emissions to further the national transition objective, framed around decarbonising four main carbon emitting sectors, namely; electricity generation; the built environment; transport; and agriculture. It recognises that Ireland is not likely to meet it GHG emissions reduction target, with a reduction of only 4%-6% below 2005 levels for all sectors, with emissions exceeding the effort sharing decision limit by 13.7Mt, compared to the 20% target. It refers to quantity of carbon stored in Irish peatlands (64% of total soil organic carbon stock present) and to the National Peatland's Strategy as setting out how to sustainably manage and protect / conserve this national resource, but it does not include any explicit reference to the potential for peatland restoration / rehabilitation to contribute to climate change mitigation.

National Landscape Strategy for Ireland 2015-2025 - The National Landscape Strategy was published by the Department of Arts, Heritage and the Gaeltacht in June 2015. The main objectives include the development of a National Landscape Character Assessment, which would provide a framework for the protection and management of change within the landscape in terms of its cultural, social, economic and

environmental values. The aim is to seek to achieve a balance between the social, cultural and economic needs and the environment and the landscape. It is stated that a National Landscape Character Assessment would ensure consistency between and within public authority functions and areas, would inform LCA's at a local level and would guide the development of landscape policy.

The National Peatlands Strategy 2015-2025 (DAH&G, 2015) – The Strategy sets out clear principles to guide Government policy and to provide a long-term framework for the responsible management of all peatlands to optimise their social, environmental and economic contribution to the State, including the role of peatlands within cross-cutting issue climate change.

It proposes that the potential contribution of peatlands rehabilitation, restoration and enhancement to climate change mitigation and adaptation to be fully explored, in addition to their potential to contribute to a low carbon economy through use as sites for renewable energy. It provides that:

- Semi State companies and public authorities discharge their functions in such a way to support the objectives of this Strategy;
- Future management of these State-owned peatlands will be in keeping with the objectives of the Strategy.
- Bord na Móna will continue to assess and evaluate the potential of the company's land bank, using a land use review system. The assessment will help prepare a set of evidence-based management plans for the various areas of peatland. These plans will also inform its cutaway bog rehabilitation programme;
- Bord na Móna cutaway bogs that flood naturally will be permitted to flood unless there is a clear environmental and/or economic case to maintain pumped drainage;
- In deciding on the most appropriate after wind energy use of cutaway peatlands, consideration
 must be given to encouraging, where possible, the return to a natural functioning peatland
 ecosystem. This will require re-wetting of the cutaway peatlands which may lead in time to the
 restoration of the peatland ecosystem; and (P18) environmentally, socially and economically
 viable options should be analysed to plan the future of industrial cutaway peatlands, in
 conjunction with limiting factors as outlined in Bord na Móna's 'Strategic Framework for the
 Future Use of Peatlands.

National Planning Framework Project Ireland 2040 (2018) – It is a goal of the Framework to refocus planning to tackle Ireland's higher than average carbon-intensity per capita and enable a national transition to a competitive low carbon, climate resilient and environmentally sustainable economy by 2050, through harnessing our country's prodigious renewable energy potential, including, inter alia onshore and offshore wind energy.

The Government will support the roll-out of renewables and protection and enhancement of carbon pools such as forests, peatlands and permanent grasslands; and climate change being taken into account in planning-related decision-making processes. The NPF sets out a series of National Policy Objectives, the following being pertinent to the proposed development:

 National Strategic Outcome 8 - Transition to Sustainable Energy states that new energy systems and transmission grids will be necessary for a more distributed, more renewable focused energy generation system, harnessing both the considerable on-shore and off-shore potential from energy sources such as wind, wave and solar and connecting the richest sources of that energy. A target of 40% of the Country's electricity needs from renewable sources by 2020 is stated along with a strategic aim to increase renewable deployment in line with EU targets and national policy objectives up to 2030 and beyond.

- National Policy Objective (NPO) 23 Facilitate the development of the rural economy through supporting a sustainable and economically efficient agricultural and food sector together with forestry, fishing and aquaculture, energy and extractive industries, the bio-economy and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting the natural landscape and built heritage which are vital to rural tourism.
- NPO 52 The planning system will be responsive to our national environmental challenges and ensure that development occurs within environmental limits, having regard to the requirements of all relevant environmental legislation and the sustainable management of our natural capital.
- NPO 54 Reduce our carbon footprint by integrating climate action into the planning system in support of national targets for climate policy mitigation and adaptation objectives, as well as targets for greenhouse gas emissions reductions.
- NPO 55 Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.

Policy anticipates that the forthcoming Renewable Electricity Policy and Development Framework will aim to identify strategic areas for the sustainable development of renewable electricity projects of scale, in a sustainable manner, compatible with environmental and cultural heritage, landscape and amenity considerations, and that the development of the Wind Energy Guidelines and the Renewable Electricity Development Plan will facilitate informed decision-making in relation to onshore renewable energy infrastructure.

Climate Action Plan 2019, To Tackle Climate Breakdown (Government of Ireland, June 2019) - This Action Plan supports the ambition for net zero GHG emissions target by 2050 and comprises a sectoral road map of measures for, inter alia, the electricity sector and the agriculture, forestry and land-use sectors.

The projected CO₂ savings through Project Ireland 2040 and through investment in the national forestry strategy are insufficient to address the projected 101 MtCO₂eq. emissions excess. Regarding electricity, measures include the phasing out of fossil fuels (closing peat and coal plants; with BnM to transition away from peat by 2028) an increase in harnessing renewable energy, increasing from 30% to 70% (through RESS; target of at least 3.5 GW of offshore renewable energy, up to 1.5 GW of grid-scale solar energy, an increase in onshore wind capacity of up to 8.2 GW).

Regarding agriculture, forestry and land-use sector, it is proposed to better manage peatlands and soils to deliver carbon abatement from land-use.

Measures to develop and manage this carbon sink include:

 Undertake further research to assess the potential to sequester, store and reduce emissions of carbon through the management, restoration and rehabilitation of peatlands as outlined in the National Peatlands Strategy;

- Develop best-practice guidelines for wetland management, including the management of degraded sites and peatlands currently exploited for energy peat extraction;
- Create additional incentives to adopt carbon-positive, post-production management options on Bord na Móna lands, and similar options on other commercial and private peat extraction sites;
- Develop further measures to help rehabilitate exploited and degraded peatlands, including as part of national land-use planning and the new CAP, and recognising that strategies may need to differ between regions.

The Action Plan includes an Annex of Actions, setting out 183 no. actions. Action 133 –Assess and implement mitigation options on post-production, peat extraction site to be implemented with a number of sub-actions (the following are pertinent);

- Timely implementation and optimum management practices on extraction sites as they retire from production;
- Establish a focused research and development programme to ensure robust National Inventory Systems are in place to report and account LULUCF emissions and removals;
- Assess the status and mitigation potential for other commercial and private peat extraction across Ireland.

Renewable Electricity Support Scheme (RESS 1) - RESS 1 is the first Renewable Electricity Support Scheme by the Government of Ireland and is a pivotal component of the Government's Climate Action Plan. RESS 1 uses a competitive auction process to determine which generators receive support. For projects that are successful in the RESS 1 Auction, this support typically applies for approximately 15 years.

Action Number 28 of the Climate Action Plan 2019 addresses the design and implementation of RESS. The action calls on the need to increase the volumes and frequencies of RESS auctions to deliver on the 70% renewable electricity target by 2030, ensuring an appropriate community/enterprise mix to achieve an efficient delivery of renewables. RESS 1 is the first step in this important component of the Climate Action Plan.

All RESS 1 Projects are required to establish a Community Benefit Fund prior to Commercial Operation of the project. The contribution will be €2/MWh of Loss-Adjusted Metered Quantity for all RESS 1 Projects.

Wind Energy Development Guidelines for Planning Authorities 2006 - These guidelines provide advice to the Board and to planning authorities on wind energy development through the Development Plan and the development management process. They are intended to provide for consistency in the approach to wind energy development in terms of the identification of suitable locations for such development and in the determination of planning applications. It is stated that the assessment of such projects should be plan-led with clear guidance on where wind energy development should locate and what factors will be taken into account.

The matters to be considered in a planning application are set out in Chapter 4. These include potential impacts on the built and natural heritage, ground conditions and drainage, visual and landscape impacts, local environmental impacts, (including noise, shadow flicker, electromagnetic interference), and adequacy of local access road network. It is stated that best practice would suggest that an integrated planning application that include grid connection information should ideally be submitted and that developers should be encouraged to engage in public consultation with the local community.

The potential environmental impacts arising from wind energy developments are discussed in Chapter 5. Guidance is given on matters such as noise, shadow flicker, natural heritage, archaeology, architectural

heritage, ground conditions, aircraft safety and windtake. Whilst a setback distance is not established, it is stated that noise is unlikely to be a significant problem where the distance to the residential property is more than 500m. In respect of noise, the recommended standard is a lower fixed limit of 45dBA or a maximum increase of 5dBA above background noise and nearby noise sensitive locations, apart from very quiet areas where the daytime level is limited to 35-40dB(A). A night time limit of 43 dB(A) is recommended. In terms of shadow flicker, the recommended standard is a maximum of 30 hours per year or 30 minutes per day for dwellings and offices within 500m. It is further stated that at distances of greater than 10 rotor diameters, the potential for shadow flicker is very low.

Chapter 6 provides guidance on siting and design of wind energy development in the landscape. This includes advice on siting, spatial extent and scale, cumulative effect, spacing of turbines, layout of turbines and height of turbines. Advice is also given regarding landscape character types as a basis for application of the guidance on siting and design.

Draft Revised Wind Energy Development Guidelines 2019 – It should be noted that the Department of Housing Planning and Local Government published Draft Revised Wind Energy Development Guidelines in December 2019. A public consultation period was held until the 19th of February 2020.

The proposed key revisions include the following;

- New noise standards: The draft guidelines include proposed new standards aimed at reducing noise nuisance from wind energy developments for local residents and communities. The proposed new standards are in line with international standards, as incorporated in the 2018 World Health Organisation Environmental Noise Guidelines for the European Region. The permitted noise levels will take account of certain noise characteristics specific to wind energy projects i.e. tonal, amplitude modulation and low frequency noise and provide penalties for tonal noise and amplitude modulation and a threshold for low frequency noise above specified limits which, if breached, will result in turbine shut down. The implementation of a new robust noise monitoring framework is also proposed.
- Setback distance: The draft guidelines require a setback distance for visual amenity purposes of four times the tip height between a wind turbine and the nearest point of the curtilage of any residential property in the vicinity of the proposed development, subject to a minimum mandatory setback distance of 500 metres. This setback requirement is also subject to the need to comply with the proposed noise limits outlined above.
- Automatic shadow flicker control mechanisms: Automatic shadow flicker control mechanisms will be required to be in place for the operational duration of a wind energy development project. It will be a specific condition of planning permissions that should shadow flicker occur and impact existing properties, the relevant wind turbines must be shut down.
- Community consultation: Wind energy developers will be mandatorily required to engage in active public consultation with the local community at an early stage. In this regard, they will have to prepare and submit a 'Community Report' as part of their planning application outlining how they have consulted and engaged with the local community regarding the proposed development and how they will work with the local community to allow for the free flow of information between the community and the developer at all stages in the project.
- Community dividend: Wind energy developers will have to provide an opportunity for the proposed development to be of enduring economic or social benefit to the local community, whether by facilitating community investment/ ownership in the project, other types of benefits/ dividends, or a combination of the two.
- Grid connections: The draft guidelines contain updated guidance regarding the Environmental Impact Assessment-related requirements in respect of wind energy development projects and

their related grid connections, arising from a High Court Judicial Review (O Grianna and others v. An Bord Pleanála).

The draft is subject of SEA, with the aim to issue the finalised Guidelines, following detailed analysis and consideration of the submissions and views received during the consultation phase.

4.4 Regional Policy

Eastern and Midlands Regional Assembly – Regional Spatial and Economic Strategy 2019 -2031

The primary purpose of the RSES is to support the implementation of Project Ireland 2040 and the economic policies and objectives of the Government by providing a long-term strategic planning and economic framework for the development of the Region.

The RSES sets out vision based across 3 no. key guiding principles: healthy place-making, climate change, and economic opportunity. Underpinning these guiding principles are a series of Regional Policy Objectives (RPO's). The following RPO's are of particular relevance to the proposed development:

RPO 7.36: Planning policy at local authority level shall reflect and adhere to the principles and planning guidance set out in Department of Housing, Planning and Local Government publications relating to 'Wind Energy Development' and the DCCAE Code of Practice for Wind Energy Development in Ireland on Guidelines for Community Engagement and any other relevant guidance which may be issued in relation to sustainable energy provisions.

RPO 10.20: Support and facilitate the development of enhanced electricity and gas supplies, and associated networks, to serve the existing and future needs of the Region and facilitate new transmission infrastructure projects that might be brought forward in the lifetime of this Strategy. This Includes the delivery of the necessary integration of transmission network requirements to facilitate linkages of renewable energy proposals to the electricity and gas transmission grid in a sustainable and timely manner subject to appropriate environmental assessment and the planning process.

RPO 10.22: Support the reinforcement and strengthening of the electricity transmission and distribution network to facilitate planned growth and transmission/distribution of a renewable energy focused generation across the major demand centres to support an island population of 8 million people.

4.5 Local Policy and Guidance Documents

The Westmeath County Development Plan 2021- 2027 (CDP) is the overarching plan with respect to land use in the County and outlines the overall strategy for the proper planning and sustainable development of County Westmeath. The relevant Sections, Policies and Objectives of the CDP, which have significance to the proposed development are outlined below.

Chapter 5 Economic Development & Employment Strategy: Transition to a Low Carbon Economy/Green Economy where a shift towards the use of renewable energy is identified as a key component and supported by policy.

CPO 5.59: Support Renewable energy initiatives that supports a low carbon transition.

Chapter 9 Rural Westmeath: Farm Diversification which notes the potential challenges within the rural economy, and acknowledges that there is a need to promote farm diversification and new employment opportunities to ensure the viability and sustain existing rural communities. The Council willingness to support diversification of the rural economy, including renewable energy is highlighted in supporting policy:

CPO 9.34: Support the rural economy and initiatives in relation to diversification, agri business, rural tourism and renewable energy so as to sustain employment opportunities in rural areas.

In terms of the proposed burrow pit, *Section 9.15* refers to the Extractive Industry and notes that the County contains a variety of natural resources such as raw materials critical to the construction industry in the form of sand, gravel, stone reserves including high purity limestones and shale used in cement and magnesia manufacture and base metal deposits. The policy acknowledges the potential of these resources to underpin construction output and provide employment and economic growth in the local and regional economy is recognised as is the need to exploit such resources in an environmentally sound and sustainable manner.

Relevant supporting policy objectives include:

CPO 9.62: Ensure that development for aggregate extraction, processing and associated concrete production does not significantly impact the following:

- Areas of Geological interest as identified in the County Esker Survey
- Existing and Candidate Special Areas of Conservation (SACs)
- Special Protection Areas (SPAs)
- Existing and proposed Natural Heritage Areas (pNHAs)
- Other areas of importance for the conservation of flora and fauna
- High Amenity Areas
- Zones of archaeological potential
- Important aquifers and sensitive groundwater resources
- The vicinity of a recorded monument
- Sensitive landscape areas
- Established rights of way and walking routes.

