An Bord Pleanála

Inspector's Report ABP311565-21

Development	10 Year Planning Permission for the construction of 9 wind turbines and all associated works, including substation, meteorological mast and underground cables and two end lattice masts connecting to the 110kV Corduff – Mullingar overhead electricity mast.
Location	Ballagh, Billinstown, Ballynacar and Bracklyn, County Westmeath and Coolronan, County Meath.
Planning Authority	Westmeath County Council and Meath County Council.
Planning Authority Reg. Ref.	N/A.
Applicant	Bracklyn Wind farm Limited.
Type of Application	Application under the Provisions of S37E of the Act.
Planning Authority Decision	N/A.
Type of Appeal	N/A.
Appellant(s)	N/A.

Observers/Prescribed Bodies	(i) Irish Water, (ii) Development Applications Unit, (iii) Irish Aviation Authority, (iv) Transport Infrastructure Ireland, (v) Inland Fisheries Ireland.
Third Party Observers	1. John and Louise Byrne. 2. Mark Potterton 3. Karen Clune and Brendan Ivory 4. Tom and Catherine Clune 5. Mark and Nicole Clune 6. Patrick and Bridget Milligan and Others 7. Jenna Clune and Eoin Farrelly 8. Michael and Mary Keogh 9. Patrick and Elizabeth Farrington 10. Olive Power 11. Michelle and John Paul Farrelly 12. The North Westmeath Turbine Action Group (NWTAG) 13. Daryl Kennedy 14. Cathleen and Joey McMahon 15. Andrew Apps and Others 16. The Vaughan Family 17. Carmel and Thomas Clune 18. Eco Advocacy/Kieran Cummins 19. Gigginstown Horse Stud 20. Patrick and Bridget Mulligan and Others 21. Judith and Don Barker 22. Johnny Guirke TD

Date of Site Inspection	1st February, 2022.
Inspector	Paul Caprani.

Contents

1.0 Introduction and Background

1.1. ABP311565 relates to a planning application made under the provisions of Section 37(E) of the Planning and Development Act 2000, (as amended) for a wind farm development comprising of 9 turbines all of which are located within the administrative boundary of Westmeath. Part of the underground grid connection traverses the boundary into Co. Meath where it is proposed to connect with an the existing Corduff – Mullingar overhead powerline.

1.2. Under Planning Ref. 306261-19 the Board, in its decision dated 4th August 2021, determined that the proposed development constitutes development which falls within the definition of strategic infrastructure in the Seventh Schedule, and it is considered that the proposal is of strategic importance by reference to the requirements of Section 37(A)(2)(a), (b) and (c) of the Planning and Development Act 2000, as amended. On this basis it was determined that the application be made directly to An Bord Pleanála under the provisions of Section 37(E) of the Act. The proposed wind farm development is located in County Westmeath and is being made by Bracklyn Wind farm Limited.

1.3. The development relates to the provision of 9 wind turbines with a hub height of 104 metres and a rotor diameter of 162 metres providing an overall tip height of 185 metres together with all associated works. These works include associated underground electrical and communication cabling, site control buildings, a freestanding meteorological mast together with a 110 kilovolt (kV) loop in/loop out air insulated switch gear (AIS) electrical substation, 6.3 kilometres of 110kV underground electricity lines together with 2 lattice type end masts to link in with the 110kV Mullingar – Corduff overhead electricity transmission line. It is also proposed to replace the existing meteorological mast on site. The application was accompanied by an Environmental Impact Assessment Report and a Natura Impact Statement. A total of 27 submissions were received in respect of the planning application from both third-party observers and prescribed bodies. The subject site occupies an extensive rural, agricultural area amounting to 273 hectares between Cloughan Crossroads c.3km to the south of the village of Delvin along a tract of land

to the south of a local road the L5508 towards the Meath border. The lands in which the turbines are located, are contained within the Bracklyn Farm Estate a working agricultural farm. Ancillary elements of the overall development including the grid connection infrastructure and haul route upgrade works are located on both private lands and within the public road network.

2.0 Site Location and Description

2.1. The subject site occupies an extensive area straddling the Westmeath/Meath border approximately 20 kilometres north-east/east of the town of Mullingar. The north-western end of the site is located c.2.7 kilometres south of Delvin and at its closest point approximately 4 kilometres north of the village of Raharney. The proposed turbines will be located in the townland of Bracklyn in County Westmeath, whereas the proposed grid connection infrastructure and electricity substations will be located within the townlands of Bracklyn, County Westmeath and Coolronan, County Meath.

Land Use

2.2. The site together with the underground cables extensively stretch along the southern side of a local third-class road (the L5508) which links the N52 to the north-west to the village of Ballivor to the south east. The site extends along a distance of approximately 7.6 kilometres roughly along the southern side of the alignment of the local road. The central portion of the site is to accommodate the 9 wind turbines. The central area of the site extends southwards from the local access road to a depth of approximately 2 kilometres. It is within this area where it is proposed to locate the 9 turbines. The site comprises of a mixture of arable crop fields, improved grassland, conifer plantation and natural and broadleaf woodland. The wider area incorporates extensive areas of cutover bogland which have been harvested by Bord na Mona. Much of the grassland along the peripheral areas of the proposed wind farm site is reclaimed cutover raised bog.

2.3. Habitat surveys carried out as part of the EIAR identified pockets of mature woodland scattered throughout the site. Field boundaries generally consist of mature and semi-mature treelined hedgerows which consist of a mix of native species. Much of the area where the proposed turbines are to be located comprise of deciduous woodland and arable farmland. Bracklyn House is located in the centrally within the

site with various farm buildings and surrounding fields being connected by a series of farm tracks.

2.4. The proposed turbines T1, T2 and T3, spoil deposition areas (2 no.), temporary compound, meteorological mast and site control building will be located upon agricultural lands. Turbines T4, T5, T6, T7, T10 & T11 are located within and adjacent to areas of mixed forestry and woodland[1]. Based on the Corine Land Mapping (2018) the central area of land within the site is classified under 211 'non-irrigated arable land'. Other areas within the site are classified as 243 'land principally occupied by agriculture with significant areas of natural vegetation' and 313 'mixed forestry'. The agricultural land is predominantly used for tillage crops with some cattle grazing. The proposed 110kv sub-station is centrally located within an area of conifer forestry.

Topography

2.5. In terms of topography the site is relatively flat, with slight undulations. The topography on the whole ranging between 75m to 100m AOD. The central area of the subject site comprises of a gently sloping hill and the land falls away in all directions from this high point. The access road which runs along the northern boundary of the site incorporates a slight incline from c.67 metres AOD in the south-east to c.87 metres AOD to the north-west.

Settlement

2.6. In terms of surrounding settlement, the local road running along the northern boundary of the site accommodates sporadic linear development along its alignment. Most of the development along the alignment is confined to the north-west and south-eastern end of the road. No houses are located within the immediate vicinity of the proposed turbines. Other dwellings in the wider area are located along local access roads at Craddenstown to the south of the site and along Bracklyn, a local road which runs in an east-west direction southwards from the N52 to the south of the site. The EIAR indicates that there are 78 dwellings located within 1.85

[1] It appears from documentation submitted, that it was originally proposed to construct 11 turbines on site. During the iterative design process, it was decided to omit 2 turbines (T8 & T9). The original numbering of turbines was retained (T1-T7 & T10 and T11).

kilometres of the proposed wind turbines. St. Tolas National School is located approximately 3.5 kilometres to the north-west of the proposed turbines, off a local road near the N52. The settlement pattern in the area can be described as dispersed and sporadic with no large concentration of clusters of dwellings outside the main settlements referred to above.

Road Network

2.7. In terms of the road network, the site is generally surrounded by regional and local roads. In addition, the N52 National Secondary Road is located approximately 2 kilometres to the north-west of the site and 1.7 kilometres from the proposed site entrance to the turbines. The L1504 and L5508 will be used to access the proposed development from the N52. The L5508 which runs along the northern boundary of the site is a narrow single carriageway road with grass verges on either side. In the vicinity of the proposed entrance to the site, the L5508 incorporates a straight alignment with good vision splays in both directions. All roads proximate to the subject site are local roads, either of double carriageway (two cars passing in opposite directions) or single carriageways such as the L5508 along the northern boundary of the site. The R156 (Killucan- Raharney-Ballivor Regional Route) runs roughly east-west c5km the south of the site.

Hydrology and Hydrogeology

2.8. In terms of hydrology, a number of small streams and or ditches traverse the site and two small water bodies, including Bracklyn Lough are located to the immediate south-east of the main portion of the site. On a regional level the site is located within the Boyne Catchment Area. On a more local scale the majority of the wind farm site is located within the Stoneyford River (Boyne_SC050) surface water area. The western extremity of the site is located in the Deel Catchment. All the lands on which the turbines are located are within the Stoneyford River Catchment area. The Stoneyford River runs in a south-eastern direction c.2.5 kilometres to the east of the site. A number of tributaries which flow into the Stoneyford River are located in close proximity to the south-east of the site. The River Deel and the tributaries associated with this river are located to the south-west of the subject site. A small section of the western portion of the site is located within this area.

2.9. The vast majority of the site is located in an area underlain by a locally important aquifer which is moderately productive in local zones only. T7 is located in an area underlain by a poor aquifer which is generally unproductive except for local zones.

2.10. In terms of other infrastructure, The Mullingar – Corduff 110 kV overhead line runs along the south-eastern boundary of the site where the proposed substation is to be located.