CPO 9.65: Ensure that extractions (quarries / sand and gravel pits) which would result in a reduction of the visual amenity of areas of high amenity or damage to designated sites, habitat types or species shall not be permitted.

CPO 9.66: Ensure that extractive developments do not adversely impact on environmental quality, including water quality, tourism value, existing infrastructure, residential amenity or the amenity value of neighbouring lands.

Chapter 10 Transport Infrastructure and Energy: Section 10.22 Renewable Energy Sources outlines that a favourable approach will be taken towards applications for renewable energy developments provided they are environmentally sustainable and are in accordance with general planning criteria. The most pertinent policies refer as follows:

CPO 10.139: Support local, regional, national and international initiatives for limiting emissions of greenhouse gases through energy efficiency and the development of renewable energy sources which make use of the natural resources in an environmentally acceptable manner and having particular regard to the requirements of the Habitats Directive.

CPO 10.140: Facilitate measures which seek to reduce emissions of greenhouse gases and support the implementation of actions identified in the Westmeath County Council Climate Change Adaptation Strategy 2019-2024 and any future amendments.

Section 10.23.2: Industrial Scale Wind Farms. The Council will look favourably on the development of industrial scale wind farms and the harnessing of wind energy in a manner that is consistent with proper planning and sustainable development of the County. In addition, it is noted that The Regional Economic

and Spatial Strategy for the Eastern and Midland Region (RSES) refers specifically to the after use of peatlands and consideration of their potential contribution to climate change mitigation and adaptation including renewable energy production.

The following is relevant council policy in relation to wind farms:

CPO 10.142: Have regard to the principles and planning guidance set out in Department of Housing, Planning and Local Government publications relating to 'Wind Energy Development' and the DCCAE Code of Practice for Wind Energy Development in Ireland and any other relevant guidance which may be issued in relation to sustainable energy provisions.

CPO 10.144: Ensure the security of energy supply by supporting the potential of the wind energy resources of the County in a manner that is consistent with proper planning and sustainable development of the area.

CPO 10.146: To strictly direct large-scale energy production projects, in the form of wind farms, onto cutover cutaway peatlands in the County, subject to environmental, landscape, habitats and wildlife protection requirements being addressed.

CPO 10.147: Ensure that proposals for energy development demonstrate that human health has been considered, including those relating to the topics of:

- Noise (including consistency with the World Health Organisation's 2018 Environmental Noise Guidelines for the European Region);
- Shadow Flicker (for wind turbine developments, including detailed Shadow Flicker Study);
- Ground Conditions/Geology (including landslide and slope stability risk assessment);
- Air Quality; and Water Quality;
- Assessment of impacts on collision risk species (bird and bats).

CPO 10.148: With regard to wind energy developments, to ensure that the potential for visual disturbance should be mitigated by applying an appropriate setback distance, which, where relevant, complies with available Ministerial Guidelines.

Chapter 11 Climate Action: Chapter 11 address the transition to a low carbon and climate resilient County, with an emphasis on reduction in energy demand and greenhouse gas emissions, through a combination of effective mitigation and adaptation responses to climate change. Relevant policy is as follows:

CPO 11.1: Support the implementation and achievement of European, National, Regional and Local objectives for climate adaptation and mitigation as detailed in the following documents, taking into account other provisions of the Plan (including those relating to land use planning, energy, sustainable mobility, flood risk management and drainage) and having regard to the Climate mitigation and adaptation measures which have been outlined through the policy objectives in this Development Plan:

- National Mitigation Plan (2017 and any subsequent versions);
- National Climate Change Adaptation Framework (2018 and any subsequent versions);
- Climate Action Plan (2019 and any subsequent versions);
- Any Regional Decarbonisation Plan prepared on foot of commitments included in the emerging Regional Spatial and Economic Strategy for the Eastern and Midland Region;
- Relevant provisions of any Sectoral Adaptation Plans prepared to comply the requirements of the Climate Action and Low Carbon Development Act 2015, including those seeking to contribute towards the National Transition Objective, to pursue, and achieve, the transition to a low carbon, climate resilient and environmentally sustainable economy by the end of the year 2050; and

• Westmeath County Council Climate Change Adaptation Strategy 2019-2024

Chapter 12 Natural Heritage and Green Infrastructure policy: In Section 12.17 peatlands are acknowledges as one of our oldest surviving ecosystems and associated key value for biodiversity, regulation of climate as a valuable natural carbon sink, water filtration and supply. In addition, the Council recognises the importance of peatlands as a major natural, archaeological and non-renewable resource in addition to recognising the important historical traditions and peat management skills associated with cutting turf for domestic use.

Relevant council policy in this regard is as follows:

CPO 12.64: Protect the county's designated peatland areas and landscapes, including any ancient walkways through bogs and to conserve their ecological, archaeological, cultural, and educational heritage.

CPO 12.65: Require the preparation of Hydrological Reports for significant developments within and in close proximity to peatlands, and to take account of same in the assessment of impacts on the integrity of peatland ecosystems.

Draft Direction on County Development Plan 2021-2027

In the context of this assessment, it should be noted that the Westmeath County Development Plan 2021-2027 was adopted by the Members of the Council on the 22nd March 2021 with the Plan coming into effect on the 3rd May 2021. Having regard to the foregoing it should be noted that a Draft Ministerial Direction was issued by the Minister for Planning under Section 31 of the Act on 29 April 2021 which stated:

1) Delete wind energy policy objective CPO 10.143 in its entirety from section 10.23.2 of the Development Plan.

(It should be noted that CPO 10.143 set out the following:

Provide the following separation distances between wind turbines and residential dwellings:

- 500 metres, where the tip height of the wind turbine blade is greater than 25 metres but does not exceed 50 metres.
- 1000 metres, where the tip height of the wind turbine blade is greater than 50 metres but does not exceed 100 metres.
- 1500 metres, where the tip height of the wind turbine blade is greater than 100 metres but does not exceed 150 metres.
- More than 2000 metres, where the tip height of the wind turbine blade is greater than 150 metres).
- 2) Take such steps as are required to identify, on an evidence-basis and using appropriate and meaningful metrics, the wind energy production (in megawatts) which County Westmeath can contribute in delivering its share of overall Government targets on renewable energy and climate change mitigation over the plan period, consistent with the requirements set out in the Specific Planning Policy Requirement in the Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (July 2017)

Such steps shall be accompanied by revisions to the Wind Energy Capacity Map and Landscape Character Assessment, and coordination of the objectives for wind energy development in the Development Plan with those of the neighbouring counties as are necessary to ensure a coordinated approach with wind energy objectives of adjoining local authorities having regard to requirements of section 9(4) of the Act.

Accordingly, having regard to the provisions as set out under s.34(2)(c) of the Planning and Development Act 2000 (as amended, by virtue of the issuing of a notice of a Draft Ministerial Direction, the above referenced CPO 10.143, is taken not to have come into effect for the purpose of this assessment.

5. EIA SCREENING

The proposed development falls within the definition of a project under the EIA Directive as amended by Directive 2014/52 and falls within the scope of Class 3 under Part 1 Schedule 5 of the Planning and Development Regulations, (as amended), Development for the Purposes of Part 10:

Energy Industry (j) Installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts.

EIA is required, and the applicant has submitted an EIAR.

6. RELEVANT PLANNING HISTORY:

File Ref. 92/347 Planning permission granted to Hunt Peat Ltd for a temporary staging area for loading of peat at Coole and Mayne, County Westmeath.

File Ref. 98/1092 Planning permission was granted to Coillte Teoranta, for new forestry entrances. Permission granted by the Planning Authority on the 03/12/98 subject to 2 no. conditions.

File Ref. ENV/W01/2009 Discharge license granted by Westmeath County Council for discharge to surface waters.

File Ref. 17/6177 Coole Wind Farm Ltd applied for planning permission for a proposed wind farm development will consist of (a) up to 13 No. wind turbines with a tip height of up to 175 metres and all associated foundations and hardstanding areas (b) 1 no on-site electrical substation, (c) 1 no. temporary construction compound, (d) all associated underground electrical and communications cabling connecting the turbines to the proposed on-site substation, (e) provision of new site access roads, upgrading of existing access tracks and associated drainage, (f) excavation of 1 no. borrow pit (g) construction of a link road between the R395 and R396 Regional roads to facilitate turbine delivery, including surfacing at the junction of the N4 and L1927 roads in the townland of Joanstown and widening of the L1927 and L5828 Junction in the townland of Boherquill and (i) all associated site development works(including tree felling) An Environmental Impact Statement Report (EIAR)/Environmental Impact Statement (RIAR) and a Natural Impact Statement (NIS) have been prepared in respect of the proposed development. A Further Information Request was issued by Westmeath County Council on the 3rd August 2017 in relation to this application. Application was subsequently withdrawn.

File Ref 17/6292 (ABP PL25M 300686) Coole Wind farm Ltd applied for a 10 year planning permission for a Wind Farm Development with a 30 year operational life (from date of commissioning of the entire wind farm) and all associated works. The proposed Development will consist of (a) up to 13 No. Wind Turbines with a tip height of up to 175 metres and all associated foundations and hardstanding areas (b) 1 No. on-site electrical substation (c) 1 No. temporary construction compound (d) all associated underground electrical and communications cabling connecting the turbines to the proposed on-site substation (e) provision of new site access roads, upgrading of existing access tracks and associated drainage (f)

excavation of 1 No. borrow pit (g) construction of a link road between the R395 and R396 Regional Roads to facilitate turbine delivery (h) junction improvement works to facilitate turbine delivery, including providing hardsurfacing at the N4 in the vicinity of its junction with the L1927 Local road in the townland of Joanstown and the widening of the L1927 and L5828 junction in the townland of Boherquill and (i) all associated site development works (including tree felling). An Environmental Impact Assessment Report (EIAR) / Environmental Impact Statement (EIAR) and a Natura Impact Statement (NIS) have been prepared in respect of the proposed development. Permission was refused by Westmeath County Council and subsequently granted by An Bord Pleanala on appeal.

File Ref. EPA IPPC Licence P0914-01 Application made by Westland Horticulture Ltd to the EPA in July 2013 for an Integrated Pollution Control Licence for peat harvesting activities at the subject site (extraction of peat from an area exceeding 50ha). The application document submitted to the EPA for the licence includes an Environmental Impact Statement. The EPA refused to consider the licence application by Bulrush Horticulture Ltd, P0914-01 pursuant to Section 87(1C) of the EPA Act 1992 as amended.

File Ref. Section 5 referral PL25.RL.2975 An Bord Pleanala decided, in April 2013, that the drainage of boglands and extraction of peat at the Lower Coole, Mayne, County Westmeath (the subject site), after the 20th September 2012, was development and not exempted development, having regard to the introduction of section 4(4) of the Planning and Development Act, 2000, as inserted section 17 of the Environment (Miscellaneous Provisions) Act, 2011, and on the grounds that the development required an environmental impact assessment and appropriate assessment. The referral was the subject of a Judicial Review (2013/398/JR) and on 8th February 2018 the High Court upheld the Board's decision [2018] IEHC 58.

File Ref 20/6121 Coole Wind Farm Ltd applied for a 10 year permission to upgrade, reorientation and expansion of previously permitted electricity substation granted as part of Coole Wind Farm (Pl. Ref 17/6292; ABP Ref PL25M/300686) in the townland of Camagh (Fore by). The laying of underground cabling predominantly along the public road corridor to facilitate the connection to the national grid of the permitted wind farm along a route measuring approximately 26.4 kilometres, through the townlands listed below, between the proposed substation in the townland of Camagh (Fore by) and the existing Mullingar 110kV substation in the townland of Irishtown (Moyashel and Magheradernon by). Works to complete the cable connection to the existing Mullingar 110kV electricity substation including the construction of a dedicated bay within the existing substation compound in the townland of Irishtown(Moyashel and Magheradernon by). All associated site works and ancillary development. An Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) have been prepared in respect of the proposed development. A Further Information Request Westmeath County Council on the 17th July 2020 in relation to this application. That application was subsequently withdrawn.

Adjacent Site:

File ref. 88/313: permission was granted to CARRERO LTD for RETENTION PEAT MOSS PROCESSING PLANT & BUILDINGS AT DOON, CASTLEPOLLARD.

7. ENFORCEMENT INFORMATION RELATING TO THE SUBJECT SITE.

File Ref: 1702 A warning letter issued on 19th January 2017 regarding *"The erection of a mast on lands at Camagh, Coole, Co.Westmeath without the benefit of planning permission"*. The Warning Letter was returned "not called for". Subsequent updated report by the Case Officer dated 26th October 2017, referred to potential exemption under Class 19 of the Planning and Development Regulation 2001, as amended. Recommendation to review case after a period of 15 months. No further correspondence on file.

8. DESIGNATION SITES

8.1 EUROPEAN – Special Protected Areas (SPA's) and Special Areas of Conservation (SAC's)

An Appropriate Assessment was carried out for the Proposed Development in compliance with Article 6(3) of the Habitats Directive. As part of this assessment, the potential for the Proposed Development to have an effect on any European sites in the Zone of Influence (ZoI) was considered. The Screening for Appropriate Assessment concluded as follows:

"It cannot be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the Proposed Development, individually or in combination with other plans and projects, would have a significant effect on the following European Sites: Lough Owel SAC (000688) Lough Ennell SAC (000685) Lough Owel SPA (004047) Lough Ennell SPA (004044) Lough Derravaragh SPA (004043) Lough Iron SPA (004046)".

As a result, an Appropriate Assessment of the Proposed Development is required and a Natura Impact Statement (NIS) has been submitted as part of this SID.

The identification of Key Ornithological Receptors and the assessment of effects follow a precautionary approach. The potential for effects on designated sites is fully described in the Natura Impact Statement that accompanies this application. The following European sites are identified within the AA Screening as being within the Likely Zone of Impact of the Wind Farm Site, namely: Lough Owel SAC (000688), Lough Ennell SAC (000685), Lough Owel SPA (004047), Lough Ennell SPA (004044), Lough Derravaragh SPA (004043), Lough Iron SPA (004046). Effects upon European Sites are discussed within the Natura Impact Statement.

Designated sites located near the Grid Connection Route include the Gariskil Bog SAC, Lough Owel SAC, Scragh Bog SAC, Lough Derravaragh SPA. The closest site to the Grid Connection Route is the Gariskil Bog SAC (60m at closest point), which is located hydraulically upgradient of the proposed Gird Connection Route. Based on the distances involved, the hydraulic gradients, the roadside verge which acts as a buffer zone and the proposed mitigation measures outlined in Chapter 9 of the EIAR, it is indicated that there will be no significant impacts on designated sites in terms of the hydrological and hydrogeological environment. An assessment of the grid connection construction stage, operational stage and decommissioning stage has been completed, along with a cumulative assessment for each stage.

The NIS concluded that "following examination, evaluation and analysis, in light of best scientific knowledge and the conservation objectives of the site, and, on the basis of objective information, having taken into account the relevant mitigation measures, it can be concluded that the Proposed Development will not have an adverse impact on any European Sites, either alone or in combination with other plans or projects. Provided that the Proposed Development is constructed and operated in accordance with the design, best practice and mitigation that is described within this application, significant individual or cumulative effects on biodiversity are not anticipated at the international, national or county scales".

Environment Department of Westmeath County Council concur with this conclusion, Section 15.3 of this report refers.

In this case, An Bord Pleanala is the competent authority for the purposes of Appropriate Assessment (AA).

8.2 NATIONAL DESIGNATIONS - Natural Heritage Areas

These are well described in the EIAR.

Lough Bane pNHA is a small lake located on the northeastern boundary of the Wind Farm Site and is hydraulically upgradient of the Wind Farm Site.

Designated sites located near the Grid Connection Route include Lough Derravarragh NHA, Ballynafid Lake and Fen pNHA, Royal Canal pNHA, Lough Owel pNHA, Lough Iron pNHA and Lough Ennell pNHA. An assessment of the grid connection construction stage, operational stage and decommissioning stage has been completed, along with a cumulative assessment for each stage.

Four of these sites are also designated Natura 2000 and as a result, any mitigation measures implemented for the protection of these European sites will also apply to the concurrently designated national site. Two of the six nationally designated sites are designated sites in their own right and have been assessed accordingly, namely Ballynafid Lake and Fen pNHA, and Royal Canal pNHA. The proposed grid connection occurs within the national N4 road along the boundary of the Ballynafid Lake and Fen pNHA. It is a site that contains peatland and fen habitats and the potential for hydrological connection was considered as a pathway for effect. Royal Canal pNHA is traversed by the proposed grid connection route where it crosses the Lough Owel feeder via the existing road bridge.

The EIAR highlights (Impact Section 9.4.1.1), that there could potentially be an "imperceptible, short term, likely impact" on local streams and rivers but this would be very localised and over a very short time period. Therefore, significant direct, or indirect impacts on NHAs, and pNHAs will not occur. The hydrological regime locally will not be affected by the proposed works and so the regime of the NHA and pNHAs will not be affected. Following the implementation of mitigation, there is no potential for significant effects on these Nationally Designated Sites.

9. PROTECTED STRUCTURES/ACA/SPECIAL AMENITY AREA ORDERS

The EIAR informs that the majority of the 20 protected structures within 100m of the grid connection are listed in Table 13-7 of the EIAR, are located off-road or adjacent to the roadside and comprise houses or churches that will not be directly impacted by ground works associated with the construction of the proposed underground grid connection. The closest protected structure to the Grid Connection Route comprises Levington railway crossing gates (Ref. 019-239) which are located on the public road along which the proposed Grid Connection Route extends. The level crossing gates are part of the Dublin-Sligo railway line and are still in active use. Levington Park contains a gateway (Ref. 019-236) and pair of twostorey gate lodges (Ref. 019-237) marking the entrance to the estate at a distance of 2m and 4m away from the grid route, respectively. Similarly, the route extends past a number of protected structures (including 007-043) that form the streetscape in Multyfarnham village but will not impact directly on same given that the proposed cable will be placed in the public road. Also, in Coole, Simonstown House (Ref. 003-042) is situated off-road in private property and will not be directly impacted by the works associated with the Grid Connection Route which will be placed within the public road c. 38m to the north-west. The EIAR informs that while it is unlikely that any direct impacts to these structures will occur as a result of the proposed Grid Connection Route some mitigation at the construction stage of the Proposed Development is recommended for this area.

10. PUBLIC SERVICES

Public Water Supply. Due to the specific nature of the operational phase of the Proposed Development (approximately 2 staff members on site at any one time), there will be a very small water requirement for

occasional toilet flushing and hand-washing. It is proposed to install a rainwater harvesting tank adjacent to the Control Building. During the operational phase, potable drinking water will be supplied by a water cooler at the control building. A supply contract will be set up with a water cooler company with water supplies delivered to site as required on a regular basis.

Surface Water. The proposed wind farm site has parallel-running peat drains that are spaced approximately every 12- 15 metres on the bog surface for surface water runoff removal. Surface water runoff collected in these drains is conveyed to a headland silt trap, from where it flows into a larger boundary drain and then onto a sedimentation basin for retention and controlled discharge. The proposed Wind Farm will not alter the existing drainage regime at the proposed Wind Farm. Moreover, the proposed drainage system within the proposed Wind Farm Site will be fully integrated into the existing drainage systems. Existing field drains and main drains will be routed under/around access tracks using culverts as required.

Drainage water from any works areas of the wind farm site will not be directed to any natural watercourses within the site. Two distinct methods will be employed to manage drainage water within the site. The first method involves keeping clean water clean by avoiding disturbance to natural drainage features, minimising any works in or around artificial drainage features, and diverting clean surface water flow around excavations and construction areas. The second method involves collecting any drainage waters from works areas within the site that might carry silt or sediment, to allow attenuation and settlement prior to controlled diffuse release.

Interceptor drains will be installed upslope of the access road alignment to divert any surface water away from the construction area. All new roadways will be constructed with a camber to aid drainage and surface water runoff. The gradient and slope of the camber will depend on the site characteristics where the road is actually being constructed.

Sanitary Facilities It is proposed to manage wastewater from the staff welfare facilities in the control building by means of a sealed storage tank located adjacent to the building, with all wastewater being tankered off site by a permitted waste collector to a wastewater treatment plant. Temporary port-a-loo toilets located within portacabins will be used during the construction phase.

11. FLOOD RISK ASSESSMENT:

A flood risk assessment was carried out in accordance with '*The Planning System and Flood Risk Management Guidelines for Planning Authorities*' (DoEHLG, 2009) and contained within Appendix 9-1 of the EIAR.

The Preliminary Flood Risk Assessment (PFRA) mapping indicates that pluvial flooding appears to occur along the main drainage channels within the site and this is as a result of surface water runoff backing up in the drainage routes when the capacity of the outfalls are exceeded. The EIAR notes that this does not occur in any proposed area of infrastructure and therefore will not affect the wind farm development. OPW records indicate there is no history of recurring flood incidents within the site boundary. According to the OPW, the land on the banks of the River Glore and Inny River within the site are mapped as "Benefiting Lands"

The EIAR informs that it may be considered that the proposed activity is a Highly Vulnerable Development – electricity generating power stations and substations. The majority of the proposed development is located in Flood Zone C and is therefore appropriate. However, proposed turbines T1, T5, T7, T8, T14 and T15 are located within the mapped Flood Zone A and B areas of the site and therefore a Justification Test was completed. This Test concludes that based on site specific knowledge and ground levels these proposed wind farm infrastructure are located in Flood Zone C, and are therefore also acceptable. The

EIAR notes that no part of the proposed infrastructure will flood, and all access roads, and turbine bases will be designed to be above known pluvial flood levels.

The EIAR informs that proposed Grid Connection Route will not have an impact or contribution to flood risk along the 26km length. Near the Mullingar substation, the overall hydrology and surface water drainage regime will not be altered, as the road will be reinstated after installation of the grid cable.

12. WATER FRAMEWORK DIRECTIVE AND ASSOCIATED REGULATIONS

The site is located within the Upper and Lower Shannon surface water catchment within Hydrometric Area 25 of the Shannon River Basin District. River Basin Management Plans (RBMPs) have been published for all River Basin Districts in Ireland in accordance with the requirements of the Water Framework Directive and outlines the water quality objectives for each waterbody. The EIAR contends that strict mitigation measures in relation to maintaining a high quality of surface water runoff from the development and groundwater protection will ensure that the status of both surface water and groundwater bodies in the vicinity of the site will be at least maintained.

13. ENVIRONMENT IMPACT ASSESSMENT REPORT (EIAR) (Comments)

The following section gives the Planning Authority's views in relation to the adequacy of the EIAR submitted as part of this planning application. Where possible it has been attempted to keep the planning assessment separate from those comments specifically relating to environmental impact. However, there is somewhat of a crossover and in the interests of brevity it is requested that any matters arising from the discussion on the EIAR would be raised as points of further information if deemed relevant by the Board.

In this case, An Bord Pleanala is the competent authority for the purposes of carrying out an Environmental Impact Assessment (EIA). The EIAR submitted by the applicant informs this EIA, as does information available to the Board and information given by the Local Authority.

For the most part, the EIAR is considered to be set out in a clear format. The Non-Technical Summary (NTS) is considered generally adequate. The Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018) specify that (as per EU Directive 2014/52/EU) there is a requirement for the EIAR to be prepared by component experts. Chapter 1 of the EIAR states that each chapter has been completed by a component expert and a 'Statement of Authority' has been provided at the beginning of each impact assessment chapter which illustrate the project team relevant expertise. The level of expertise of the component experts appears reasonable but ultimately this is a matter for the Board to determine.

The section below provides a brief summary of the environmental impacts of the proposal as outlined in the chapters contained in the EIAR.

13.1 Chapter 1 – Introduction

Chapter 1 Introduction is clearly set out and refers to the legislative context of the Environment Impact Assessment with regard to Strategic Infrastructure Development under Section 37A of the Planning and Development Acts 2000 to 2020.

Adherence to current 'Wind Energy Development Guidelines for Planning Authorities' (Department of the Environment, Heritage and Local Government (DOEHLG), 2006) is applied as is a commitment to comply with any revision thereof. This chapter includes a brief description of the proposed development along

with proximity to neighbouring dwellings and the introduction of an Interactions Management Group (IMG) to oversee construction, subsequent operational and decommissioning of the wind farm site. The introduction sets out and refers to the need for the proposed development, highlighting benefits including contribution towards meeting energy renewable targets, climate change and greenhouse gas emissions, energy security, competitiveness and associated economics benefits envisaged from the proposal are outlined. This chapter sets out the proposed structure and content of the EIAR, along with identification of project team members, associated competencies and work experiences.

It is stated that no difficulties were encountered in the preparation of the EIAR.

13.2 Chapter 2 – Background to the Proposed Development

Chapter 2 of the EIAR presents very clearly information on renewable energy and climate change policy and targets, the strategic planning context for the Proposed Development, a description of the Proposed Development site and planning history, scoping and consultation undertaken, and the cumulative impact assessment process.

Reference is made to local wind energy policy contained within the Westmeath County Development Plan 2014-2020, P-Win 2 which refers to strictly directing large scale wind farms onto cutover/cutaway peatlands and P-Win 6 which refers to separation distances from residential dwellings.

13.3 Chapter 3 – Consideration of Reasonable Alternatives

This chapter of the EIAR includes a description of the reasonable alternatives studied by the developer which are relevant to the project and its specific characteristics and an indication of the main reasons for the option chosen, taking into account the environmental effects.

Do Nothing' Alternative: The 'Do-Nothing' scenario has been assessed, i.e. an outline of what is likely to happen to the environment should the Project not be implemented. Proposed Development would be left as is, with no changes made to the current land-use practices. The EIAR informs that the environmental effects in terms of emissions are likely to be neutral.

Alternative Locations: The EIAR informs that the subject site was identified for potential development following a detailed desktop screening appraisal, firstly at national level and subsequently at regional and county level of all available sites which met criteria as set out in national and local policy with regard to the proposed siting of wind energy developments. The site is void of any environmental designations and is accessible in terms of connection to the national grid and situated in an area of relatively low population density with appropriate annual wind speeds.

Alternative Renewable Energy Technologies: The alternative sources of renewable energy considered for the site was solar energy. Comparisons relate to efficiency, potential development footprint, environmental effect on Hydrology & Hydrogeology, Traffic & Transport (construction phase) and Biodiversity (habitat loss) at the site. The proposal for a wind energy development at this site was considered to be the most efficient method of electricity production with the lesser potential for significant environmental effects.

Alternative Turbine Numbers and Model: The proposed wind turbines will typically each have a potential power output of approximately 5 - 6 megawatt (MW). It is proposed to install 15 turbines at the site which could achieve in the region of 90MW total output, depending on the chosen turbine model. The proposed tip height of the turbine layout is up to 175 metres while the proposed rotor diameter is up to 155 metres, (previous permitted Coole Wind Farm includes for a rotor diameter of up to 140 meters with a tip height

of 175m). The use of a greater rotor diameter allows for a greater capture of wind, thereby increasing the efficiency of the Proposed Development.

Alternative Designs: The EIAR informs that the design of the Proposed Development has been a collaborative process from the outset, the aim being to reduce potential for environmental effects while designing a project capable of being constructed and viable. Modification to the layout of the Proposed Development has been refined to take account of the findings of all site investigations along with recommendations and comments of the relevant statutory and non-statutory consultees, the local community and local authorities. As information regarding the site was compiled and assessed, the number of turbines and the proposed wind farm layout were revised and amended to take account of these findings.

Alternative Grid Connections



Two alternative cable route options were considered for the connection of the Proposed Development to the existing 110kV substation at Mullingar. Route Options A and B follow the same public roads from the proposed wind farm site to the village of Multyfarnham. From here, Option A follows the public road through Ballynafid and along the N4 east of Lough Owel, while Option B follows the public road to Bunbrosna heading immediately southwards along public roads west of Lough Owel. Option A is considered the preferred connection route as it is approximately 4.2 kilometres with fewer water shorter. crossing points than route option B, thereby minimises the potential for additional environmental effects.

Grid Connection Route.

Alternative Transport Routes and Site Access

The EIAR notes that during the assessment of a transport route to the Proposed Development site, alternatives were considered in relation to turbine components, general construction-related traffic, and site access locations. The main site entrance is located off the R396 Regional Road with access to the site for construction purposes from the L5755 which adjoins the R396 and R394. When considering turbine transport routes, alternative routes comprising of a more direct route with greater stretches of secondary and local roads were considered less optimal due to the increased possibility of road and roadside disruption and a greater need to carry out works. The chosen route between the N4 National Primary

Road and the proposed wind farm site utilises local and Regional roads where possible, as described in Section 4.3.17 of this EIAR. The most suitable route between the N4 and the site was identified, taking into account potential pinch points and the requirement for widening works.

There is a requirement that the EIAR outlines the main alternative sites considered during the site selection process. It is considered that the EIAR identifies the selection criteria used in the process and identifies the main reasons for the final choice, however it fails to specifically identify any of the alternative sites considered.



Turbine Delivery - Transportation Route

13.4 Chapter 4 - Description of the Proposed Development

In Chapter 4 of the EIAR a detailed description of the proposed development is provided along with development layout configuration.

Particulars are provided regarding development components including turbines and assembly mechanism, road construction types, quarrying of materials, onsite electricity Substation and Control Building, grid connection and cabling, upgrading of existing Substation at Irishtown, tree felling and replanting, environment management of construction works which feeds into the overall construction management plan.

Chapter 4 briefly describes the proposed Community Benefit Schemes under RESS 1 which is considered part of the proposal and predicted to provide a significant opportunity in terms of bringing economic, environmental and social benefits to the local area. Renewable energy projects which are developed

under the current RESS have a community benefit fund associated for wind energy, this contribution is currently set at ≤ 2 per MWhr. The level of associated community funding is valued at approx. $\leq 500,000/$ year for the local community for the lifetime of the project.