European Sites

2.11. In terms of surrounding Natura 2000 sites, there are no European sites located within or contiguous to the application site. The nearest European sites are the River Boyne and River Blackwater SPA (Site Code: 004232) and SAC (Site Code: 002299). It follows the course of the River Del to the south-west of the site. The Stoneyford River also forms part of the mosaic of the River Boyne and River Blackwater SAC and SPA to the north-east and east of the site. The Mount Hevey Bog SAC is located c.9 kilometres to the south of the site.

3.0 **Proposed Development**

3.1. Planning permission is sought for the following on the subject site:

Turbine Development

3.2. 9 wind turbines are proposed to be constructed on site. The wind farm development site is to be accessed via a single access point to the north-west of the site from the L5508. The access track serving the wind farm development runs roughly parallel to the south of the access road L5508. Turbines Nos. 1 and 6 are located off the north of the access road while Turbines Nos. 2, 7 and 11 are located directly to the south off the main access. Opposite Turbine 6 a separate access runs southwards towards the southern boundary of the site off which, Turbines 3, 4 and 5 are located. Turbine 11 is located adjacent to the access road at the eastern end of the site.

3.3. The approximate altitude of each of the turbines range from 78 to 93 metres. Details of the proposed turbine make, model, dimensions and co-ordinates are provided for in Table 1, set out below.

Turbine Model	Output (MW)	Hub Height (m)	Rotor Diameter (m)	Overall Tip Height (m)
Vestas V162-6.0	6.0	104	162	185

3.4. The proposed turbines will have an overall tip height of 185 metres. The turbines will each consist of a three bladed rotor attached to nacelle (hub) which contains the mechanical drive train and the electrical generation mechanism which are mounted on a 104 metre high concrete tower. The colour of the proposed turbines and blades will be white, off-white or light grey or as required by An Bord Pleanála. The turbines have a hub height of 104 metres and a rotor diameter of 162 metres (blade length 81 metres) giving an overall height of 185 metres. The EIAR acknowledges that any proposal to materially deviate from the above dimensions must be subject to a separate future development consent process.

Table 2 below sets out the precise location of each of the turbines.

ID	Easting	Northing	Approx. Altitude (m AOD)
T1	660970	759136	83
T2	660780	758679	91
T3	660893	758066	93
T4	661188	757707	83
T5	660780	757320	82
T6	661425	758849	79
T7	661617	758418	79
T10	662349	758514	78
T11	661153	758072	82

Turbine Foundations

3.5. Each turbine is to be secured to a steel ring foundation comprising of either reinforced concrete or a pile foundation depending on the specific ground conditions at each location. The depth of excavation required for each wind turbine foundation

will vary, depending on the precise ground conditions. It is anticipated that foundation depths will range between 3 and 5 metres and the diameter of the pile foundation will be c.19 metres. The total volume of excavated material at each foundation will range from between 940 cubic metres to 2,260 cubic metres. Excavation will be by conventional mechanical methods and no blasting will be required. Hardstanding areas will be constructed adjacent to each turbine to facilitate crane operations for turbine erection. Each of the hardstanding areas will be 55 metres by 35 metres and will consist of a level and compacted hardcore.

Access Tracks and Underground Cabling

3.6. A total of 6.8 kilometres of on-site access tracks will be required for the construction of the proposal and for site access during the operational phase. This will comprise of 3.7 kilometres of newly constructed access tracks and the utilisation/upgrade of 3.1 kilometres of existing agricultural and forestry tracks. The access track will have a typical running width of 5 metres (wider at bends). The tracks will be unsealed and constructed of crushed stone material to allow for permeability. Access to the proposed wind farm will be provided via an existing forestry entrance from the local road at the north-western corner of the site. A number of drainage ditches and streams do exist where access roads are required to traverse these watercourses appropriate construction protocols will take place.

3.7. All on-site electrical and communication cables will be placed underground and will follow the alignment of the on-site access tracks insofar as practicable. The proposed depth of the cable trench is 1 metre with a width of 0.5 metres. An electrical site control building is located along the access road to Turbine 11 in the eastern part of the site. The control building will have a height of just over 6 metres and a gross floor area of c.130 square metres. It will be constructed of blockwork and finished in a sand and cement render with slate roof and galvanised steel doors. The control building will contain electrical apparatus and will transfer electricity from each individual circuit to a single circuit for its onward transmission to the 110kV electricity substation.

Mast

3.8. It is also proposed to replace the existing meteorological mast (constructed under the exempted development provisions (Class 20A of Schedule 2 of Part 1) with a

permanent mast. The mast is to be located approximately 300 metres to the south-east of Turbine 3. It will be 104 metres in height and will consist of a freestanding lattice structure. It will involve the construction of a concrete foundation.

3.9. A temporary construction compound which will include temporary cabins for site offices, welfare facilities for construction including toilets, parking, storage areas for waste components and materials will be located to the immediate south of the main access tracks serving the turbines between Turbine Nos. 1 and 2 and to the immediate north-west of the 110kV substation.

Substation

3.10. The 110kV electricity substation will export electrical power generated by the proposed development to the National Grid via the existing Mullingar – Corduff 110kV overlying electricity transmission line. It will comprise of a loop-in/loop-out air-insulated switchroom. The footprint of the substation (overall compound area) will measure 15,400 square metres and will be surrounded by a palisade fence. It will contain two control buildings and all necessary electricity equipment and apparatus to facilitate the export of electricity to the national grid. The proposed substation will be located within a forested area to the immediate south of the access road. The proposed substation will contain two control buildings one of which will accommodate an MV switchgear room while the other will comprise of a transmission system operator control building. The switchgear room will have a gross floor area of c.172 square metres while the control building will measure 450 square metres. Both buildings will incorporate a ridge height of between 5.5 and c.7 metres in height. Both buildings will be finished in a sand and cement render with a slate roof.

3.11. The proposed electricity substation is located c.5.3 kilometres from the proposed end mast which will link into the existing Mullingar – Corduff 110kV overhead electricity line. It is proposed to install 6.3 kilometres of 110kV underground electricity line. 4.4 kilometres of which will be located within agricultural lands/forestry area and 1.9 kilometres will be located within the carriageway/verges of the L5508 and L80122 local roads. The underground line will be installed within ducting in excavated trenches c.1.3 metres in depth and 0.6 metres wide. Details of the methodology involved in laying the underground electricity lines are set out in Section 3.4.8.2 of

the EIAR (page 3:17 to 3:20). It is noted that horizontal directional drilling will be required to facilitate the crossing of the L80122.

End Masts

3.12. Two proposed end masts (lattice type towers) will be located immediate beneath the Mullingar – Corduff 110kV overhead electricity transmission line. The mast will have a height of 16 metres and will be incorporated into concrete foundations to a depth of 3 metres. The proposed end mast will connect to the existing Mullingar – Corduff overhead transmission line at a point between two existing poles and thus will not entail the removal or alteration of any part of the existing line. This will allow electricity generated by the proposed wind farm to be exported to the National Grid before returning to the Mullingar – Corduff 110 kV electricity transmission line.

Earthworks and Other Construction Activities

3.13. In terms of earthworks, the EIAR states that no borrow pits will be developed as part of the proposed development. It is proposed to develop two spoil deposition areas where excess peat soil and subsoil which cannot be used for reinstatement or is unsuitable for landscaping purposes will be stored permanently. These soil deposition areas are located between Turbine 3 and 4 and are contiguous to the proposed permanent met mast near the southern boundary of the site. Following the completion of the construction of the wind farm, the deposition areas will be graded to match the profile of the surrounding land and capped soil. It is stated that a micro-siting allowance of 20 metres in any direction is proposed for wind turbines in accordance with Section 5.3 of the Wind Energy Development Guidelines for Planning Authorities 2006.

3.14. The EIAR states that the final selection of the precise haul route has not been selected and will be determined by the turbine supplier and the Port of entry. It is suggested that the turbine components will most likely enter via the Port of Waterford. It is anticipated that some site works will be required at the entrance of the L5508 and other locations have been identified where works to the public road will be required. These are detailed in Table 3.4 of the EIAR (page 3:24). Local construction materials will be obtained from local quarries/suppliers. All construction works to be carried out on site will be subject to the various mitigation measures included in the EIAR.

3.15. With regard to tree felling, it is noted that the majority of the proposed development is located within pastural grasslands and arable crop lands. However, it is proposed to permanently remove c.28 hectares of commercial forestry in order to accommodate the construction of the turbine foundations, the substation and other infrastructural works.

3.16. In accordance with the granting of felling licences for wind farm developments, it will be necessary for the applicant to identify appropriate replacement lands. The applicant can confirm that no felling will take place within the proposed development site until such time as a felling licence has been obtained.

3.17. In terms of the construction phase, it is stated that this is likely to last approximately 15 to 18 months from the commencement of construction activities on site. Works will take place 6 days a week 0700 hours to 1900 hours Monday to Friday and a half day on Saturday. No construction works are envisaged during the operational phase. Details of the construction sequence are set out in Section 3.6.1 of the EIAR.

4.0 **Planning History**

4.1. Details of the planning history associated with the subject site and its surroundings are contained in the Westmeath County Council Report to Elected Members contained on file. The relevant planning history is set out in Section 6 of the report. It refers to a number of planning applications for Ballynagall Feeds Limited (a pig rearing enterprise) located to the north of Mullingar and to the west of the subject site. These applications are not directly relevant to the current application before the Board and for this reason are not summarised in this report.

4.2. Under File Ref. 18/6246 planning permission was granted to the upgrading of an entrance to a forestry development together with internal access road and associated site works.