For the purposes of this EIAR, it is stated that various types and sizes of wind turbines (within the 175metre tip height envelope) have been selected and considered in the relevant sections of the EIAR to assess the worst-case scenario. Turbine design parameters have a bearing on the assessment of shadow flicker, noise, visual impact, traffic and transport and ecology (specifically birds). In each EIAR section that requires the consideration of turbine parameters as part of the impact assessment, the turbine design parameters that have been used in the impact assessment have been specified. For instance in the case of shadow flicker assessment, a turbine size up to a maximum ground to blade tip height of 175 metres, in order to present a worst case scenario.

13.5 Chapter 5 – Population and Human Health

Chapter 5 identifies, describes and assesses the potential effects of the Proposed Development on population and human health. The key issues examined in this chapter of the EIAR include population, human health, employment and economic activity, land-use, residential amenity, shadow flicker, property values, noise, and health and safety.

In order to assess the population in the vicinity of the Wind Farm Site, the Study Area for the Population section of this EIAR was defined in terms of the District Electoral Divisions (DEDs) where the Wind Farm Site is located, and where relevant, nearby DEDs which may be affected by the Wind Farm Site. The Wind Farm Site lies within three DEDs: Knockarrow, Glore and Coole of Co. Westmeath and borders DEDs of Boherquil and Firry/Newgrove of Co. Longford. The Population Study Area for the wind farm site has a population of 878 persons.

There are 18 no. occupied dwellings located within one kilometre of the proposed turbine locations. The closest occupied dwelling (indicated as H014) (i.e. dwelling not involved with the Proposed Development) is located at a distance of approx. 700 metres from the nearest proposed turbine T11. There are two dwellings, (indicated as H18 & H24) which are located at distances of 638m and 679m from proposed turbine T15 respectively however these dwellings are associated with individuals involved with the Proposed Development.

From a socio-economic perspective the likely positive significant impacts will primarily been seen during the construction phase where 135 jobs is indicated to be created over the construction period of 12-18 months. It is also indicated that most construction workers and materials will be sourced locally, thereby helping to sustain employment in the construction trade. This will have a short-term significant positive impact provided by the injection of money in the form of salaries and wages to those employed during the construction phase of the project which has the potential to result in an increase in household spending and demand for goods and services in the local area. This would result in local retailers and businesses experiencing a short-term positive impact on their cash flow. Up-skilling and training of local staff in the particular requirements of the wind energy industry is likely to lead to additional opportunities for those staff as additional wind farms are constructed in Ireland.

Operational stage benefits include the proposed Community Benefit Scheme. Direct long-term employment is envisaged at 2 persons, which cannot be considered significant. However, it is envisaged that the proposed development would make a substantial contribution to Ireland's renewable energy generating capacity and hence would be beneficial in terms of the Country's balance of payments and avoiding fines for failing to meet climate change targets.

The EIAR predicts likely negative construction impacts, although temporary in nature, including potential risk associated with construction, traffic disruption during delivery of turbine parts, increased construction traffic, extraction of stone from the burrow pit, nuisance from noise and dust and visual impact during the course of the works.

Mitigation measures proposed include delivery of turbines at night, majority of aggregate materials will be sourced at a burrow pit located onsite, all staff will be made aware of and adhere to the Health & Safety Authority's standards, all plant and machinery used on the site will comply with E.U. and Irish legislation in relation to noise emissions, operation of plant shall comply with guidelines set out in British Standard and dust abatement measures shall be applied.

The EIAR concludes that there will be no significant direct and indirect effects on health and safety during the construction phase of the Proposed Development.

Following consideration of the residual effects (post-mitigation), the EIAR considers that the Proposed Development will not result in any significant effects on population and human health. Provided that the proposed wind farm development is constructed, operated and decommissioned in accordance with the design, best practice and mitigation that is described within the application, significant effects on population and human health are not anticipated at international, national, county or local scale.

It is considered that the proposed development would not have any unacceptable direct or indirect impacts in terms of population and human health.

Shadow Flicker:

The relevant Irish guidance for shadow flicker is derived from the 'Wind Energy Development Guidelines for Planning Authorities' (Department of the Environment, Heritage and Local Government, 2006). The DoEHLG 2006 Wind Energy Guidelines recommend that shadow flicker at dwellings within 500 metres of a proposed turbine location should not exceed a total of 30 hours per year or 30 minutes per day. The guidelines state that shadow flicker lasts only for a short period of time and occurs only during certain specific combined circumstances, as follows:

- the sun is shining and is at a low angle in the sky, i.e. just after dawn and before sunset, and
- the turbine is located directly between the sun and the affected property, and
- there is enough wind energy to ensure that the turbine blades are moving, and
- the turbine blades are positioned so as to cast a shadow on the receptor.

There EIAR states that there are no occupied dwellings within 500 metres of any proposed turbine location. The guideline thresholds of 30 hours per year or 30 minutes per day have been applied to all properties located within ten rotor diameters (i.e. assumed at 1.55 kilometres as a worst-case scenario) of the proposed turbines within the Proposed Development (as per Irish Wind Energy Association's, IWEA guidelines, 2012). The DoEHLG Guidelines state that at distances greater than 10 rotor diameters from a turbine, the potential for shadow flicker is very low. The closest occupied dwelling H14 (i.e. dwelling not involved with the Proposed Development) is located at a distance of approx. 700 metres from the nearest proposed turbine T11. There are 2 no. dwellings, H18 & H24 which are located at distances of 638m and 679m from T15 respectively however these are individuals involved with the proposed development.



Wind Farm Site – Shadow Flicker Study Area.

The EIAR informs that the applicant is aware that the DoEHLG Wind Energy Development Planning Guidelines (2006) are currently being revised and commits to compliance with any revision thereof. There are a total of 47 dwellings within the shadow flicker study area which has a 1.55km buffer area.

Assuming worst-case conditions (100% sunshine during day light hours, no screening, sun directly behind blade and that the blade is turning) 28 occupied dwellings are predicted to experience daily shadow flicker in excess of the guideline amount of 30 minutes per day. Four such dwellings are occupied by individuals involved with the Proposed development. The DoEHLG total annual guideline limit of 30 hours is exceeded at 3 properties once the regional sunshine average of 30.1% and wind reduction factor of 37% is considered. The EIAR informs that following continuing engagement with the local community Coole Wind Farm Ltd is committing to zero shadow flicker at occupied residential receptors within 10 rotor diameters of the Proposed Development.

The EIAR informs that where shadow flicker exceedances are experienced, a site visit will be undertaken and a number of mitigation measures are proposed, including:

- Installation of appropriate window blinds or curtains in the affected rooms of the residence;
- Planting of screening vegetation;
- Turbine shutdown of relevant turbines when adverse conditions arise.
- Other site-specific measures that might be agreeable to the affected party and may result in the desired mitigation.

The EIAR conclude that commitment to zero shadow flicker at occupied residential receptors will ensure there will be no impact from shadow flicker on human beings. The proposal to provide a system for logging and addressing complaints, as outlined in the CEMP at Appendix 4-8, is noted in this regard.

Shadow flicker could potentially have a long-term slight negative impact. However, as the applicant has committed to exceeding the existing daily and annual guideline requirements and committed to zero shadow flicker at occupied residential receptors, it can therefore be reasonably concluded that there will be no impact from shadow flicker on human beings.

Property Value:

The EIAR informs that there have been no empirical studies carried out in Ireland on the impacts of wind farms on property prices. It is indicated that international literature from Scotland and USA concludes that there is no evidence to suggest that home prices surrounding wind facilities are consistently, measurably, and significantly affected by either the view of wind facilities or the distance of the home to those wind farms. The EIAR in Section 4.6 concludes, "Although there have been no empirical studies carried out in Ireland on the effects of wind farms on property prices, it is a reasonable assumption based on the available international literature that the provision of a wind farm at the proposed location would not impact on the property values in the area." However, 'The Impact of Wind Power Projects on Residential Property Values in the United States: A multi-Site Hedonic Analysis', December 2009, quoted on page 528 of the EIAR concludes when referring to property prices that "the analysis cannot dismiss the possibility that individual or small numbers of homes have been or could be negatively impacted".

The EIAR has no detailed assessment impact on property valuations within the Coole locality.

While the prospect of the proposed development may become a factor in the short term and the potential for impact on values is plausible, information is not conclusive in relation to the impact, in particular, the long term impact on property values. The Wind Energy Development Guidelines do not refer to the impact on property values, but they do set standards in terms of appropriate setback between properties and turbines, noise and shadow flicker. Therefore, if property values are not to be adversely affected, it would be necessary to ensure that the Wind Energy Development Guidelines standards are achieved and that noise and shadow flicker levels are controlled, in order to protect residential amenities.

Amenity:

In the event that planning permission is to be granted for this development, there is potential for the inclusion of Coole Wind Farm as a Green infrastructure amenity. As such, it is considered that the proposed development has the potential to add to the tourism infrastructure in the vicinity and County Westmeath in general, particularly having regard to Green Infrastructure policy contained within the Westmeath County Development Plan 2021-2027. The policy outlines the vision for development of walking and cycling projects throughout the county with particular emphasis on improving existing routes in addition to creating new loops.

13.6 Chapter 6 - Biodiversity

The EIAR informs that the proposed development has been designed to avoid ecologically sensitive areas and has been constraint led from the initial design stage.

Effects on Habitats during construction:

The Proposed Development has the potential to result in habitat loss and disturbance impacts on faunal species that were recorded on the site, however such impacts will result in the loss of areas of habitat that are of Local Importance (Lower Value) and are not identified as Key Ecological Receptors (KERs). This mainly involves the loss of bare peat and conifer plantation that are both of very low ecological value. Given the extensive area of habitat that will remain undisturbed throughout the site and the avoidance of the most significant areas of faunal habitat (wetlands, natural woodlands and watercourses), no significant effects on non-KER faunal biodiversity is anticipated as a result of the Proposed Development.

It should be noted that no significant habitat for salmonids, lamprey, coarse fish, white-clawed crayfish, European eel, aquatic invertebrates or other aquatic species was recorded within the footprint of the proposed development.

The bridge crossings of the river Glore will be clear span and will not include any instream works. The potential for significant effects on the above aquatic species is restricted to indirect effects on their habitat resulting from water pollution. The only pathway for effect to occur is as a result of water pollution. In this regard the EIAR provides details of how water quality will be protected during the construction of the proposed development.

It is considered that any direct or indirect impacts on these habitats are not significant. During construction, the contractor should be bound to follow a detailed Construction and Environmental Management Plan (CEMP) which should be in place prior to the start of construction.

Protected Species:

The EIAR informs that direct impacts on Otter are not anticipated. Documentation submitted indicates that there will be two crossings of the Glore River, and one drain crossing which will comprise clear span bridges with no requirement for instream works. There will be no loss of resting or breeding places associated with the development. Potential indirect effects may include deterioration of habitat resulting from surface water pollution, mitigation include compliance with a Construction Environmental Management Plan (CEMP). In is submitted that the proposed development will therefore not result in any significant effect on otter and it therefore cannot contribute to any cumulative effect in this regard.

It is indicated that, given that badger activity was associated with the periphery of the study area boundary and not the development footprint, the temporary disturbance to foraging badger constitutes a temporary slight negative effect. The proposed development will not result in any fragmentation of badger habitat, as there will be no barriers to movement throughout the site as a result of the proposed works

Whilst the study area was utilised by foraging and commuting bats, the proposed development will not result in any significant reduction or loss of the available habitat on the site given the nature of the habitats within the site i.e. predominantly milled peat.

No bat roosts were identified in close proximity to the construction footprint of the proposed development and there is no potential for significant bat roosts to be disturbed by increased human presence and increased noise during construction. Pre-construction surveys should inform appropriate mitigation actions to ensure the conservation of bats, if found, utilising roosts within the construction corridor.

Effects on Habitats during Operation:

The EIAR predicts that the operation of the proposed development will not result in any additional land take or loss of peatland habitats and as such there is no potential for any significant effects in this regard. These habitats are not considered to be a KER in the context of the operation of the proposed development.

There is no potential for significant negative effects on non-volant terrestrial fauna including badger and otter that were identified as KERs, during the construction phase of the development. It should be noted that no significant habitat for salmonids, lamprey, coarse fish, white-clawed crayfish, European eel, aquatic invertebrates or other aquatic species was recorded within the footprint of the Proposed Development and all major infrastructure such as turbine bases are located over 50 metres from the watercourses and wetlands within the site. Potential for significant effects on bat species resulting from the operation of the Proposed Development were identified and therefore, these taxa were identified as KERs during the operational phase. Implementation of detailed monitoring and mitigation measures will result in no significant residual effects on bat species.

Assessment of Cumulative Effects

The EIAR envisages that residual construction, operational and decommissioning impacts of the Proposed Development are considered cumulatively with other plans and projects that are in closest proximity to the Proposed Development and those that could be potentially affected via downstream surface water.

The Proposed Development will not result in any significant residual effects on biodiversity and will not contribute to any cumulative effect when considered in combination with other plans and projects. In the review of the projects that was undertaken, no connection that could potentially result in additional or cumulative impacts was identified. Neither was any potential for different (new) impacts resulting from the combination of the various projects and plans in association with the proposed development.

On the basis of the detail provided it is considered that the loss of local biodiversity habitats for turbines and associated infrastructure would have negligible impacts on local flora and fauna and protected species. Proposed mitigation measures detailed within the EIAR in relation to construction, prevention of habitat loss, protection of fauna species and residual effect on biodiversity should be included as condition of any grant of planning permission.

13.7 Chapter 7 - Ornithology

Chapter 7 evaluates the likely significant effects of the proposed wind farm development on bird species.

Ornithological surveys were conducted as part of the multidisciplinary surveys along the proposed grid connection route. These surveys were undertaken in addition to the dedicated bird surveys carried out between 2015 and 2017 as part of the permitted Coole Wind Farm. The grid connection works will be confined to the existing road corridor, conifer plantation and Mullingar substation. The EIAR highlights that wind farms present three potential risks to birds, namely

- Direct habitat loss through construction of wind farm infrastructure;
- Displacement (sometimes called indirect habitat loss) if birds avoid the wind farm and its surrounding area due to turbine construction and operation.
- Death through Collision or interaction with turbine blades and other infrastructure.

Chapter 7 assesses the likely significant effects that the Proposed Development may have on bird species. It provides a comprehensive list of all bird species recorded within the zone of influence of the proposed development. Species are listed in accordance with conservation significance: Annex I species, SCIs of designated sites, Red and Amber-listed species and raptors.

The following species were identified as Key Ornithological Receptors (KORs - Defined as a species occurring within the zone of influence of the development upon which likely significant effects are anticipated and assessed) and were subject to detailed impact assessment: Whooper Swan, Greenland White-fronted, Goose Golden Plover, Merlin, Peregrine Falcon, Osprey, Red Kite, Wigeon, Teal, Blackheaded Gull, Lapwing, Woodcock, Barn Owl, Long-eared Owl, Buzzard, Sparrowhawk, Kestrel and Common Snipe.