4.3. Under ABP308608-20 retention of planning permission for an 80 metre high meteorological mast together with an increase in height of the mast to 100 metres was granted by the Board on 14th June, 2021.

4.4. Under File Ref. ABP307278-20 which related to lands contiguous to the south-western boundary of the site an application for substitute consent in relation to peat extraction was sought. This application was withdrawn.

4.5. Under ABP306236-19, which relates to a large tract of land to the south-east of the subject site leave was sought to apply for substitute consent for peat extraction on these lands this decision was annulled.

4.6. Under File Ref. 306261-19, the Board determined that the construction of 9 turbines falls within the definition of strategic infrastructure in the Seventh Schedule of the Planning and Development Act and is considered to be of strategic importance and as such qualifies as a strategic infrastructure development under the provisions of the Planning Acts (as amended).

5.0 **Submissions**

5.1. **Submissions by Prescribed Bodies**

5.1.1. Submission by the National Parks and Wildlife – Department of Housing, Local Government and Heritage

The Department notes the need for an updated National Strategic Plan for the siting of wind farms and other renewable energy generation in order to address inconsistent wind energy policies on a national level.

The Department recommends the inclusion of an overall “do nothing scenario assessment for wind farms” especially in areas where there are natural habitats that are acting as carbon storage. The Board are requested to acknowledge that there is a biodiversity crisis alongside a climate crisis and that climate resilience includes healthy biodiversity.

Specifically in relation to the NIS submitted, it is recommended that the mitigation measures set out in the NIS are implemented in full to avoid potential adverse impacts on European Sites.

The Department acknowledges the extensive and scientifically rigorous bird survey work over 2 years which has been carried out and considers it to be sufficient to

inform the impact assessment on this project. However, concerns remain in relation to cumulative impacts from multiple wind farms in the wider area.

The Natura Impact Statement details a total of 125 turbines which are existing, consented or in review within 45 kilometres of the proposed development together with another 26 turbines proposed for nearby Ballivor Wind farm. Data from the proposed development and the proposed Ballivor Wind farm will need combined assessment of the likely cumulative effects on birds. The Department recommends that the cumulative impact of these multiple wind farms is recognised, and a strategic plan put in place.

To aim for zero net biodiversity loss, the Department recommends the siting of several of the turbines further away from existing scrub/trees. Where possible the location of turbines within field areas will minimise potential collision to bird and bat species without the need to remove existing vegetation.

The submission goes on to note that wind turbines have the potential to cause harm to bats in several ways. The Department acknowledges that bat activity has been taken into consideration during the design phases of the proposed wind farm development. A programme of post construction monitoring of bat activity and searches for bat carcasses is recommended to check that pre-construction predictions of risk are accurate, and that any mitigation implemented has been effective. All mitigations for bats should be carried out to the standards of survey, modelling and mitigation outlined in Eurobats publication ‘No. 6 2019’. The Department notes that a buffer of 50 metres from turbine blade tip to all habitat features used by bats (hedgerows, treelines) is proposed for these turbines. However, it is considered that a greater buffer distance of up to 200 metres may be required in accordance with European guidance. The Department recommends consideration of the re-siting of any turbine that requires vegetation removal to achieve this distance.

The Department recommends that all wind turbines are subject to a feathering and curtailment of turbine blades when wind speeds are below the cut-off speed of the proposed turbine. It is argued that feathering can significantly reduce bat fatalities without reducing economic output. Curtailment involves raising the cut-in speed of wind turbines to reduce their operation during periods of high bat activity usually

dawn and dusk from April to October. Any proposed curtailment mitigation strategy should aim to ensure that a wind turbine is shut down during conditions where at least 90% of bat activity was recorded.

The Department recommends the inclusion of a condition for the rehabilitation/ biodiversity enhancements avoiding areas that may draw bats, birds into a collision zone.

It is noted that lighting requirements for wind turbines may have impacts on biodiversity in particular pollinators and bat species. An assessment of the impacts of required lighting or aviating lighting has not been included in the biodiversity chapter of the EIAR or the bat survey report.

Lighting of the project site should consider best practice guidance such as dark sky Ireland light recommendations. Lighting should avoid LED light which peaks in the blue spectrum as this could have negative impacts on biodiversity. The submission also makes other recommendations in relation to lighting.

Cumulative operation effects on local bird population needs to be addressed with consideration for mitigation measures proposed for the Ballivor Wind farm development also. Should a situation arise whereby usage levels by species prone to collision risk increases, appropriate measures need to be conditioned. It is noted that ‘carcasses searches’ i.e. searching for dead bats under the operational turbines provide the most reliable way of determining the actual risk of wind turbines at local bat population.

5.1.2. <u>Submission by Irish Water</u>

This submission notes that wind farm construction can disturb/move large volumes of peat. This can have an impact on the quality of raw water and can increase difficulties in treating water. It is critical that all surface/groundwater sources within proximity are protected from any pollution arising from the proposed development to protect drinking water sources as per the requirements of the Water Framework Directive.

Appropriate mitigation and monitoring measures, including those set out in the EIAR, should be implemented in full including the provision of monitoring to ensure that the mitigation measures are appropriate and effective.

Irish Water does not permit building over of its assets. Where this is likely to occur, the applicant is required to identify, survey and map the exact location of the Irish Water assets relative to the proposed works.

Irish Water respectfully request that in the case of a grant of planning permission, a total of 9 conditions be attached.

5.1.3. Submission by Transport Infrastructure Ireland (TII)

A submission from Transport Infrastructure Ireland sets out national policy in relation to development on national roads including the requirement to maintain the strategic capacity of the national road network including future capacity enhancement.

It is noted with serious concern that under Section 13.1.2.2 of the EIAR that no reference has been made to national planning policy in relation to national roads. It also refers to national roads standards publications that have been superseded.

Transport Infrastructure Ireland are also concerned that the character and total number of trips in and out of the proposed development are significant. Concerns over the development potential effects on road safety has not been addressed in the application especially in relation to the provision of a Road Safety Audits.

Transport Infrastructure Ireland therefore consider that a traffic and transport assessment should be required. It is stated that insufficient data has been submitted with the planning application to demonstrate that the proposed development would not have a detrimental effect on the capacity, safety or operational efficiency of the national road network. In the absence of a traffic and transport assessment, TII is unable to ascertain that transport impacts on national roads have been adequately addressed.

The applicant is required to consult with relevant road authorities on any works proposed that affect the national roads and associated junctions in terms of operational requirements such as delivery timetabling, potential costs and associated requirements prior to the commencement of any development permitted.

An assessment review should be undertaken by the applicant to confirm that the road have sufficient structural integrity to accommodate abnormal loads and highlight where the weight of the delivery vehicle and load exceeds that permissible under the Road Traffic Regulations. Therefore, a full assessment of the structural integrity of

any proposed haul route needs to be undertaken to confirm that all structures can accommodate the proposed loading associated with the delivery of the turbine components where the weight of the delivery vehicle and load exceeds that permissible under the Road Traffic Regulations.

Any works including reinstatement works to existing junctions on the national road network shall comply with the standards set out in TII publications and shall be the subject of a Road Safety Audit.

TII advise that amended documentation especially with regard to the absence of addressing road safety and TII standards will be required prior to a decision being made on the application.

The Board may also be aware that any works to national roads may require licensing and other consents.

5.1.4. Submission by Inland Fisheries Ireland

This submission sets out the role and responsibility of Inland Fisheries Ireland. The Stoneyford River adjacent to the site is currently at moderate/poor quality (2020). The Deel River adjacent to the site is designated as good status. Both rivers contain stocks of Atlantic Salmon, Brown Trout, Eel and Lamprey.

It is noted that the proposed turbine sites are to be located adjacent to a range of smaller watercourses which act primarily as contributors to downstream habitats for juvenile salmonids, lampreys and other species as well as macrophytes, algae and macroinvertebrates which form a significant part of the food supply to downstream fisheries. There is therefore the potential to convey deleterious matter (including hydrocarbons, fuels, oils etc.) downstream unless proper safeguards are in place.

All natural watercourses which must be traversed during the site development and road construction works should be effectively bridged prior to commencement. The crossing of watercourses at fords is unacceptable because of the amount of uncontrolled sedimentation that can be generated by their use. If temporary crossing structures are required, IFI approval will be necessary.

Design and choice of temporary crossing structures must provide for passage of fish and macroinvertebrates. No temporary crossing on any watercourse shall be

installed without the approval of IFI. Details of the requirements for any temporary crossing structures are set out.

Permanent crossing structures should not damage fish habitat or create blockages to fish or macroinvertebrate passages. Culverting of long stretches of fisheries water is extremely undesirable and can result in significant loss of valuable habitat. Generally, bridges and bottomless culverts are the best option for maintaining a natural stream channel. Clear span design are the most preferable in terms of designing channel crossings. Foundations should be positioned at least 2.5 metres from waters. Culverts should be positioned where the watercourse is straightest and aligned with its bed. While the preferred option is for bottomless culverts, the IFI is prepared in certain circumstances to consider proposals for the installation of box or pipe culverts on fisheries waters, (the design details of which are set out in the submission). Details of bank protection works are also set out. It is noted that gabions are not a preferred option when it comes to bank protection. To minimise adverse impacts on the fisheries resource, works in rivers and streams and watercourses should normally be carried out during the period July to September.

Extreme caution must be undertaken to ensure that silt laden waters are not discharged into surface watercourses, salmonid spawning beds and juvenile salmonids are particularly sensitive to siltation. The submission sets out a number of mitigation measures which should be implemented to ensure that silt laden discharge does not enter the surface watercourses. Mitigation measures for the use, storage and delivery of concrete are also set out in the submission.