The development has been designed to specifically avoid, reduce and minimise effects on all Key Ornithological Receptors. The potential effects of the Proposed Development are then considered in terms of the construction, operation and decommissioning phases of the Proposed Development. Taking into consideration the effect significance levels identified and the proposed best practice and mitigation; significant residual effects on KORs with regard to direct habitat loss, displacement or collision mortality are not anticipated.

The EIAR informs that an Ecological Clerk of Works (ECoW) will be appointed during the construction phase to oversee the management of ornithological and ecological issues during construction, inform and educate on-site personnel of the ornithological and ecological sensitivities within the proposed development, provide guidance to contractors and liaise with officers of consenting authorities and other relevant bodies with regular updates in relation to construction progress. A pre-construction transect/walkover bird survey will be conducted to ensure significant effects on breeding birds is avoided. A detailed post construction Bird Monitoring Programme has been prepared for the operational phase of the development. Surveys are scheduled to coincide with years 1, 2, 3, 5, 10 and 15 of the windfarm lifetime.

Overall it is considered ornithological features have been adequately surveyed and quantified and allows for an evaluation of impacts to be completed. Whilst bat and bird collisions cannot be definitively ruled out it has been appropriately assessed and the risk is considered low for the identified species. The implementation of the prescribed mitigation measures will further reduce the significance of any potential effects on avian receptors. It is considered that the EIAR presents a reasoned methodology which demonstrates the occurrence of negligible and low impacts. It is considered that the proposed development would not have any unacceptable direct or indirect impacts in terms of biodiversity and that cumulative effects are not likely to arise. As such, approval should not be withheld on the grounds of such cumulative effects.

13.8 Chapter 8 - Land, Soils and Geology

Chapter 8 examines the potential impacts on the soil and the geological environment in relation to the proposed wind farm development.

The EIAR advises that the geology of the Wind Farm Site consists of peat depths range from 0 to 7.8m, and peat is underlain by shell marl and lacustrine clay deposits at the Wind Farm Site. It is stated within the geotechnical risk register (Appendix B of Appendix 8-1) that all infrastructure locations will be formed on piled areas with the exception of T5 and T15. The majority of new access tracks within the wind farm site will be constructed using a floated technique, with some minor areas formed using excavate and replace method. Excavation of peat, mineral subsoils and bedrock (from the borrow pit) will be required for site levelling and for the installation of the grid connection cable, infrastructure and foundations for the access roads and turbine T5 and T15. The handling and storage of peat will be done in accordance with a 'Peat Management Plan'. Storage and handling of hydrocarbons/chemicals indicated to be carried out using best practice methods. Measures to prevent peat and subsoil erosion during excavation, reinstatement and long-term storage of peat will be undertaken to prevent erosion and potential water

quality impacts. A peat stability assessment has been completed for the grid connection route for areas where peat deposits occur and shows that the inclusion of the cable trench would not reduce the stability of the existing road embankments the route.

An assessment of the wind farm construction stage, operational stage and decommissioning stage has been completed, along with a cumulative assessment for each stage. It is considered, on the basis of the information provided in terms of the detailed site investigations, assessment of peat stability, the excavations required and expected volumes of material, in addition to details on foundation design, including floating turbine bases on piled foundations, that the conclusions reached are robust and that the proposed development would not have adverse impact on the soils and geology of the area, subject to the implementation of the outlined mitigation measures.

13.9 Chapter 9 - Hydrology & Hydrogeology

The impact on the hydrology and hydrogeology on the receiving environment, as a result of the proposed development, is investigated in Chapter 9.

On a regional scale, the wind farm site is located in the Inny River surface water sub-catchment, which is in the Upper Shannon catchment within Hydrometric Area 26 of the Shannon International River Basin District (SIRBD). On a local scale the wind farm site drains directly to the Inny River, or via its tributary the Glore River.

Within the wind farm site, there are numerous manmade drains that are in place predominately to drain the bog for peat cutting. The integration of the proposed wind farm infrastructure with the existing bog drainage in a manner that avoids water quality impacts in downstream rivers and streams is a key component of the wind farm design. The site drains to the local rivers via 5 no. surface water outfalls from the bog. Due to the nature of wind farm developments, being near surface construction activities, impacts on groundwater are generally negligible and surface water is generally the main sensitive receptor assessed during impact assessments. The primary risk to groundwater at the site would be from oil spillage and leakages at the borrow pit or during construction plant refueling.

These potential contamination sources are to be carefully managed at the site during the construction and operational phases of the development and measures are proposed within the EIAR to deal with these potential minor local impacts. Two methods will be employed to control drainage water within the site during construction, thereby protecting downstream surface water quality and aquatic habitats. The first method involves 'keeping clean water clean' by avoiding disturbance to natural drainage features, minimising any works in or around artificial drainage features, and diverting clean surface water flow around excavations and construction areas. The second method involves collecting any drainage waters from works areas within the site that might carry silt, to allow settlement and cleaning prior to its release. Surface water drainage measures, pollution control and other preventative measures have been incorporated into the project design to minimise significant adverse effects on water quality and downstream designated sites.

An assessment of the wind farm construction stage, operational stage and decommissioning stage has been completed, along with a cumulative assessment for each stage. Based on the above, and with implementation of the outlined mitigation measures, no significant impacts on the surface water and groundwater environments are predicted to occur.

Drainage along the Grid Connection Route is limited to existing roadside drains along the N4 and L1826 roads. In areas where these drains are not present, runoff from the road hard standing will generally flow towards the grass verge along the majority of the route and infiltrate to ground.

The EIAR envisages that there will be no significant impacts on designated sites in terms of the hydrological and hydrogeological environment. An assessment of the grid connection construction stage, operational stage and decommissioning stage has been completed, along with a cumulative assessment for each stage. Based on the above, and with implementation of the outlined mitigation measures, no significant impacts on the surface water and groundwater environments are predicted to occur.

Based on the details submitted, it is considered that the development would not have a significant adverse impact on water quality subject to the proper implementation of the proposed project design features, including drainage proposals. These measures are comprehensive and are considered preemptive and proactive, and include ongoing inspection, water-quality monitoring and maintenance.

13.10 Chapter 10 - Air and Climate

This chapter describes and assesses the potential significant direct and indirect effects on air quality and climate arising from the construction, operation and decommissioning of the proposed development.

The production of energy from wind turbines has no direct emissions. Harnessing more energy by means of wind farms will reduce dependency on fossil fuels, thereby resulting in a reduction in harmful emissions that can be damaging to human health and the environment. Some minor short term or temporary indirect emissions associated with the construction of the proposed development include vehicular and dust emissions. A Construction and Environmental Management Plan (CEMP) is proposed for the construction phase (see Appendix 4-8 of the EIAR) and includes dust suppression measures. In addition, turbines and construction materials will be transported to the site on the specified haul routes only. The agreed haul route roads adjacent to the site will be regularly inspected for cleanliness and cleaned as necessary.

This chapter of the EIAR calculates the carbon savings associated with the Proposed Development. In total, it is estimated that 22,688,629 tonnes of carbon dioxide will be displaced over the proposed thirty year lifetime of the proposed development. It is submitted that construction of the proposed development will have a short-term, imperceptible negative effect as a result of greenhouse gas emissions from construction plant and vehicles. Further, it is submitted that operation of the proposed development will have a direct long-term moderate positive Impact on climate as a result of reduced greenhouse gas emissions.

Having reviewed the foregoing and given the inherent temporary duration and impact of the proposed construction works, coupled with design elements to ensure best practice site management and dust minimisation, it is considered that the construction of the proposed development would not result in any significant impact on air quality in the surrounding area. Similarly, given the nature of the development proposed, the occurrence of any significant detrimental impact on air quality is not anticipated during the operational phase.

13.11 Chapter 11 - Noise and Vibration

Chapter 11 assessed the potential noise and vibration impacts associated with the development of the proposed Coole Wind Farm.

Background noise environment has been established through noise monitoring surveys undertaken at several noise sensitive locations (NSLs) surrounding the proposed development. Potential noise and vibration effects on the surroundings is considered for two stages: the short-term construction phase and the long-term operational phase.

Existing noise levels at the site were monitored. There is no published statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase of a project. Local authorities normally control construction activities by imposing limits on the hours of construction works and may consider noise limits at their discretion. In the absence of specific noise limits, appropriate criteria relating to permissible construction noise levels for a development of this scale may be found in the British Standard Code of practice for noise and vibration control on construction and open sites.

The EIAR predicted noise levels from construction activities are in the range of 33 to 47dB LAeq,1hr with a cumulative level of the order of 51dB LAeq,1hr. In all instances the predicted noise levels are below the appropriate Category A value (i.e. 65dB LAeq,1hr) presented in Section 11.3.2.1. With respect to the EPA's guidance for description of effects the potential worst-case associated effect at the nearest NSL associated with the construction phase is expected to be negative, slight and short-term.

An assessment of the operational noise levels has been undertaken in accordance with best practice guidelines and procedures as outlined in Section 11.3.2.2 of this Chapter. The findings of the assessment identified that there are two NSLs where potential exceedances are predicted under worst-case assumptions at H013 and H014. If confirmed during post-construction monitoring the EIAR states that "a curtailment strategy will be implemented to reduce noise levels due to the wind farm to within the criteria at all NSLs"

Such an approach would typically be envisaged to focus on control and regulation of the operation of turbine unit(s) in certain atmospheric and meteorological conditions.

Assuming the implementation of the foregoing or similar, it is not considered that a significant effect is associated with the operation of this development, since the predicted residual noise levels associated with the proposed development will be within the relevant best practice noise criteria curves for wind farms. While noise levels at low wind speeds may increase due to the development, predicted levels remain low, albeit a new source of noise will be introduced into the soundscape.

With respect to the EPA criteria for description of effects, the potential worst-case associated effects at the nearest noise sensitive locations associated with the operation of the wind turbines in proposed development are described negative, moderate and long-term.

13.12 Chapter 12 – Landscape and Visual

Chapter 12 of the EIAR provides a landscape and visual impact assessment (LVIA) of the proposed Coole Wind Farm development.

The proposed development is located on an area of cutover peatland, coniferous forestry and agricultural land. The Westmeath County Development Plan 2021-2027 policy identifies cutover peatlands as the preferred location for large scale wind energy production. The landscape surrounding the site is relatively flat and landcover primarily comprises cutover peatlands, agricultural land, coniferous forestry, scattered settlements, hedgerows and clusters of deciduous woodland. The EIAR informs that visibility of the Proposed Development was assessed from all geographic perspectives within 20 km of the proposed turbines using tools such as Zone of Threshold Visibility (ZTV) mapping, photomontages, a route screening analysis and also on-site appraisal during site visits. The ZTV mapping was used as a tool to identify visual and landscape receptors within 20 km of the proposed turbines that had no theoretical visibility of the Coole Wind Farm, these receptors were then screened out from further assessment.

A comprehensive assessment was conducted to determine the likely significant effects of the proposed turbines upon the landscape character of all designated Landscape Character Areas (LCAs) within 15 km of the site. The footprint of turbines and associated infrastructure of the Coole Wind Farm will only

materially alter a very small portion (approximately 26 hectares - 0.13%) of the LCA in which it is situated. Therefore, any direct effects on landscape character are highly localised to the immediate landscape in which the turbines are located.

Twenty-two photomontages were used to represent the views from differing geographical perspectives and thematic visual receptors located within the LVIA study area. The likely significant visual effects arising at each photomontage viewpoint was determined by considering the magnitude of change attributed to the addition of the Coole Wind Farm balanced with the sensitivity of receptors located at each viewpoint. A residual visual effect was recorded for each viewpoint location in mind of mitigating factors, such as reduced visibility of turbines from screening factors.

The EIAR informs the location of the proposed development is not within a High Amenity Area, however a number of photomontages 4, 6, 12, 14, 21 & 22 were taken from High Amenity Areas or other designated areas to represent visibility from these areas. In addition, a number of protected views photomontages 1, 7, 8, 10, 12 & 21 as set out under the Westmeath County Development Plan have been represented. Protected views in the case of photomontages 1, 7 and 21 are directed away from the wind farm site, while photomontages 8, 10 and 12 show visibility of the turbines.

Of the 22 photomontages, one was considered to be 'Imperceptible', six were considered 'not significant', eleven were considered 'slight' and four were considered 'moderate'. Viewpoints 3, 5, 7 and 21 were considered to have visual impact of moderate significance. In all cases, the EIAR informs that the turbines are an element of the view, but do not obscure, dominate or detract from the main elements of the view.

In terms of cumulative visual effect the EIAR informs, the proposed development is not in close proximity to any other turbines, the closest permitted turbine being located over 16 km from the proposed development at Ballyjamesduff, Co. Cavan and therefore does not give rise to cumulative visual effects.

Having reviewed Chapter 12 of the EIAR, it is considered that visual impact of the proposed turbines will vary depending on the location. Localised visual impact will exist from sections of the L-5575 and the R394 and R396 Regional roads, and residences which are situated in a highly moderated working landscape. The visual impacts represented by the photomontages 1-22 range from imperceptible to moderate significance and no visual impacts were deemed to be significant. Having reviewed all such potential viewpoints, this assertion is considered to be accurate.

13.13 Chapter 13 – Archaeology and Cultural Heritage

Chapter 13 presents a comprehensive review of the potential impacts of the proposed development on the surrounding archaeological, architectural and cultural heritage landscape were assessed.

Through a detailed examination of the baseline data available and a detailed site inspection, it was concluded that while the archaeological potential of the area is high no new sites were noted within the peatland areas of the proposed development, nor are any recorded archaeological or architectural assets located therein. One new potential archaeological monument was detected within the Wind Farm Site boundary at Clonrobert townland. It comprises an enclosed rectangular area in pasture c. 74m east of the proposed access road to T15. No direct impacts to this potential monument as a result of the proposed development have been identified. Furthermore, direct impacts to recorded archaeological and architectural assets as a result of the proposed turbines, substation, associated infrastructure and borrow pit have not been identified.

Where potential impacts are possible appropriate mitigation measures have been recommended in order to minimise any such impacts. Recommended mitigation includes re-assessment surveys due to the

potential changing levels within the bog should further peat harvesting occur, pre-development archaeological testing where turbine bases, roads, etc will be excavated, and archaeological monitoring during the construction stage of the project.

Indirect (visual) effects on the setting of National Monuments within 15km, RMPs within 5km and RPS/NIAH within 5km of the proposed development were also assessed. No significant visual effects on the recorded archaeological, architectural or cultural heritage resource were identified.

As the grid connection extends along the public road it passes in close proximity (within 100m) of 19 recorded monuments as detailed under Table 13-6 of the EIAR. The site types that occur along the proposed Grid Connection Route include ringforts, church and graveyards, mottes and castles, a barrow, watermill and bridge. While the proposed cable will be placed in the public road outside the monument sites, mitigation measures will be necessary given its proximity to the aforementioned monuments. Mitigation includes archaeological monitoring during construction phase where they extend past the monument with the resulting report on the outcomes of the monitoring compiled and submitted to the relevant authorities on completion of the project. If new archaeological sites are detected during archaeological monitoring they will be preserved by record (archaeologically excavated) and therefore permanently removed with a full record made of same. In this regard the potential impact after the mitigation measures is likely to be slight-moderate. The EIAR concludes that "based on the assessment above there will be no significant effects".

Mitigation measures are recommended where deemed appropriate and include archaeological monitoring of ground works in specified areas along the proposed route. An assessment of potential impacts as a result of proposed junction accommodation works along the proposed turbine delivery route was also carried out. No direct or indirect impacts to the recorded archaeological or cultural heritage resource were identified.

An assessment of cumulative impacts as a result of the proposed development was undertaken and no significant cumulative impacts have been identified when considered with other existing, proposed and permitted wind farm developments.

Whilst the proposal would alter the setting and character of the area, it is not considered that this alteration to represent an inappropriate change in the context of features of archaeological and cultural interest.

13.14 Chapter 14 – Material Assets

Chapter 14 of the EIAR conveys the likely significant effects of the proposal on transportation infrastructure and on telecommunications and aviation during the construction and operational stages of the development.

The assessment considered the effects that traffic generated by the proposed development, including the abnormally large vehicles required to deliver the turbine plant equipment, and would have on the surrounding highway network. The types of vehicles that will be required to negotiate the local network will be up to 77.5 metres long, or 83.5 metres including the blade overhang, and a detailed assessment of the geometry of the proposed route was undertaken.

Locations where it was established that existing road geometry will not accommodate all of the vehicles associated with the proposed development were identified, with the extent of additional land required to implement temporary remedial works established. These works have been assessed as part of the proposed development. It is envisaged that delivery of the large plant will be conducted at night, as is frequently the case for abnormally large loads, and will therefore have a slight effect on traffic. A

comparison of traffic flow forecasts and link capacities shows that, with the exception of the N4, the surrounding road network will operate within capacity for all construction and operational stages of the development. It was determined that the N4 will operate over capacity without the proposed development, with the proposed Coole Wind Farm development resulting in a temporary marginal increase in traffic for the duration of the 12 to 18 month construction period.

An assessment of the traffic effects of a proposed grid connection route consisting of 26km of underground cable was undertaken for both the construction and operational stages of the proposed development. The assessment presented demonstrates that the traffic effects resulting from the construction of the cable route and associated connection to the existing Mullingar substations will last approximately 6 months along the public road. The work associated with the proposed grid connection route will be transient and will impact on isolated sections of the road network at any one time, with the impacts forecast to be slight at most locations, and moderate at those locations requiring short period road closures. A comprehensive set of traffic management measures are proposed to be put in place during the construction period in order to minimise impacts to general traffic flow on the proposed route.

The EIAR notes that wind turbines have the potential to interfere with television or radio signals by acting as a physical barrier to microwave links. The alternating current electrical generating and transformer equipment associated with wind turbines also generates its own electromagnetic fields, and this can interfere with broadcast communications, i.e. television and radio signals. The most significant effect however, at a domestic level, relates to a possible flicker effect caused by the moving rotor, particularly on television signals. Interference with broadcast communications can be overcome by the installation of deflectors or repeaters where required. To mitigate against potential interference to viewers in the area, Coole Wind Farm have signed a protocol agreement with RTÉ for the wind farm development. Telephone, broadband and other telecommunications operators Enet, Three Ltd and Ripplecom noted links in the area and requested buffers and mitigation measures to be included in the wind farm design to mitigate potential impacts on the associated links. A scoping response was received from the Irish Aviation Authority (IAA). The requirements of the IAA include the following:

- Agree an aeronautical obstacle warning light scheme for the wind farm development.
- Provide as-constructed coordinates in WGS84 format together with ground and tip height elevations at each wind turbine location.
- Notify the Authority of intention to commence crane operations with a minimum of 30 days prior notification of their erection.

The closest aerodrome is at Abbeyshrule, Co. Longford, a small private airport that is located approximately 22km southwest of the nearest proposed turbine location, and therefore outside the range at which any interference issues would be expected. In response to the lighting requirements requested by the IAA the turbines will be marked on maps, lit at night and entered into aircraft navigation databases and therefore can be avoided during flight.

Having regard to the foregoing it is considered that the proposed development would not have any unacceptable direct or indirect impacts in terms of material assets and that cumulative effects are not likely to arise.

13.15 Chapter 15 – Interaction of the Foregoing

A matrix is presented in Chapter 15 of the EIAR to identify potential interactions between the various aspects of the environment.

The matrix highlights the occurrence of potential positive or negative impacts during both the construction and operational phases of the proposed development. Where any potential interactive impacts have been identified, the EIAR considers that appropriate mitigation is included in the relevant sections.

The most dynamic interactions listed pertain to human beings and interactions between air and climate (dust and noise), hydrology (water quality), material assets (traffic) and the landscape. Dynamic interactions between biodiversity (birds) could also impact on hydrology and hydrogeology (drainage), air and climate (reduced carbon emissions and noise). Interactions between biodiversity and soils and geology (use of aggregate), hydrology and hydrogeology (drainage), air and climate (reduced carbon emissions and noise) and material assets (landscape – tree removal).

All of the aforementioned have been assessed above and it is considered that the interactions identified are unlikely to cause or exacerbate any potentially significant environmental impacts. Each section of the EIAR sets out the mitigation measures proposed with the information on potential residual effects, and their significance.

13.16 Chapter 16 – Schedule of Mitigation

Chapter 16 provides a schedule of all mitigation measures relating to the pre-commencement, construction and operational phases of the proposed wind farm development are set out in the relevant chapters of the EIAR.

14. CARRYING CAPACITY AND SAFETY OF ROAD NETWORK.

Please refer to the details contained in the Transportation Section and District Engineer reports under Section 16.

15. ENVIRONMENTAL CARRYING CAPACITY OF THE SUBJECT SITE AND SURROUNDING AREA:

It is considered that previous comments on the EIAR as set out under Section 13 address this matter.

16. REPORTS OF RELEVANT LOCAL AUTHORITY SECTIONS:

16.1 Transportation Section:

The Transport Section has reviewed the proposed development solely in the context of a bridge structure perspective.

Issued to be considered:

- 1. Implications for the safety of both motorised and non-motorised users in the context of the development being proposed along the public roads and bridge structures on the following roads:
 - a) R 396 Camagh Road
 - **b)** R 395 Coole village
 - c) L1825 Simonstown
 - d) L1825 Coole Road-Multyfarnham.
 - e) L1819 Multyfarnham -Ballinafid.

- f) N4-722 Ballinafid.
- g) L1773-0 Old Longford Road.
- 2. Implications of the impact of construction of the proposed cabling on the local roads and bridges and on the N4.

Transportation section wish to advise the following comments regarding the bridges and culverts along the proposed route which construction of cabling will be undertaken as shown in Drawing No. 200445-02 – Coole Wind Farm Site Location Map submitted for planning.

• The developer has submitted Drawing No. COLE d005.3.2 regarding Bridge Crossing No. WH L1825-002.00 (Shrubbywood Bridge) showing a detail of the 5 No. 125mm ducts to be carried in a 400mm diameter iron conduit fixed to the side of the bridge deck.

The proposed layout shown in Drawing No. COLE d005.3.2 is not acceptable to Westmeath County Council as it will compromise future maintenance work and /or rehabilitation work on the bridge parapet due to the attachment of the proposed 5 No. 125mm ducts which will carry high voltage electricity to Mullingar ESB Sub Station.

The developer should be asked to provide an alternative method for placing of the proposed ducts and electricity cables across the river Inny.

• The developer has submitted Drawing No. COLE d005.3.1 regarding Bridge Crossing No. WH L1825-001.00 (Clonava Bridge) showing a detail of the 5 No. 125mm ducts to be carried in a 400mm diameter iron conduit on the deck surface in Option A.

The proposed layout shown in Drawing No. COLE d005.3.1 is not acceptable to Westmeath County Council as it will reduce the capacity of the bridge by reducing the bridge road width from 5.50m to 4.65m and it will also compromise future maintenance work and /or rehabilitation work on the bridge deck due to the instillation of the proposed 5 No. 125mm ducts on the bridge deck surface which carry high voltage electricity to Mullingar ESB Sub Station.

The developer should be asked to provide an alternative method for placing of the proposed ducts and electricity cables across the river Inny.

 The developer has submitted drawings No. COLE d005.3.1 for Clonava Bridge WH I 1825-001.00 showing detail Option B with the 5 No. 125mm ducts to be carried in a 400mm diameter iron conduit fixed to the side of the bridge deck. Option B is not acceptable as it will compromise future maintenance work and /or rehabilitation work on the bridge parapet due to the attachment of the proposed 5 No. 125mm ducts which will carry high voltage electricity to Mullingar ESB Sub Station.

The developer should be asked to provide an alternative method for placing of the proposed ducts and electricity cables across the river Inny.

• The developer has submitted drawings regarding the placing of duct crossing over and under existing culverts on the public road along the line of the proposed Grid Route. In particular Drawing No's Coole D005.4.4. Water Crossings Typical Detail-Under and Coole D005.4.3 Water Crossings Typical Detail- Over.

The developer should be asked to show how he intends to comply with the Purple Book on "Guidelines on the Opening, Backfilling and Reinstatement of Openings in Public Roads" published by the DTTAS.

16.2 District Engineers' Report:

The District Engineer has no objection to the proposed development from an engineering perspective, subject to the following:

Development

The development to be carried out strictly in accordance with the plans and details received by An Bord Pleanala on 22-3-2021 and comply with the following conditions.

Roads

- 3.0m x 90m sightlines shall be achieved and maintained on L-5755-16 from proposed site entrances to the borrow pits and entrances to the construction site.
- 3.0m x 150m sightlines shall be achieved and maintained on R395 and R396 from proposed link road between R395 and R396.
- Junction improvements at junction of N4 with L-1927-0 shall comply with Transport Infrastructure Ireland (TII) publications and before commencement the developer shall carry out a traffic safety audit on the junction and submit the traffic safety audit report to the planning authority.
- Prior to commencement the developer shall undertake a detailed condition survey of the proposed haul routes (L-5755-16, L1927, L5828, R394, R396 and R395) and submit a Pavement Strength Analysis and Culvert/Bridge Bearing Capacity Analysis Report for roads identified as the construction material haul routes. The report shall include the proposed ongoing maintenance programme to be implanted during the construction stage to avoid deterioration of the regional and local roads.
- The condition survey of the roads and bridges along the haul routes shall be carried out by
 a qualified engineer both before and after construction of the windfarm development at
 the developer's expense. This shall include a schedule of required works to enable the haul
 routes and in particular regional and local roads in the Westmeath County Council area to
 cater for construction related traffic. The extent and scope of the survey and the schedule
 of works shall be agreed with the planning authority before development commences.
- Within three months of the cessation of the use of each public road haul route to transport material to and from the site, the developer shall undertake a detailed condition survey of the road network serving the development (L-5755-16, L1927, L5828, R394, R396 and R395) and submit a scheme of works detailing the works required to repair any damage done to these routes.

- Post construction & installation stage developer shall undertake, under licence from Planning Authority, to carry out all necessary improvement works required in condition survey carried out post construction & installation stage.
- All traffic management on public roads to be carried out in accordance with Traffic Signs Manual, 'Chapter 8 Temporary Traffic Measures & Signs for Roadworks.
- All works in the aforementioned scheme shall be completed at the Developer's expense, within 12 months of each roads' cessation as a haul route for the proposed development.
- Abnormal load haul routes shall be restricted to the identified haul route and no other local roads shall be used for these elements of the development.

Roads (Cable Route)

- 1) The applicant shall be conditioned to provide the following for the duration of the project;
 - a) The temporary employment of a dedicated liaison engineer to be appointed by Westmeath County Council or some other appropriate arrangement as may be determined by Westmeath County Council. All costs associated with this arrangement to be borne by the applicant.
 - b) The applicant shall provide a dedicated person in their project team to act as a point of contact/ liaison for Westmeath County Council.
- 2) Prior to commencement the developer shall submit a written guarantee to TII and Westmeath County Council that TII and Westmeath County Council will not be liable for cost associated with future relocation of the HV cable or loss of earning during the relocation of cable in the event of realignment or repair of the road.
- 3) Prior to commencement a pre-condition survey of cable routes, consisting of a video survey of the full route and photographs at every entrance and boundary structure to be carried out and a copy submitted to Westmeath County Council. Any damage caused to the road or adjacent properties shall be repaired to its previous condition or, where this is not possible, to an equivalent or better condition.
- Prior to commencement, all existing watercourse crossings/bridges shall be identified, detailed designs and permissions from relevant authorities shall be submitted to indicate crossing details.
- 5) Prior to commencement, details of cable installation shall be submitted to Westmeath County Council. Details to include works program, construction details, cross-sections for each road showing location of trench in road and existing road width, existing services.
- 6) All works shall be in accordance with the NRA Specification for Road Works unless otherwise specified.
- 7) Reinstatement of the trench in local and regional roads shall be in accordance with the latest version of "Guidelines for the Opening, Backfilling and Reinstatement of Trenches in Public Roads" (The Purple Book), except where noted otherwise. Trench reinstatement in poor ground

conditions may require special consideration and shall be agreed between Coole Wind Farm Ltd. and Westmeath County Council.

- 8) After temporary reinstatement of the trench a full width overlay shall be provided on all local roads. This shall consist of minimum 60mm AC 20 dense bin in accordance with Clause 906 of the Specification for Road Works and inverted double surface dressing (special application), designed and applied in accordance with IAT Guidelines for Surface Dressing in Ireland, Third Edition, or equivalent as agreed with Westmeath County Council. Tie into existing entrances by regrading and surfacing with materials to match existing. Build up verges to new road level where required.
 - After temporary reinstatement of the trench;
 - A full width overlay shall be provided on all local roads;
 - A half road permanent reinstatement shall be provided on regional roads > 5.5 metres wide;
 - National Primary Road N4 to be agreed with TII and Westmeath County Council.
- 9) A defects liability period of 2 years shall apply. This shall commence when written notification has been given that the permanent reinstatement/overlay has been completed.
- 10) The applicant shall provide a detailed Construction Traffic Management plan dealing with the following issues as a minimum:
 - A competent traffic management co-ordinator shall be appointed by the applicant for the duration of the construction phase.
 - Where road closures are required, an application must be submitted to Westmeath County Council at least 8 weeks in advance.
 - Where road works speed limits are required, an application shall be submitted to Westmeath County Council at least 8 weeks in advance. Signs to be erected by the developer.
 - Diversion routes to be maintained whilst the diversion is in place.
 - Traffic management plans to be submitted for each stage of the works.
 - The applicant shall provide details of relevant temporary traffic management plans including signage to Westmeath Co. Council in advance of implementation.
 - No parking shall be permitted on public roads surrounding the site.
 - No queuing of deliveries on public roads shall be permitted.
 - Public roads to be kept clean of mud and debris from the site during construction. A road sweeper shall be provided and wheel washes to be provided inside site.
 - The applicant shall provide a noise management plan and a dust management plan.
 - All traffic management on public roads to be carried out in accordance with 'Chapter 8 temporary Traffic Measures & Signs for Roadwork's'

Bridges / Culverts.

 Prior to commencement the applicant shall submit to the Planning Authority for written approval fully annotated construction design drawings for Shrubbywood Bridge WH I 1825-002.00 showing detail of the 5 No. 125mm ducts to be carried in a 400mm diameter iron conduit fixed to the side of the bridge deck as proposed in drawing No Cole D005.3.2. submitted.