All oils and fuels should be stored in secure bunded areas. All plant and equipment should carry fuel/oil spill kits.

The Inland Fisheries submission also recommends the employment of effective biosecurity measures during the construction phase to mitigate against the introduction and spread of invasive species. No inland stream works should be carried out without the written approval of Inland Fisheries Ireland.

5.1.5. <u>Submission from Irish Aviation Authority</u>

The Irish Aviation Authority submitted the same observation to the Board dated 4th October 2021 and the 1st November 2021. It notes that the IAA requires any person who seeks to erect a manmade object to notify the aerodrome operator of the

intended operation at least 30 days in advance if the structure is to be erected in the vicinity of an aerodrome. Any person who seeks to erect a manmade object in excess of 45 metres anywhere within the State above ground or water level must also notify the IAA at least 30 days in advance. The applicant is also required to provide co-ordinates for each turbine as well as the height above ground (to blade tip) of each turbine. Details of whether or not the wind farm is a standalone development or whether it is merged with other developments. Details of the proposed lighting to be provided at each of the turbines must also be submitted.

5.2. Third Party Observations

Many of the issues raised in the 21 separate third party observations are common issues to each of the observations and for this reason are summarised in a grouped format below.

Visual Impact

- The proposal will result in the construction of the highest wind turbines in the country at 185 metres.
- The height of the proposed wind farm would have profound visual impact on this flat scenic and unspoilt area.
- There are many castles and protected structures in the area that will be adversely affected in terms of their context and settings. A number of observations specifically referred to Martintowns House - a stone residential tower dating from the mid-15th century.
- The proposed turbines would dominate the skylines and would encroach and have an overbearing impact on residential dwellings in the vicinity.
- The photomontages do not provide a true representation of the visual impact arising from the proposed turbines.
- No mitigation measures can be effective to reduce the visual impact arising from the proposed development.
- The photomontages should include a depiction of the wind turbines during the winter period where there is no foliage on the trees to screen the turbines from various vantage points along the road.

- Cumulative impacts arising from other wind farms have not been adequately assessed.
- The proposal is deemed to be premature pending the adoption of a National Landscape Strategy in which the proposed development can be adequately evaluated.
- The proposed development will be visible from important and sensitive visual receptors including Trim Castle, the Hill of Ward, the Spire of Lloyd.
- It is requested that a full and more robust comprehensive assessment should be undertaken by An Bord Pleanála in relation to the potential visual impact arising from the proposal.
- There is references throughout the EIAR of the meteorological mast being 104 metres in height. The Board should note that the mast permitted as per the planning application is only 100 metres in height.
- The widening of the local access road the L5508 will destroy the character of this rural laneway which will further impact on the visual amenities of the area.
- No visualisation or representation of the end masts to link into the Corduff – Mullingar 110kV line are provided in the assessment.

Health and Safety Considerations

- A number of observations make reference to a number of court cases which have been taken against wind farms where it was determined that adverse health effects were experienced by families living in close proximity to wind farms. A number of observations make reference to a court case where compensation was paid to residents living in close proximity to a wind farm in County Cork.
- Further details are required in terms of the impact which could arise from dust and air quality during the construction phase particularly for receptors located in close proximity to the proposed turbines.
- The proposed electromagnetic fields and infrasound which arise from turbine operation can affect people's health.

- The mitigation measures contained in the EIAR in respect of health impacts lack detail and are generally deemed to be unsuitable.
- High voltage cables could present a significant cancer risk for people in the vicinity.

Road and Traffic Issues

- Concerns are expressed that the proposed upgrade to the road network could impact significantly on the residential amenities of the area.
- The presence of HGVs moving large turbine parts to the site could have a significant and profound impact on road safety particularly having regard to the fact that the road network in the vicinity of the site is narrow and unsuited for such large vehicles.
- The area surrounding the subject site is a popular area for walks and recreation including recreation associated with young children.
- The road widening in the area will significantly alter the rural character of the area, transforming local roads into 5-metre-wide carriageways.
- The construction works involved in improving the road will have a significant impact on residential amenity, particularly of residents living along the road during the extensive upgrades which are proposed to take place.
- It is argued that works to be undertaken on the access road leading to the site could result in blocking rear entrances to dwellings.
- It is also argued that the works to be undertaken along the roadways may impinge on lands outside the applicant's ownership. It is stated that some of the lands required to improve the width of the roadway may in fact be in third party ownership.
- Landowners have not been approached for consent in relation to the laying of cables in the side of the road.

Water and Drainage Issues

- Several observations submitted indicated that there are a number of private wells in the vicinity that could be impacted upon during the construction of the proposed development.

- The proposal could adversely impact on the existing water and drainage regime in the area.
- The amount of concrete to be used in constructing the foundation of the turbine represents a serious threat to watercourses in the vicinity.
- The placing of haul roads in close proximity to streams could impact on water quality particularly in relation to livestock which access these streams for drinking water.
- The proposal could impact on drinking water supplies through contamination of ground and surface water.
- The laying of access tracks and underground cables could impact on private water supplies and wells in the area.
- Excavation of turbine foundations could also contaminate groundwater.
- The level of ground displacement resulting from excavations could have significant implications for flooding.
- The construction of access roads in the area could exacerbate flooding.

Noise and Shadow Flicker

- A number of observations express concerns in relation to the noise impacts arising from the proposed turbines, particularly during the operational phase. More than one of the observations submitted highlighted that a family member has autism and sensory issues. It is argued that studies have indicated that noise from turbines can adversely affect mental health and can result in irritability, negativity and cognitive disruption.
- The construction phase of the proposed development will give rise to significant noise and vibration issues.
- The proposal is deemed to be premature until such time as the government agree on appropriate noise limits and standards from wind farms at the nearest noise sensitive receptors.
- The inspector in determining the report is requested to have due regard to the noise limit of 43 dB(A) as set out in the 2019 Wind farm Guidelines.

- The conclusions set out in the EIAR in respect of noise should be subject of an assessment by an independent consultant prior to the Board determining the application.
- Vibrations arising from the construction phase could undermine the structural integrity of buildings in the vicinity including residential dwellings and protected structures and monuments in the area.
- It is argued that the proposal will also give rise to shadow flicker as well as excessive noise. It is argued that shadow flicker give rise to headaches, nose bleeds and sleep disturbance. Shadow flicker and noise can also give rise to nausea, dizziness and disorientation.
- It is noted that the threshold of 40 dB(A) is too high in a noise environment where the typical background noise is less than 30 dB(A).
- Assessing the noise impact on the basis of the four closest houses to the proposed turbines is not appropriate. It is suggested that all 78 houses within 1.85 kilometres of the turbines should be assessed in terms of noise.
- It is not accepted that shadow flicker will be restricted to 30 minutes per day. It is argued that an acceptable level of shadow flicker should amount to zero minutes per day.
- It is argued that the noise emissions and shadow flicker will devastate the residential amenity of the majority of people living in the vicinity merely to benefit a few landowners in financial terms.

Devaluation of Property

- It is argued that the proposed development will result in a significant devaluation of houses in the vicinity. Surveys in England and Wales clearly indicate that wind farms have a detrimental effect on property prices for homes in the vicinity.

Biodiversity Issues

- The turbines and their blades are extremely hazardous to ornithological creatures.

- Each turbine requires a 1,000 tonnes of concrete and this will have a significant adverse impact on local wildlife should any pollution occur as a result of a concrete spillage.
- The number of bird collisions that would arise from the wind farm are grossly underestimated in their EIAR.
- The bird surveys undertaken in the EIAR also grossly underestimate the numbers of birds which frequent the area.
- It is contended that much of the information contained in the surveys is untrustworthy.
- No assessment was undertaken regarding the impact of shadow flicker and noise on existing wildlife and livestock in the area. It is argued that wind farms can have adverse impacts on livestock though eating, sleeping and reproductive disorders.
- The Bracklyn Bog area is home to an abundance of bird species including the Cuckoo, Barn Owl, Corncrake and a host of other bird species. The area is also home to the Red Deer. It is argued that the natural habitats of these species will be critically endangered by the provision of turbines at this location.
- The proposal seeks to remove 28 hectares of commercial forestry, and this is detrimental to the natural environment and the landscape.
- The wider area possesses exceptional flora including flora along the access roads which will be lost through road widening.
- A number of observations highlight the fact that barn owls are resident in the area and next in Martintowns Castle. However, this fact is not adequately highlighted in the EIAR.
- The proposal will impact on migration paths associated with bird species.
- The aquatic survey was carried out over a 2 day period and this is deemed to be insufficient.
- The proposal could impact on surrounding SACs.
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Lack of Consultation

- It is argued that there is no meaningful consultation carried out with the local community.
- Older people in the community were not properly consulted.
- The appellants reneged on a verbal commitment given to the community that the project would adhere to the limits and standards set out in the 2019 Wind farm Guidelines.
- Site notices had been removed from the site before the statutory time period.
- The applicants in carrying out community consultations made false promises particularly in relation to the assurance that there would be no shadow flicker.

Wind farm Policy

- A number of submissions argue that the midlands area are generally unsuitable for wind farm development because of the general low wind speeds.
- The proposal is premature pending the formal adoption of the 2019 Wind farm Guidelines.
- The proposal is premature pending the preparation of a wind energy strategy for County Westmeath including a wind energy capacity map and a landscape character assessment. Reference is made to a Ministerial Direction attesting to this issue and this Ministerial Direction is attached to the observations submitted on behalf of Gigginstown House.
- The proposal is reliant on the 2006 Guidelines and the parameters set out therein, where it should be evaluated on the basis of the more onerous 2019 Guidelines.
- A number of submissions argue that the future of wind energy is offshore wind and not terrestrial wind farms.
- The proposal is contrary to Policy 10.143 of the Westmeath County Development Plan. The County Development Plan has been misquoted in Chapter 9 of the EIAR.

- The proposal is contrary to Policy CPO10.146 which seeks to direct largescale energy projects such as wind farms into areas of cutover and cutaway peatlands. The proposal is located on pastureland and forestry lands and therefore contravenes this policy.
- The proposal is contrary to Section 10.23 of the development plan which states that the Council are generally supportive of wind energy provided such developments do not have an adverse effect on residential amenities, tourism amenities, special landscape character, views or prospects, Natura 2000 sites, protected structures, aircraft flightpaths or by reason of noise or visual impact.
- It is argued that the future of wind energy is offshore wind and that it is inappropriate to the further develop terrestrial wind farms particularly in lowland flat areas where the wind regime is lowest.
- The construction activities and extensive use of concrete transport and removal of forestry will have profound impacts in terms of reducing CO_2 emissions and the proposed wind farm will have little or no value overall in alleviating this impact.
- Data from Eirgrid indicates that wind energy is very unreliable and contributes very little to the overall electricity generation particularly during cold periods when the wind regime is at its lowest.
- More emphasis should be placed on other renewable energy which is much more sustainable including solar energy, biomass geothermal and microgeneration energy proposals. Having regard to the fact that there is a pig farm in the vicinity, the applicant should assess the suitability of the site for biomass generation.
- A number of submissions argue that the application should not be considered strategic infrastructure development as it will not produce 50 megawatts on a consistent basis. It is noted that wind energy projects which produce energy in excess of 50 megawatts classify as strategic infrastructure development.
- The wind farm strategy for County Westmeath indicates that the entire county is considered to be at either low capacity or no capacity. The fact that the

wind regime is so low in the midlands area this necessitates a wind farm of the size and scale proposed which is completely disproportionate and will have a significant adverse impact on the surrounding rural community.

- It is argued that the setback of the turbines in respect of residential receptors should be at least 1,500 metres in the case of all turbines.

Impacts on Cultural Heritage

- It is argued that the size and scale and location of the proposed turbines will have an unacceptable impact on national monuments and protected structures. It is argued that the proposal will significantly and materially impact on the context and setting of both RMPs and protected structures.
- It is argued that micrositing as suggested in the EIAR may not be possible in the case of Turbines 3 and 11 as they are located in close proximity to recorded monuments.
- Precise details are required in relation to the foundations so as to properly ascertain the potential impacts that could arise on structures of historical value in the area (whether or not steel ring foundations or pile foundations are proposed).
- Structural changes to the roads could affect the structural integrity of archaeological features in the vicinity including ringforts as well as protected monuments.
- One observation notes that the observers were refused planning permission for a dwellinghouse on the basis that the proposed dwelling would impact on the setting and context of Martinstowns House. Surely it is argued that the same reasoning should apply to the wind farms of the size and scale proposed.

Other Issues

- The proposal could interfere with the flightpaths associated with light aircrafts flying in and out of Ballyboy Airfield which is located within 15 kilometres of the proposed wind farm.
- Concerns are expressed that imported aggregate for the turbine basis could be sourced from unauthorised or illegal quarries.

- It is argued that wind farms are an unsustainable form of renewable energy were it not for grant aid and subsidies available. In this regard emphasis should be placed on more cost-efficient renewable energy sources such as biomass, tidal and micro-renewable energy.
- There are precedents for refusal of planning permission for wind farms in the vicinity which are relevant to the current application before the Board.
- The proposal constitutes piecemeal development or project splitting on the basis that a Bord na Mona wind farm on adjacent lands is in the pipeline. A comprehensive planning application assessing the potential impact from the entire development should be submitted.
- Planning a wind farm and bogland is extremely problematic in terms of creating bog slides. It could also adversely affect the drainage associated with the bog.
- It is argued that the wind turbine will only give rise to sporadic and intermittent power generation.
- The proposal in this instance is not a State-led strategic investment but is rather an investment by a private developer.
- The proposed development is contrary to the SEA Directive as it is a project being carried out in the absence of a plan or programme.
- The Board is asked to satisfy itself that the proposed development is in accordance with both national and European law.
- The proposal is heavily reliant on finite resources (steel, concrete and neodymium magnets). It is argued that the mining and manufacturer of the products come with a massive environmental and social cost.
- The decommissioning and removal of such largescale infrastructure will be next to impossible.
- Both the wind energy strategy and the planning system in Ireland are fundamentally flawed and it is not appropriate that a development of such a size and scale should be assessed and adjudicated upon within the context of such flawed structures.

- The carbon saving suggested in the EIAR as a result of the proposed development are considered to be ambiguous to say the least.
- The proposed wind farm will merely supply energy for data centres.
- Subsidies and grant aid available for wind farms would be better spent on retrofitting and insulating existing dwellings and encouraging micro-generating programmes.
- Works have already been undertaken on site prior to the grant of planning permission. These works include the felling of trees to make way for the proposed development.
- A proper assessment of the proposed development cannot be adequately undertaken in the absence of assessing the proposal in the context of the proposed 26 turbines proposed by Bord na Mona at Ballivor.

5.3. **Westmeath County Council's Planning Report**

- The report at the outset details the various comments made by County Councillors at a presentation of the proposal to the members of Westmeath County Council. With the exception of one councillor, all councillors who attended the presentation expressed concerns in respect of the proposed development, and the impact it would have on the landscape and the local community.
- The report goes on to set out details of the proposed development, the site location and description and relevant planning policy as it relates to wind farm development. Reference is made to the following:
- International Energy Policy Framework
- European Energy Policy Framework
- National Energy and Climate Policy with specific reference to policy statements under the security of energy supply,
- The Climate Action Plan,
- The National Mitigation Plan,

- The National Planning Framework and
- The Wind Energy Guidelines 2006 and the Draft Revised Guidelines of 2019.
- In terms of Regional Policy reference is made to the policy set out in Eastern and Midlands Regional Assembly – Regional, Spatial and Economic Strategy 2019 to 2031.
- Local Policy and Guidance Documents are also referred to, including the Ministerial Direction on the County Development Plan 2021 to 2027. It is noted, having regard to the Draft Ministerial Direction, that certain aspects of the Wind Policy Guidance set out in the Development Plan will not be taken into consideration for the purposes of the assessment.
- The report goes on set out details of the planning history for the subject site and its surroundings. It is noted that there is no enforcement cases in relation to the subject site.
- Section 8 of the report deals with Natura 2000 sites and appropriate assessment. It is noted that there are 7 SAC's and 2 SPA's within 15km of the subject site. It also notes presence of Natural Heritage Areas in the vicinity of the site and that all NHAs are located between 11 and 15 kilometres from the subject site.
- In terms of protected structures, it is noted that there are three protected structures within the landholding boundary associated with the proposed development which are:
- The Gate Lodge, Bracklyn House c.1.8 kilometres from Turbines 2, 3 and 5.
- Bracklyn House c.750 metres west of Turbine 3.
- A freestanding mausoleum at Bracklyn House located approximately 140 metres south of the access track leading to Turbine 1 and approximately 370 metres west of Turbine 2.
- It is noted that there is an additional 54 protected structures listed in the Westmeath County Development Plan within 5 kilometres of the proposed development. Public services in the local area including public water supply, sanitary facilities and surface water disposal are described in the report. It is

noted that due to modest demand, local water supply will not be required within the local control building. A rainwater harvesting system will be employed to obtain water supply. Likewise, wastewater will be tankered off site to obviate the requirement to connect to wastewater treatment infrastructure. In relation to flooding, the report notes that the EIAR informs that localised pluvial flooding can be effectively managed by the proposed drainage design and as such no significant effects will arise.

- Section 12 assesses the proposal in the context of the Water Framework Directive. It notes that with the incorporation of mitigation measures as set out In the EIAR, the proposed development presents no likelihood for significant effects on either surface water or groundwater in the area.
- Section 13 of the report comments on the EIAR submitted with the application and assesses each chapter of the document in turn. Sections 14 & 15 relate to comments on the carrying capacity and safety of the surrounding road network and the environmental capacity of the subject site and the surrounding area. Comments on these matters are set out elsewhere in the report.
- Section 16 specifically sets out the contents of internal reports produced by the relevant local authority sections within Westmeath Co. Council. It is noted that the District Engineer has no objection to the proposed development from an engineering perspective subject to a number of conditions.
- A report from the *Environment Section* notes that the Construction and Environmental Management Plan is comprehensive and has clearly identified and managed all the key environmental concerns. It is therefore recommended that planning permission be granted subject to a number of conditions.
- A report from the *Chief Fire Officer* stated there is no objection to the proposed development from a fire safety perspective.
- A report from the *National Roads Design Office* (NRDO) states that the application does not affect any currently planned road scheme in the Westmeath area and therefore has no comments to make.