- Prior to commencement the applicant shall submit a bridge condition survey and a bridge structural report showing the structural adequacy of Shrubbywood Bridge WH I 1825-002.00 to carry the proposed attached ducts and iron conduit.
- 3. Prior to commencement the applicant shall submit to the Planning Authority for written approval fully annotated construction design drawings for Clonava Bridge WH I 1825-001.00 showing detail Option B of the 5 No. 125mm ducts to be carried in a 400mm diameter iron conduit fixed to the side of the bridge deck as proposed in drawing No Cole D005.3.1. submitted. Note Option A is not desirable as it reduces the effective width of the bridge.
- 4. Prior to commencement the applicant to submit a bridge condition survey and a bridge structural report showing the structural adequacy of Clonava Bridge WH I 1825-0021.00 to carry the proposed attached ducts and iron conduit.
- 5. Prior to commencement the applicant to submit to the Planning Authority for written approval detail of the proposed work at each of the 16 water crossings along the cable route showing proximity of the proposed cabling to the existing culverts and the proposed works to protect the existing culverts.

Surface Water

- The surface water system shall be designed to mimic existing green field runoff from the proposed site during a hundred year rainfall event and a restricted discharge rate of no greater than 5I/s/ha (min 5I/s).
- 2. All surface water from all hard standing areas for vehicular refuelling, maintenance, waiting and parking shall be passed through adequately sized and located petrol/oil bypass interceptors before any discharge to waters.
- 3. Prior to commencement the developer shall submit to the planning authority for agreement full details of the petrol/oil interceptors and hardstand area. All fuel, lubricants or other chemical storage tanks shall be adequately bunded to protect against spillage. Bunding shall be impermeable and capable of retaining a volume equal to 1.5 times the capacity of the largest tank. The developer shall take precautions to ensure that oils and fuels used in the operations are stored in a secure place. All waste oil shall be removed from the site and disposed of in accordance with the Waste Management Act 1996-2003 and to the satisfaction of the planning authority.
- 4. Where the development land is higher than the public road a linear drainage channel or gully shall be placed at the entrance to the development, connected back to an additional dedicated soakaway.

Sewage treatment and disposal system

All foul sewerage & effluent associated with Wastewater Storage tank shall be removed from site by licensed waste contractor in accordance with the Waste Management Act 1996-2003. Prior to commencement developer to submit to the planning authority for agreement full details of maintenance contract with a licensed waste contractor in accordance with the Waste Management Act 1996-2003.

Bond for Long term damage on Local and Regional Roads

The planning authority is of the view that construction of this development will lead to long term damage to the road network used as a haul routes for the development. The applicant shall be required to contribute to the cost of repairing this damage and a cash bond of €451,746 shall be paid to the Planning Authority, prior to commencement of development.

General Requirements

- A Construction Management Plan shall be submitted to WCC. Contents to include implementation of planning conditions and EIAR requirements.
- WCC to be advised of details of PSDP, PSCS and contractors.
- Prior to commencement the applicant shall apply to Westmeath County Council for a roads opening licence and pay associated fees / bonds.
- Developer to consult with An Garda Siochana, emergency services and bus operators in relation to each stage of the works.
- Liaison with the public, residents, businesses and schools.
- Liaison with local groups such as Tidy Towns, etc.
- Allow for briefing of Elected Members in affected Municipal Districts.
- The developer shall allow in his programme for accommodation of local events, such as charity walks and cycles.

16.3 Water & Environmental Services Report:

Previous planning applications (plan ref 17/6177 & 17/6292) for a wind farm consisting of 13 no wind turbines had been the subject of reports dated 21^{st} July 2017 and 8^{th} December 2017 by Environment Section.

The following is set out in the report of Water and Environmental Services.

It is noted that the current SID application is similar to the development proposed in those previous planning applications, however there are significant differences. In particular the current proposal includes 15 No wind turbines but also the grid connection (26 km of underground cabling to facilitate the connection to the national grid from the proposed onsite substation at Camagh to the existing 110KV Mullingar substation at Irishtown, Mullingar, along with associated upgrade works to the 110KV Mullingar substation).

The documentation accompanying this SID application include:-

- Environmental Impact Assessment Report (volumes 1a, 1b, 2, 3a, 3b and Drawings)
- Natura Impact Statement

Construction and commissioning of the wind farm will take between 12 and 18 months, followed by a 30 year operational phase at minimum. The principle environmental impacts anticipated during the construction phase are noise, water supply, sewage disposal, waste disposal, protection of waters, and dust. During the operational phase, the principle impacts will be light (shadow flicker), noise, water supply, sewage disposal, waste disposal, waste disposal, waste disposal, water supply, sewage disposal, waters.

Natura Impact Statement (NIS)

1.1 The applicant carried out an Appropriate Assessment (Stage 1) Screening Report to consider the potential effects from the development on Natura 2000 sites within a 15km radius of the site in line with "Assessment of plans and projects significantly affecting Natura 2000 sites; Methodological guidance on

the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC" (EC, 2001) and "Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities" (DoEHLG, December 2009, as amended February 2010).

1.2 There are 20 Natura 2000 sites listed as being within a 15km radius of the site, but due to the lack of connectivity between the European Site and the proposed development, or it's location in a separate surface water catchment, or species associated with the SPA were not recorded at the site of the proposed development, or the proposed development site is outside the foraging range for species associated with the SPA, 14 of the sites were screened out, leaving Lough Owel SAC (000688), Lough Ennell SAC (000685), Lough Owel SPA (004044), Lough Derravaragh SPA (site code 004043) and Lough Iron SPA (site code 004046) as screened-in for assessment and a Stage 2 Natura Impact Statement (NIS) was prepared.

1.3 The NIS provides an assessment of all potential direct or indirect adverse effects on these Natura 2000 Sites. Where the potential for any adverse has been identified, the source-pathway-receptor link has been blocked through the use of avoidance, appropriate design and mitigation measures set out with the NIS report and its appendices. The assessment concludes that the proposed development will not adversely affect the integrity of these Natura 2000 sites either as a stand-alone development or in combination with other plans or projects.

This conclusion is endorsed.

Environmental Impact Assessment Report (EIAR)

I have examined the Environmental Impact Assessment Report (EIAR) and supporting Appendices but have focussed in particular on Chapter 4 (description of the proposed development), Chapter 5 (shadow flicker only), Chapter 8 (land, soils and geology), Chapter 9 (hydrology and hydrogeology), Chapter 10 (air and climate), Chapter 11 (noise and vibration), Chapter 15 (interaction of effects), Chapter 16 (schedule of mitigation and monitoring proposals) and Appendix 4-8 (Construction & Environmental Management Plan (CEMP)).

Shadow Flicker.

Of the 55 no properties modelled, 3 no properties are projected as exceeding the annual threshold. The report notes that the assessment is conservative and that in reality, shadow flicker is likely to be eliminated or significantly reduced from that projected. Mitigation measures proposed include wind turbine control measures and /or physical screening measures at the property.

Land, Soils and Geology

An assessment of the wind farm and grid connection during construction, operation and decommissioning stages, along with a cumulative assessment for each stage has been undertaken. Mitigation measures have been identified and no significant impacts are predicted to occur.

Hydrology and Hydrogeology

The primary risk to groundwater would be from oil spillage and leakages. Surface water drainage measures, pollution control and other preventative measures have been incorporated into the CEMP to minimise significant adverse effects on water quality and downstream sensitive sites.

An assessment of the wind farm and grid connection during construction, operation and decommissioning stages, along with a cumulative assessment for each stage has been undertaken. Mitigation measures have been identified and no significant impacts are predicted to occur.

Noise and Vibration

The report identifies 18 houses within 1 km radius of a wind turbine with the 2 closest house (H18 & H24) within 638m and 679m respectively. The noise and vibration associated with the construction, operation and decommissioning phases are not expected to have any significant impact subject to the implementation of listed mitigation measures.

Interaction of Effects

As part of the EIAR process, the potential for the interaction of effects has been identified and assessed. These impacts have been avoided or reduced by design and proposed mitigation measures.

Schedule of Mitigation and Monitoring Proposals

Some 137 no mitigation and 40 no monitoring measures proposed in the relevant chapters of the EIAR are listed in this schedule.

Conclusions

Having regard to the NIS, the EIAR and compliance with the mitigation measures proposed, there are no objections to the proposed development from an Environment point of view, subject to the following conditions:

- Before the commencement of construction on site, the developer shall submit an updated Construction & Environmental Management Plan (CEMP) for approval of the Planning Authority. The updated CEMP shall clearly identify key construction personnel responsible for the operation on the plan. It shall also identify waste collection contractors and waste destination facilities (including permit numbers) to be used the construction phase. The Plan shall also set out regime for reporting monitoring results to the Planning Authority.
- 2. During the operational phase of the development, all foul sewage and effluent from wash-hand basins shall be discharged to a sealed storage tank, which will be emptied as required and the contents tankered off site by an authorised waste collector to a wastewater treatment plant. The storage tank shall be fitted with a monitored automated alarm system that will provide sufficient notice that the tank requires emptying.
- 3. All oil and fuel storage tanks shall be stored in designated storage areas, which shall be bunded to a volume of 110% of the capacity of the largest tank/container within the bunded area(s). The bund shall be designed in accordance with IS EN 1992–3: 2006 (Design of concrete structures Part 3: Liquid retaining and containment structures). Filling and draw-off points shall be located entirely within the bunded area(s). Drainage from the bunded area(s) shall be diverted for collection and safe disposal.
- 4. The developer shall make arrangements to prevent surface water run-off from open cut areas directly to any stream or watercourse during the construction phase. All such water shall be trapped and held in temporary settling ponds until such time as the suspended solids are deposited and the colour of the water dropped to a level that will not cause discolouration of the receiving waters.
- 5. The concentration of suspended solids in the surface water run-off from the construction works for discharge to watercourses shall not exceed 30mg/litre.

- During the construction phase, best available technology not entailing excessive cost shall be employed by the developer to minimise noise from the construction operations and shall have regard to BS 5228-1:2009 + A1:2014 (Code of practice for noise and vibration control on construction and open sites – Noise)
- 7. During the construction phase, site noise as defined in BS 5228-1:2009 + A1:2014 (Code of practice for noise and vibration control on construction and open sites Noise) shall not give rise to noise levels off-site, at any noise sensitive location in the vicinity which exceed the following sound pressure limits (LAeq,1 hour):
 - i. Daytime 7am to 7pm Monday to Saturday (excl. public holidays) 65dB
 - ii. Evening 7pm to 11pm (excl. public holidays) 55dB
 - iii. Any other time: 45dB

An appropriate correction shall be applied in the case of tonal or impulsive components in the measurements of noise.

- 8. During the operational phase of the development, noise generated by the wind turbines shall not give rise to noise levels off-site, at noise sensitive locations, which exceed the following sound pressure limits (LA90,10mins):
 - i. 40dB for quiet daytime (7am to 7pm) environments of less than 30dB
 - ii. 45dB for daytime (7am to 7pm) environments greater than 30dB or a maximum increase of 5dB(A) above background noise (whichever is higher)
 - iii. 43dB or a maximum increase of 5dB(A) above background noise (whichever is higher) for night time (7pm to 7am) periods

16.4 Senior Assistant Chief Fire Officer Report:

The Fire Officer has no objection to the development proposal subject to the provision of adequate access and facilities being provided for its use in the event of an accident on the site.

16.5 National Roads Design Office (NRDO)

It is indicated that the proposed grid connection has the potential to act as a constraint / increase costs associated with their proposed N4 Mullingar to Longford Scheme (currently at Phase 2 Option Selection).

17. THIRD PARTY OBSERVATIONS/SUBMISSION SUBMITTED TO AN BORD PLEANALA

The closing date for submissions to An Bord Pleanala was 17th May 2021 and as of the date of this report no third party submission has been received from the Board.

18. PLANNING AUTHORITY'S ASSESSMENT.

18.1 Principle of Proposed Development:

The proposed development is located within the "Inny River Lowlands" Landscape Character Assessment, which is classified as 'Low Capacity' in the Wind Energy Capacity CDP Map Ref No. 69 in Volume 2 of the Westmeath County Development Plan 2021-2027. Development wind farm site is located largely on flat, cutover peatland, with some areas of agricultural land and coniferous forestry. A landscape that is best described as Flat Peatland as per the Wind Energy Development Guidelines 2006.

Support for the location of industrial wind farms can be found in national policy (see Section 4.3 above) which specifically refers to the many worked out bogs in the Midlands, as being highly suited to wind energy development at a significant enough scale to support ancillary manufacturing, servicing and development activities. The the Regional Economic and Spatial Strategy (RSES) for the Eastern and Midland Region refers specifically to the after use of peatlands and consideration of their potential contribution to climate change mitigation and adaptation including renewable energy production.

In terms of appropriate location for Wind farm developments CDP policy CPO 10.146 refers as follows:

To strictly direct large-scale energy production projects, in the form of wind farms, onto cutover cutaway peatlands in the County, subject to environmental, landscape, habitats and wildlife protection requirements being addressed.

The principle of the proposed wind farm development is considered acceptable, given that the development is in line with national and regional energy and climate action policies, and largely complies with the objectives and policies set out in the current County Development Plan 2021 - 2027 (CDP). The proposed development is considered generally compliant with the Wind Energy Guidelines 2006 (and the Draft Revised Wind Energy Development Guidelines 2019) in terms of siting and landscape suitably for large wind farm developments, given the proposed location on an extensive parcel of peatland. The Landscape Character Assessment associated with the CDP, the above Guidelines and the CDP make reference to the suitably of cut away peatland for taller wind turbines.

Having regard to the foregoing, it is clear that the preferred locations for large scale energy production in the form of wind farms, is on cutover cutaway peatlands in the County, subject to nature conservation and habitat protection requirements being fully addressed.

Following a review of the proposed turbine locations in light of the suitability of peatlands as wind areas, it is assessed that 14 of the proposed turbines are wholly located inside a landscape deemed suitable for wind energy development. Turbine T15 is located on agricultural grazing land.

In the context of this assessment, it should be noted that Westmeath County Development Plan 2021-2027 was adopted by the Members of the Council on the 22nd March 2021 with the Plan coming into effect on the 3rd May 2021. Having regard to the foregoing it should be noted that a Draft Ministerial Direction was issued by the Minister for Planning under Section 31 of the Act on 29 April 2021 which stated:

3) Delete wind energy policy objective CPO 10.143 in its entirety from section 10.23.2 of the Development Plan.