- A report from the *Heritage Officer* states that while the proposed development will not have a direct impact on the integrity on monuments within the site there is potential for previously unrecorded subsurface archaeological sites and features to be present in the development area. A geophysical survey and an archaeological assessment at pre-construction phase is essential in order to identify previously unrecorded archaeological features within the site. It is noted that the photomontages do not give consideration to the view of the proposed wind farm from the Hill of Uisneach. It is noted in Chapter 10 of the EIAR acknowledges that the proposed wind farm will have a visual impact on Bracklyn House and Gate Lodge. It is also noted that the EIAR considers that the impact of the proposed wind farm on protected structures in the area is moderate and reversible at such time when the wind farm is decommissioned.
- Section 17 relates to third party submissions. The report incorrectly states that no third-party submissions were received by the Board.
- Section 18 of the report specifically relates to the planning authority assessment. It is summarised below:
- <u>Policy</u>
- The report notes the draft Ministerial Direction requiring the Council to omit Policy CPO10.143 of the Development Plan and it is taken that this policy is deemed not to have come into effect for the purposes of the assessment. The proposed wind farm is considered to comply with national, regional and local energy and climate action policies. The proposed development is considered to be generally compliant with the Wind Energy Guidelines 2006 and with the Draft Revised Wind Energy Guidelines 2019 in terms of siting and landscaping. Reference is made to CPO10.146 which requires developments to strictly direct largescale energy production projects in the from of wind farms onto cutover cutaway peatlands in the county, subject to environmental landscape habitats and wildlife protection requirements being addressed. The proposal is not located on cutover/cutaway peatlands and as such it is considered that the proposal contravenes CPO10.146 of the County Development Plan. However, for the sake of completeness the proposal has

been further assessed under various headings which are briefly commented upon below.

- Residential Amenity
- The three main potential impacts of relevance are shadow flicker, noise and visual amenity. It is stated that there are no dwellings located within 500 metres of the proposed wind turbines. When economically involved dwellings and landowners are removed, the nearest dwelling is approximately 1.08 kilometres due north of Turbine No. 1.
- In terms of *shadow flicker*, it is noted that under a worst-case scenario, cumulative impacts on four dwellings are predicted to experience shadow flicker in excess of 30 minutes per day. However, when curtailment measures are applied, the EIAR concludes that none of the 78 receptors within 10 times the tip height of the proposed wind turbines are likely to experience shadow flicker in excess of 30 hours per annum. It is therefore considered that should shadow flicker exist, it can be adequately mitigated against in accordance with the measures set out in the EIAR.
- In terms of *noise,* a series of computer-based prediction models have been prepared in order to quantify the noise levels associated with the operational phase of the proposed development. The local authority planner's report relies on the findings of the modelling undertaken in the EIAR and notes that the assessment predicts that none of the 78 noise sensitive locations under the worst-case assumptions exceed stated standards. Cumulative effects were also assessed and presented in Table 11.19 of Chapter 11 of the EIAR and it demonstrates that no exceedences of the adopted noise limit criteria would occur.
- In terms of *visual amenity,* it is acknowledged that the proposal would have a visual impact from roads in the immediate vicinity and from residential properties therein. The landscape presents itself as a highly modified working landscape that is relatively robust. It is not considered however that the proposal would constitute such a material alteration of the visual intrusion as to warrant 'an unsupportive recommendation' from a visual assessment point of view. The visual impact of the proposed turbines will vary depending on the

location. The Wind Energy Development Guidelines do not specify a minimum distance for the location of an industrial wind turbine from a residential property. The presence of highly sensitive historical features has a notable impact on the overall sensitivity of the wider study area. It is recommended that the visual and landscape character assessment be carried out for the Hill of Uisneach.

- In terms of the grid connection and haul route, it is considered that the requirements of the additional traffic and abnormal loads generated during the construction phase were assessed. Locations where remedial measures are required to accommodate the normal loads are identified. A number of recommendations are made in respect of a condition survey of the roads and bridges along the haul routes, and this should be carried out. Adequate sightlines should be provided at the entrance to the construction site.
- In terms of property values, it is noted that the EIAR is void of an assessment of the potential impact of the proposed wind farm on property valuations in the immediate vicinity. If property values are not to be adversely affected, it would be necessary to ensure that the Wind Energy Development Guideline standards are achieved in respect of noise and shadow flicker. The turbine design should be kept as simple and as clean as possible. Community gains in terms of amenity improvements and the development of tourism paths and trails are noted. It is considered that any community benefit scheme should last the entirety of the operating life of the development i.e. 30 years. The report suggests that both development contributions, special development contributions required for the pre-surveying of effective roads etc. should be attached to any grant of planning permission. Furthermore, it is recommended that in the event of a grant of planning permission, the applicant should be required to contribute to the cost of repairing the damage of roads and in this regard, a cash bond should be paid to the Planning Authority prior to the commencement of any development, notwithstanding the fact that the guidelines suggest that such a bond should not be attached to any decommissioning of the turbines.
- In conclusion the report notes that the proposed development if permitted, would:

- Make a positive contribution to Ireland's National Strategic Policy on Renewable Energy.
- Be capable of being integrated successfully at the subject site without undue adverse impact on the amenity of the area.
- Not seriously injure the residential or visual amenities of the area.
- Have an acceptable impact on the landscape.
- Not be likely to have significant adverse impacts on any designated site or conservation objectives associated with any site.
- Not be likely to adversely affect the archaeological or natural heritage of the area.
- Be acceptable in terms of traffic safety and convenience.

- Notwithstanding the above, the current Westmeath County Development Plan under CPO10.146 seeks to strictly direct largescale energy production projects in the form of wind farms onto cutover and cutaway peatlands in the county subject to environmental landscape habitat and wildlife protection requirements being addressed. Having regard to the location of the proposal on predominantly agricultural grasslands, deciduous woodland and conifer tree plantations, it is considered that the proposed development is contrary to the above policy objective and on this basis, Westmeath County Council recommends that planning permission be refused for the proposed development.

5.4. **Meath County Council Planning Report**

- The planning report submitted by Meath County Council sets out details of the proposed development, the site location, the planning history relating to the site, planning policy and reviews the various internal departmental reports prepared in respect of the development before assessing the proposed development.
- The proposed development is assessed specifically as it relates to the proposal within the administrative area of County Meath. This in turn relates to the infrastructure to facilitate the connection of the proposed wind farm to the

110kV Mullingar – Corduff overhead line. It essentially comprises of 2.5 kilometres of 110kV underground electricity lines, access tracks, the provision of two end masts (16 metres in height) and all associated site works including an additional access from the site entrance onto the public road. It is noted that there is no planning history in the vicinity of the subject site which is of relevance. The full texts of all internal departmental reports are set out in Appendix 2 of the report.

- In terms of the assessment of the wind farm, the report notes that the proposal will assist in realising the various and many strategic objectives set out in various planning policy documents which seek to lower the national carbon footprint by generating electricity from sustainable/renewable means. The proposed development accords with many of the policies and objectives set out in the current Meath County Development Plan. The assessment also details and evaluates the environmental impact assessment report submitted with the application. In terms of the EIAR submitted, the local authority report assesses in detail, the visual impact arising from the proposed development particularly on sensitive sites within County Meath. The planning authority cannot conclude that the proposed development would not have an unacceptable direct, indirect or cumulative impact on designated protected views, protected landscapes and important heritage sites within the county until further visual assessments are carried out.
- The report overall concludes that, notwithstanding the general supportive policy approach for wind farm development, there are issues in relation to the potential visual impact of the proposed wind turbines on protected views and heritage sites which require and necessitate further information. Furthermore, issues raised in relation to the potential for flooding on the site have not been addressed to the satisfaction of the Planning Authority.
- On the basis of the above, Meath County Council request further information in relation to the landscape and visual impact arising from the proposed development and further information in relation to flooding. The Board are also asked to note that the Natura Impact Statement should be revised to reflect and incorporate the outcomes of the “Development Management Justification Test” and the Board should satisfy itself that sufficient detail has

been provided to ensure an appropriate assessment can be undertaken to determine that the proposed development would not adversely affect the River Boyne and River Blackwater Special Area of Conservation and Special Protection Area.

- In the event that planning permission is granted Meath County Council also submitted a schedule of 33 conditions that should be attached in the event that planning permission is granted.

6.0 Responses to Submissions on Behalf of the Applicant

6.1. A response was received on behalf of the applicant from Galtetech Energy Services. It is summarised below:

6.2. <u>Response to Submission to Department of Housing, Local Government and Heritage (DAU)</u>

6.2.1. It is noted that all chapters of the EIAR including the biodiversity section includes a 'do-nothing' scenario. The section on Alternatives also includes a 'do nothing scenario'. Reference is made to the current climate crisis and the crisis in energy supply for justification of the proposed development.

6.2.2. A rigorous site selection process was undertaken as part of the preliminary studies and the development is located a considerable distance from and is not connected with Natura 2000 site in the vicinity. The immediate habitats on site are considered to be of local importance. While the subject site is surrounded by peatlands there is in fact very little peat on the subject site.

6.2.3. The applicant is pleased to note that the DAU recognises that the survey work on birds is both rigorous and extensive. Old birds listed as being of conservation concern in Ireland are fully assessed in both the EIAR and the NIS submitted. Chapter 5 of the EAIR fully assesses the likely cumulative significant effects on birds and bats species. Section 5.4. 3.8 of this chapter assesses the likely cumulative effects during the operational phase. It includes consideration of all other consented and operational wind farms within 45km of the proposed development, including the proposed Ballivor Wind farm which is only at planning stage. Annex 5.7 of the EIAR includes a collision risk model, the potential risk to Birds is set out in the response. It

is anticipated that any likely significant cumulative effects during the operation phase on the bird population have been assessed, and furthermore can be adequately assessed by the Board.

6.2.4. The micro-siting of locating the turbines have been robustly assessed and have been informed by the by comprehensive biodiversity surveys. A key consideration in siting the turbines was the loss of natural features. Notwithstanding this, the siting of the turbines must consider a range of other technical, environmental and social constraints. Any impact on the natural environment must be balanced against these constraints. However, no bat roosts were identified within the proposed development footprint and older growth woodland with the potential to support significant roosts has been fully avoided. To compensate for the unavoidable loss of small areas of bat commuting/foraging, there will be an equivalent area provided as compensatory habitat.

6.2.5. Chapter 5 and Annex 5.5 assesses all the likely impacts on bat species and sets out the various mitigation measures to avoid any significant effects on bat species. This will include a post construction monitoring plan, whereby reports are submitted annually. The proposed development has been designed to maximise all buffer distances to the greatest possible extent, in some instances the minimum buffer distances are not achievable and will be mitigated by a comprehensive suite of measures set out in the EIAR. The comprehensive bat survey undertaken indicated that 98% of bat passes within 50m of a proposed turbine occurred a wind speeds of less than 3.5 m/s which is below the cut in time of the turbines to operate.

6.2.6. The applicant is very happy to accept a condition for site rehabilitation / biodiversity enhancement as per the DAU recommendation.

6.2.7. Contrary to what was stated in the DAU submission, a lighting assessment was carried out and was included in the chapter on biodiversity (section 5.4.2.7 refers). Mitigation measures will be put in place to protect biodiversity in the unusual event that any nighttime works are to be undertaken. In respect of substation lighting, this facility will not be permanently illuminated. Where illumination is required at the substation it will be cowled inwards to protect the natural environment. Aviation lighting to be placed on the turbine will not pose a significant risk to bats and birds.

6.2.8. <u>Response to Submission by Meath Co Council</u>

6.2.9. The Council requested further visual impact assessments (VIA's) at 11 locations which are protected views in the development plan. It is note that 4 of these were already considered in the EIAR. It is noted those views which were requested to be assessed in the by the Council and are not contained in the EIAR, are all located a distance of 25 km or more from the proposed development. These are beyond the Zone of Theoretical Visibility (ZTV) prescribed in the 2006 and Draft 2019 Guidelines. The full technical rationale for not submitting the additional photomontages is set out in Annex 1 of the submission. However further photomontages and a visual impact assessment of the upper floors of Trim Castle have been submitted. The overall visual impact is deemed to be slight to imperceptible.

6.2.10. With regard to a VIA for all national monuments within a 15 km radius of the site, it is stated in the response that there are 402 such monuments within this radius and it is not feasible or relevant to assess visual impacts from each of these heritage features. Two additional photomontages have been assessment which are deemed to be relevant RFI VP1 (Local Road North of Darcy's Cross Roads) and RFI VP5 (local road east of the River Blackwater at Ballinderry). The visual impacts of the turbines are these locations are assessed as 'imperceptible'.

6.2.11. With regard to VIA's from World Heritage Sites in the County, only 1 is located within 25km, and therefore within the ZTV, this is views from Kells this is already represented by VP2 in Chapter 9 of the EIAR, and the impact was deemed to be Slight/ Imperceptible.

6.2.12. In respect of Flooding, an additional 'Flooding Information Note' was prepared and is attached as Annex 3. As per the conclusions in Chapter 7, the Flooding Note concludes that there is no potential to reduce flood storage or exacerbate flooding as a result of the proposed development.

6.2.13. It is considered that the NIS has fully identified and assessed the potential effects of the development on the River Boyne and River Blackwater SAC/SPA.

6.3. <u>Response the Westmeath Co. Council Submission</u>

6.3.1. In terms of community gain, the existing access tracks within the sites are occasionally used by the public as walking routes and this will continue.

6.3.2. The Hill of Uisneach is not included in the VIA; at 32 Km, it is beyond the Zone of Theoretical Visibility.

6.3.3. With regard to Policy CPO 10.146, where the council consider that the preferred location for large scale energy production should be on cutaway bog, it stated that the generation of energy from renewable sources is the upmost and most urgent national policy priority. This, it is suggested should take precedent over and above any policy statements in the development plan.

6.3.4. There is no evidence to support the contention that wind farms result in depreciated property values, particularly as they comply with the standards set out in the Guidelines and draft Guidelines in relation to windfarms. Extensive studies carried out in the USA and Scotland support this conclusion.

6.4. Response to the Submission from Transport Infrastructure Ireland

6.4.1. Roadworks to be undertaken on the public road network are well documented and assessed in the Chapter 13 of the EIAR. There are no permanent upgrade works or layout changes proposed to the National Road Network. All such works are temporary removal of fencing, road signage lamp standards etc. All these works will be reinstated once delivery is complete. On this basis, is it suggest that a Traffic and Transport Assessment or a Road Safety Audit is not required.

6.4.2. All appropriate consultation will be undertaken, and all works will be carried out in accordance with TII standards. The applicant is committed to ensure that maximum axle loadings for abnormal loads is strictly enforced in accordance with the Regulations Section 13.1.5.1 of the EIAR refers. All the most up to date TII guidelines were used to inform the traffic assessment. Reference to DMRB in the EIAR was made in error.

6.5. Response to Submission of Irish Water

6.5.1. Chapter 7 of the EIAR concludes that the proposed development will result in no lightly significant effects on the local water environment and the series of mitigation measures are proposed to ensure that this is the case.

6.6. Response to Inland Fisheries Ireland

6.6.1. In relation to comments made by Inland Fisheries Ireland, the applicant has committed to ensuring that all guidance and best practice requirements will be incorporated into the design of turbine construction.

6.7. Response to the Irish Aviation Authority

6.7.1. Reference is made to Section 13.2.7.1 of the EIAR Great provides operational sales mitigation measures proposed in relation to aviation and these fully align with the requirements set out in the observation of the IAA submission.

6.8. Response to Third Party Submissions

6.8.1. With regard to project splitting, it is stated that the EIAR has carried out full cumulative impact assessments for both the construction and operational phases of the proposed development. As far as practically possible, potential impacts with committed and proposed wind farm developments have been taken into consideration in the assessment.

6.8.2. Contrary to what is stated in some of the submissions, the proposed turbines are predominantly located on agricultural grassland/woodland and not peatland. The application documentation included a Peat Stability Risk Assessment and Peat Management Plan (Annex 6.2 and 3.7 refers). The potential for bog slides is negligible as demonstrated in the risk assessment undertaken. There will be no effect on any proposed bog rehabilitation plans which may be undertaken on any future adjoining boglands.

6.8.3. With regard to policy CPO 10.143 (setback distances), it is argued that if these setback distances were adhered to, it would have the de facto effect of precluding wind energy development from the entirety of Co Westmeath. It is acknowledged that in Chapter 9 of the EIAR (p.18) the applicant incorrectly refers to CPO 10.143 to the ‘height of the wind turbine generator’ instead of the ‘height of the wind turbine blade’.

6.8.4. With regard to contention that the proposal contravenes the SEA Directive, the current application before the Board is a project and not a Plan, as such the SEA Directive does not apply.

6.8.5. There is no evidence to suggest that the proposed development impacts on human health, this has already been determined by the Board through numerous other appeals and applications in relation to wind farm developments.

6.8.6. In relation to noise, a detailed noise impact assessment was undertaken in Chapter 11 of the EIAR it determined that noise levels sufficient to cause disturbance is not likely to occur.

6.8.7. The design of present-day wind turbines incorporate lightening conductors to counteract lightning strikes. Separation distances between the turbines and residential dwellings will ensure that no issues arise in respect of 'ice-throw'. With regard to electromagnetic interference, the proposed grid connection electricity lines are required to comply with international guidelines for ELF-EMF set by the ICNRP. All impacts on Health have been fully assessed in the EIAR. Any concerns in relation to safety, mental health, physical health, electromagnetic fields interference etc. are unfounded and are adequately addressed in the EIAR.

6.8.8. The contention that the proposed development is inappropriate for a flat landscape has been assessed in the visual impact assessment submitted. Outside the immediate environment (c.5km of the development proposal), the assessment indicates the visual impact will be slight.

6.8.9. It is reiterated that the any potential impact on biodiversity including bats and birds has been fully assessed in the EIAR (Chapter 5) and the response to the issues raised by the DAU.

6.8.10. Tourism is acknowledged and being an important asset in the area. However, the EIAR has assessed the potential impact arising from the proposal and impact is not deemed to be too significant.

6.8.11. Sourcing aggregate to facilitate the development is not considered a significant issue. Construction materials will be sourced from fully licensed operators. Potential quarries are identified at Annex 2.5 of the EIAR. In terms of alternative renewable energy sources, the only potentially viable alternative source is solar energy, this would involve a larger land take and would result in a substantial change to existing agricultural practices.

6.8.12. With regard to the prematurity of the development, pending the adoption of an updated wind energy strategy for the County, it is reiterated that there is an urgent

need to address the global climate change crisis and support the diversification and security of energy supplies, and this needs to take precedent.

6.8.13. In terms of not choosing the most appropriate vantage points in which to depict the visual impact of the proposal, it Is considered that the LVIA contained in the EIAR includes a selection of appropriate vantage points in which to assess the visual impact arising from the proposed development. The development was assessed in the context of c.40 vantage points which considered to be extensive and adequate.

6.8.14. With regard to livestock and bloodstock, it is noted that these issues and concerns were raised in respect of other wind farms. Specific reference is made to ABP 300746, in north Kildare where many prominent stud farms objected to a proposed wind farm development on the basis of its impact on the livestock and thoroughbred equine industries. In its decision the Board rejected these concerns and concluded that there was simply no evidence whatsoever that wind farms pose any threat to the welfare of horses or other livestock.