(It should be noted that CPO 10.143 set out the following:

Provide the following separation distances between wind turbines and residential dwellings:

- 500 metres, where the tip height of the wind turbine blade is greater than 25 metres but does not exceed 50 metres.
- 1000 metres, where the tip height of the wind turbine blade is greater than 50 metres but does not exceed 100 metres.
- 1500 metres, where the tip height of the wind turbine blade is greater than 100 metres but does not exceed 150 metres.
- More than 2000 metres, where the tip height of the wind turbine blade is greater than 150 metres).
- 4) Take such steps as are required to identify, on an evidence-basis and using appropriate and meaningful metrics, the wind energy production (in megawatts) which County Westmeath can

contribute in delivering its share of overall Government targets on renewable energy and climate change mitigation over the plan period, consistent with the requirements set out in the Specific Planning Policy Requirement in the Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (July 2017)

Such steps shall be accompanied by revisions to the Wind Energy Capacity Map and Landscape Character Assessment, and coordination of the objectives for wind energy development in the Development Plan with those of the neighbouring counties as are necessary to ensure a coordinated approach with wind energy objectives of adjoining local authorities having regard to requirements of section 9(4) of the Act.

Accordingly, having regard to the provisions as set out under s.34(2)(c) of the Planning and Development Act 2000 (as amended), by virtue of the issuing of a notice of a Draft Ministerial Direction, the above referenced CPO 10.143, is taken not to have come into effect for the purpose of this assessment.

18.2 Residential Amenity:

When considering the amenity of residents in the context of a proposed wind farm, there are three main potential impacts of relevance: Shadow Flicker, Noise and Visual Amenity.

Shadow Flicker:

Wind Turbines, like other tall structures, can cast long shadows when the sun is low in the sky. The effect known as 'shadow flicker' occurs where the blades of a wind turbine cast a shadow over a window in a nearby house and the rotation of the blades causes the shadow to flick on and off. Generally only properties within 130 degrees either side of north, relative to the turbines, can be affected at these latitudes in Ireland, turbines do not cast long shadows on their southern side.

The DoEHLG guidelines state that shadow flicker lasts only for a short period of time and occurs only during certain specific combined circumstances, as follows:

- the sun is shining and is at a low angle in the sky, i.e. just after dawn and before sunset, and
- the turbine is located directly between the sun and the affected property, and
- there is enough wind energy to ensure that the turbine blades are moving, and
- the turbine blades are positioned so as to cast a shadow on the receptor.

The DoEHLG 2006 wind energy guidelines recommend that shadow flicker at dwellings within 500 metres of a proposed turbine location should not exceed a total of 30 hours per year or 30 minutes per day. There are no occupied dwellings within 500 metres of any proposed turbine location with the nearest occupied dwelling (not involved in this application) located at a distance of approx 700 metres from the closest turbine. The DoEHLG Guidelines state that at distances greater than 10 rotor diameters from a turbine, the potential for shadow flicker is very low. There is a total of 47 dwellings within the shadow flicker study area which has a 1.55km buffer area (10 times rotor blade diameter). Assuming worst-case conditions (assuming 100% sunshine during day light hours, no screening, sun directly behind blade and that the blade is turning) 28 occupied dwellings are predicted to experience daily shadow flicker in excess of guideline amount of 30 minutes per day. Four of these dwellings are occupied by individuals involved with the proposed development. The DoEHLG total annual guideline limit of 30 hours is exceeded at 3 properties once the regional sunshine average of 30.1% and wind reduction factor of 37% is considered.

It is noted that Coole Wind Farm is committed to exceeding the existing daily and annual shadow flicker guideline requirements and committing to zero shadow flicker at occupied residential receptors.

The DoHPLG 'Draft Revised Wind Energy Development Guidelines' December 2019 recommend local planning authorities and/or An Bord Pleanála impose conditions to ensure that:

"no existing dwelling or other affected property will experience shadow flicker as a result of the wind energy development subject of the planning application and the wind energy development shall be installed and operated in accordance with the shadow flicker study submitted to accompany the planning application, including any mitigation measures required."

It is considered that should shadow flicker exist it can be adequately mitigated against as outlined within Chapter 5 of the EIAR.

Noise:

There are two quite distinct types of noise source within a wind turbine. Mechanical noise is currently less of a concern for amenity due to modern designs with additional acoustic enclosure of components to minimise noise emissions. Some manufacturers have eliminated the requirement for a gearbox, which in the past could generate significant tonal noise. Tonal noise may still arise but the dominant source of wind turbine noise is currently aerodynamic noise. A series of computer-based prediction models have been prepared in order to quantify the noise level associated with the operational phase of the proposed development. The curves are based on the baseline noise levels which represent the lowest baseline noise levels measured as part of the noise monitoring programme.

The proposed operational limits are identified within Section 11.3.2.2.2 of the EIAR for the Proposed Development:

- 40 dB LA90,10min for quiet daytime environments of less than 30 dB LA90,10min;
- 45 dB LA90,10min for daytime environments with background noise levels of greater than 30 dB LA90,10min or a maximum increase of 5 dB above background noise (whichever is higher), and;
- 43 dB LA90,10min or a maximum increase of 5dB above background noise (whichever is higher) for night time periods.

While the caveat of an increase of 5dB(A) above background for night-time operation is not explicit within the current guidance it is commonly applied in noise assessments prepared and is detailed in numerous examples of planning conditions issued by local authorities and An Bord Pleanála. Therefore, a night-time allowance for 5dB(A) above background has also been adopted for this assessment. This set of criteria has been chosen as it is in line with the intent of the relevant Irish guidance. The justification for the noise parameters used are considered reasonable.

Within the EIAR a first instance worst-case assessment has been completed assuming all noise locations are downwind of all turbines at the same time. The predicted noise levels at various wind speeds have been compared against developed noise criteria curves. The Wind Energy Development Planning Guidelines (2006) informs that the Noise impact should be assessed by reference to the nature and character of noise sensitive locations. In the case of wind energy development, a noise sensitive location includes any occupied dwelling house, hostel, health building or place of worship and may include areas of particular scenic quality or special recreational amenity importance. The findings of the assessment identified that there are two NSLs where potential exceedances are predicted under worst-case assumptions at H013 and H014. If confirmed during post-construction monitoring the EIAR states that:

"a curtailment strategy will be implemented to reduce noise levels due to the wind farm to within the criteria at all NSLs"

The application of the foregoing noise operational limits is reinforced by the recommendation of the Environment Department detailed in Section 16.3 of this report to include, in the event of a grant of permission, identical operational limits.

Mitigation measures identified within the EIAR which include control and regulation of the operation of turbine unit(s) in certain atmospheric and meteorological conditions are considered adequately robust to protect residential amenities within proximity of the proposed wind farm site.

Visual Amenity:

The Wind Energy Development Guidelines set out guidance for the siting and design of wind energy developments in various landscape contexts by defining six landscape character types that represent most situations where wind turbines may be proposed. The guidance is intended to be indicative and general, and notes that it, represents the 'best fit' solutions to likely situations. However, regarding these six landscape character types, the Guidelines also note that it is common for a wind energy development to be located in one landscape but visible from another and recommends that the entire visual unit should be taken into consideration.

As noted in the Wind Energy Development Guidelines and in the County Development Plan (Section 10.23.2), there is a need to balance the preservation and enhancement of nature conservation and habitat protection against the need to develop key strategic infrastructure in a manner that is consistent with proper planning and sustainable development. The proposal would have a visual impact from roads in the immediate vicinity and from residential properties therein, in locations where screening is not available or maintained. It is considered that in view of the long-established commercial peat-extraction operations, that the landscape presents itself as a highly moderated working landscape that is relatively robust. The visual character of the wider landscape has changed and would change further as a consequence of the proposal and would not result in a material alteration of visual intrusion as to warrant an unsupportive recommendation.

It should be noted that the Wind Energy Development Guidelines do not specify a minimum distance for the location of an industrial wind turbine from a residential property having regard to preservation of residential amenity.

It is considered that in order to protect the residential amenity of neighbouring dwellings, compliance with mitigation measures as proposed is a fundamental requirement.

18.3 Grid Connection & Haulage Route:

Preferred grid connection route of 26km follows the public roads from Wind Farm site to Multyfarnham on through Ballynafid and along the N4 east of Lough Owel to the existing Substation at Irishrown, Mullingar.

Environment Department of the Council have assessed both the EIAR and NIS submitted as part of this application and comment as follows: Having regard to the NIS, the EIAR and compliance with the mitigation measures proposed, there are no objections to the proposed development from an Environment point of view, subject to outlined conditions.

The construction phase is the critical period with respect to the traffic effects experienced on the surrounding road network in terms of both the additional traffic volumes that will be generated on the network, and the geometric requirements of the abnormally large loads associated with the wind turbine plant. The requirements of the additional traffic and abnormal loads generated during the construction

stage were assessed. Locations where remedial measures are required to accommodate the abnormal loads are identified. Westmeath County Council consider that a Transport Management Plan including full details of road network/ haulage routes, delivery times and the vehicle types to be used to transport materials on and off site is necessary. In addition, a condition survey of the roads and bridges along the haul routes shall be carried out by a qualified engineer both before and after construction of the windfarm development at the developer's expense.

The District Engineers report request the provision of adequate sightlines at proposed site entrances to the borrow pit and entrances to the construction site, proposed link road between R395 and R396. Junction improvements at junction of N4 shall comply with Transport Infrastructure Ireland (TII) publications along with the provision of a traffic safety audit of the junction.

The provision of a detailed precondition survey of the proposed haul routes and a Pavement Strength Analysis and Culvert/Bridge Bearing Capacity Analysis Report for roads identified as the construction material haul routes. The report should include the proposed ongoing maintenance programme to be agreed and applied during the construction stage to avoid deterioration of the regional and local roads. At post construction and installation stage developer shall undertake to carry out all necessary improvement works.

Transportation Department report considers that the fixing of conduit with electric cabling to the side of a Bridge deck is inappropriate as it will compromise future maintenance work and /or rehabilitation work on the bridge parapet due to the attachment of high voltage electricity cables. The developer is requested to provide an alternative method for placing of the proposed ducts and electricity cables at river crossings. Preferred option is to provide ducting under the river bed.

It is noted Transportation Department request for an alternative method for placing of the proposed ducts and electricity cables at river crossings. Such requirements are a design consideration and in the event of a grant of permission can be dealt with by way of condition. From a public road perspective, the Area Engineer has no objection to the proposed development from an engineering evaluation, subject to specified conditions.

18.4 Property Values

It is considered that the EIAR is void of an assessment of the potential impact the proposed wind farm will have on property valuations within the immediate vicinity. While the prospect of the proposed development may become a factor in the short term and the potential for impact on values is plausible, information is not conclusive in relation to the impact, in particular, the long term impact on property values. It is noted that the DoECLG Wind Energy Guidelines 2006 do not refer to impact on property value but set standards in relation to minimum setback distance from and maximum noise impacts at residential properties. Therefore, if property values are not to be adversely affected, it would be necessary to ensure that the Wind Energy Development Guidelines standards are achieved and that noise and shadow flicker levels are controlled, in order to protect residential amenities.

In view of the number of wind farm constructed throughout the country, it is considered that evidence of potential impact of wind farms, within a local Irish context, should be provided in order to complete the assessment of impacts on property values.

18.5 Turbine Design

The principle dimensions of the proposed wind turbines are as follows:

- Maximum Tip height of 175m
- Maximum Rotor Diameter of 155m

It is considered that the Board should consider the ratio of rotor diameter to hub height. A ratio in the order of 1:1 rotor diameter to hub height, gives rise to the typical tall, slender and proportional appearance of the machines. When the rotor diameter exceeds by a significant margin the hub height, the entire structure can become excessively dominant and chunky in views. Considering the stated dimensions of the proposed turbines, the maximum possible rotor diameter as proposed as 155m, resulting in a hub height of 97.5m. This results the potential ratio of rotor diameter to hub height at considerably more than 1:1, and in the order of 1.6:1.

The Planning Authority consider that no livery, stripes etc. whatsoever should be painted or attached to the turbines in order to keep them as visually clean as possible.

18.6 Amenity Potential:

It is recommended that the Board examine the possibility of a "broader" community gain in terms of amenity improvements consisting of the development of amenity pathways and links to the public roadways which will be available to walkers, trail runners, cyclists and other recreational users. These amenity pathways could be located on proposed internal road network and a new public car park provided. It is considered that both the internal amenity pathways/cycle tracks and dedicated amenity links would largely tie-in with and complement the objectives in policy CPO 12.83 which seeks to support the delivery of sustainable strategic greenways, blueways and peatways projects in the County in accordance with the *Strategy for the Future Development of National and Regional Greenways*.

18.7 Development Contributions & Bonds:

Development Contributions:

In the event of a grant of planning permission the levy as set out under the applicable Development Contribution Scheme made under section 48 of the Planning and Development Act 2000 should apply subject to any applicable indexation provisions of the Scheme at the time of payment.

Special Development Contribution:

The Councils' preference is for a very specific condition in the event of a grant requiring pre-surveying of affected roads, proposals for rendering the routes fit for purpose, ongoing monitoring and repair during the project, post construction survey and remedial works. District Engineers report refers.

Bonds

The DECLG Wind Energy Development Guidelines for Planning Authorities 2006 recommend that Planning Authorities do not to attach a bond for the decommissioning of the turbines, because the scrap value is likely to cover this cost. The District Engineers report recommends that a cash bond €451,746 relating to roads / junctions used during construction be attached to a grant of permission which shall be paid to the Planning Authority, prior to commencement of development (detailed calculations are available).

18.8 Conclusion and Recommendation:

Subject to relevant environmental determinations (for which the Board is the Competent Authority) it is considered that, subject to condition, none of the issues outlined above would be so significant as to justify refusal of permission.

Having regard to:

- the location of the proposed wind farm site primarily on flat peatlands
- the planning history of the site
- the character of the landscape in the area and of the general vicinity
- the pattern of existing and permitted development in the area and
- the distance to dwellings and other sensitive receptors from the proposed development

it is considered that the proposed development would be in accordance with European energy policy, relevant Section 28 Guidelines (including the provisions of the Wind Energy Development Guidelines – Guidelines for Planning Authorities issued by the Department of the Environment, Heritage and Local Government in June, 2006), national and regional policy together with the policy of the Westmeath County Development Plan 2021-2027 (having regard to the Draft Ministerial Direction), the proposed development would, if permitted:

- make a positive contribution to Ireland's national strategic policy on renewable energy and its move to a low energy carbon future,
- have an acceptable impact on the landscape,
- not seriously injure the residential or visual amenities of the area,
- not adversely affect the archaeological or natural heritage, and
- be acceptable in terms of traffic safety and convenience.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

19. PLANNING AUTHORITY'S CONDITIONS:

Recommendations for conditions include:

- Timescale for completion, operation and decommissioning
- Turbines not to be replaced without consent
- Construction and Environmental Management plan
- Noise levels during construction and operation, including monitoring
- Archaeological recording, reporting and any further mitigation arising from same
- Navigation lighting
- Mitigation measures in the EIAR to be applied
- Bird monitoring & kill record (subject to NPWS report)
- Surface water monitoring and management
- Development Contributions & Bond
- Community Benefit Scheme
- Wind Farm Amenity provision consisting walkway/cycle way and linkage
- No Signage/Livery
- Redesign of grid connection bridge crossings

- Pavement Strength Analysis and Culvert/Bridge Bearing Capacity Analysis Report for haulage roads
- Pre and post construction works
- Requirements of Westmeath County Councils Internal Departments (see Section 16)

Brendan O'Brien

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Barry Kehoe Director of Services 21 May 2021

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Pat Gallagher Chief Executive 21 May 2021