6.8.15. With regard to the impact of the proposal on the Barn Owl, the Barn Owl was one of the 81 species of bird recorded over the 2 years of bird surveys. The Barn Owls was not found to occur regularly within or adjacent to the 500m turbine buffer. No potential breeding sites were found within 500m of the site, thus there will be no direct or indirect impact of the proposal on this species of bird during the construction phase of the project. Furthermore, based on the distance between the known breeding sites, as well as the low collision risk to barn owls posed by operating wind farms, and the closest proposed turbine at 1.4km away, it is concluded that during the operational phase of the proposed development, the potential for adverse effects is negligible.

6.8.16. With regard to whether or not the constitutes SID, the applicant points out that the Board have already determined this question. The proposal will have a total rated power of 54MW and therefore exceeds the 50MW threshold for SID.

6.8.17. The EIAR has fully assessed that proposal in the context of impact on amenity including noise, vibration, shadow flicker etc. With regard to vibration impacts on local roads and buildings in the vicinity of the access point, the response notes that prior to the commencement of development a visual inspection (including photographic record) will be taken of all buildings within 50m of the L1504 and L5508

by a suitably qualified engineer to identify any pre-existing evidence of structural deterioration. A similar survey will be carried out post construction and any identified remedial action required will be undertaken. A vibration monitor will also be installed for monitoring purposes and a speed limit of 20kmph will be implemented for construction traffic along the road. Any impacts in relation to road upgrade works will be slight to moderate and temporary in nature. The Traffic Management Plan (TMP) prepared will include measures to limit and restrict the level of disruption. Any impacts to secondary accesses to observers' lands will be fully considered in the implementation of the TMP

6.8.18. It is not accepted that the proposed mitigation measures are insufficient unworkable and unenforceable. Mitigation measures will be achieved under expert guidance.

6.8.19. Any argument that there is no substantial basis for the development or that it does not meet the criteria in respect of the proper planning and sustainable development of the area is unfounded, and there is a wide scope of European and National policy objectives to support the development of renewable energy projects.

6.8.20. Concerns that the proposal will result in increased flooding is again unfounded. Section 7.3.14 of the EIAR shows that the proposed hardstanding areas will result in an 0.33% increase in the average daily / monthly run-off within the site. This increase in run-off is negligible.

6.8.21. In relation to community consultation, it is stated that the applicant undertook extensive efforts to engage with local stakeholders. Contacts were made with local businesses and with the local community during both the scoping and the preparation of the EIAR. All dwellings within 2 km of a proposed turbine were consulted as part of the extensive and comprehensive public consultation process carried out by the applicant. Full details of the methods adopted by the applicant in respect of community consultation is set out in the community report. The applicant undertook extensive public consultation throughout the development design and the EIAR process. It is stated that the public consultation process informed the design of the process.

6.8.22. It is stated that the EIAR Lands and Soils Chapter includes detailed surveys of the ground conditions and geotechnical investigations carried out at each of the turbine locations. It is stated that with the exception of Turbine T10, subsoil conditions are

suitable for the construction of standard turbine raft foundations. T10 is located on 2.5 m depth of peat and it will require piled foundations. Details of the total volume of excavated material at each foundation is also set out in the applicant's response.

6.8.23. With regard to the potential for water contamination to arise from the construction phase, it is stated that this is addressed in Chapter 6 (S.6.4.3.3) and Chapter 7 (S.7.4.3) of the EIAR. The potential effects are deemed to be negligible furthermore, a comprehensive surface water management plan with appropriate mitigation measures will be implemented to avoid adverse downstream surface water quality effects.

6.8.24. Concerns regarding the impacts of the proposal on Martinstown Castle (RMP WM014-017) and the Cemetery (RMP WM 013-064) are considered in the Cultural Heritage assessment at Section 10.4.2.10 of the EIAR and no likely significant effects were identified. In terms of the impact on the proposal on Bracklyn House, the Gate Lodge and the mausoleum/crypt, these structures are considered in detail in Annex 10.1 of the EIAR.

6.8.25. In terms of potential impacts on aviation interests, it is stated that comprehensive consultation was undertaken during the scoping stage of the proposed development. Correspondence was received from the IAA, its indicated that subject to a number of mitigation measures in relation to safety, no other concerns arise. Safety lights will be fitted to each turbine as a matter of course. The site is not located within any low flying areas, restricted areas, danger areas, of military operating areas etc.

6.8.26. In relation to the loss of agricultural land, the loss of 5ha of agricultural land and 28ha of forestry have been assessed in the EIAR and the impact is deemed to be negligible.

6.8.27. Concerns that the proposals are premature in the absence of adopted wind energy guidance, The EIAR makes reference to both the 2006 Guidelines and the Draft 2019 Guidelines. The applicant has aimed to ensure that both sets of Guidelines have been adhered to in the design of the proposal.

6.8.28. The possibility of using alternative technologies was assessed in the EIAR (section 2.4.2 refers), wind energy is considered to be the most effective and optimal use of the site for energy production.

6.8.29. With regard to site notices, a total of 14 site notices were erected at appropriate locations. They were closely monitored and where they were removed or defaced, they were quickly replaced.

6.8.30. In respect of boundary issues, the applicant refers the Board to figure 2, figure 4.3 and figure 4.15 of the planning drawings submitted with the planning application. The applicant submits that the aforementioned drawings provide full clarity on the lines within the ownership of the applicant. The applicant can confirm that the lands are identified in blue do not include any lands owned by Judith and Don Bakker or any other third parties. The lands to which the subject application relates are fully in the ownership and control of the applicant.

6.8.31. With regard to the proposed cabling, this cable will not be situated along the rear boundary of any third-party property. The precise detail of the cabling is indicated on drawing 4.11 of the planning drawings submitted with the application.

6.8.32. Contrary to what is stated in one of the submissions, the applicant has not carried out any works in respect of the proposed development to date. Specifically, no work has been carried out in the vicinity of the end masts.

6.8.33. Concerns in respect of the volume of concrete to be used in the foundations is noted. Approximately 750 m^3 will be used in each of the foundations it is not anticipated that the construction of the foundations will have any effect on the biodiversity of the area.

6.8.34. Finally in relation to concerns on groundwater, impacts on groundwater were assessed to be minimal in the EIAR. The cabling will involve shallow excavations and will not impact on the water table.

7.0 Legislative and Policy Context

The following legislation and policy are relevant to the proposed development before the Board.

7.1. EU Legislation/Policy

<u>European Union Directive on the Promotion of the Use of Energy from Renewable Sources (Directive 2009/28/EC)</u>

The European Union Directive on the Promotion of the Use of Energy from Renewable Sources (Directive 2009/28/EC) was adopted on 23rd April 2009. It establishes the "20-20-20" targets, meaning:

- a minimum 20% reduction in greenhouse gas emissions based on 1990 levels,
- 20% of overall EU energy consumption to come from renewable sources by 2020,
- 20% reduction in primary energy use compared with projected levels to be achieved by improving energy efficiency.

Under the terms of the Directive, each Member State is set an individually binding renewable energy target, which will contribute to the achievement of the overall EU goal. The Directive legally obliges each Member State to ensure that the target is met. It further requires that each Member State publish a national renewable energy action plan outlining how these binding commitments would be met and to submit the plan to the European commission.

The 2020 target for Ireland is to source 16% of all energy consumed from renewable resources. This will be met by 40% from renewable electricity, 12% from renewable heat and 10% from the renewable transport sector. The pathways to achieve this are set out in the National Renewable Energy Action Plan.

Climate and Energy Policy Framework 2030

The Climate and Energy Policy Framework 2030 was adopted in 2014 and includes EU-wide targets and policy objectives for the period between 2021-2030. It seeks to drive continued progress towards a low-carbon economy and build a competitive and secure energy system that ensures affordable energy for all consumers and increase the security of supply of the EU's energy supply. It sets targets of at least 40% reduction in green-house gas emissions and at least 23% share of renewable energy from all energy consumed in the EU by 2030.

The Effort Sharing Regulation (EU) 2018/842 lays down obligations on Member States with respect to minimum requirements to fulfil the EU's target of reducing its greenhouse gas emissions 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.

Revised Renewable Energy Directive 2018/2001/EU (January 2019)

It sets out a new target for share of energy from renewable sources in the EU to at least 32% for 2030, with a review for increasing this target through legislation by 2023. A major shift within the revision is the way in which Member States will contribute to the overall EU goal. Where previously (for 2020 target) member states had an individual national binding target, the 2030 framework is solely based on an EU-level binding target of 32 per cent. It requires Member States to set national contributions to meet the binding target as part of their integrated national energy and climate plans.

7.2. National Legislation/Policy

Climate Action Plan 2021

This plan sets out a road map for taking decisive action to halve our greenhouse gas emissions by 2030 and reach net zero emissions by 2050. The plan emphasises the need to act now to build a cleaner greener economy and society. Among the most important measures in the plan is to increase the proportion of renewable electricity, up to 80% of all electricity generation by 2030. The government seeks to annually update the new climate action plan and the road map of actions to reflect developments of the previous year so as to ensure that required emission reductions are achieved.

In line with EU targets, the Programme for Government commits to achieving a 51% reduction in Ireland's overall greenhouse gas emissions by 2030. These legally binding objectives are set out in the Climate Action and Low Carbon Development (Amendment) Act 2021. This Act established legally binding frameworks and commitments to achieve targets.

Chapter 4 of the Plan (Choosing the Pathways which Create the Least Burden and Offer the Most Opportunity for Ireland) notes that in terms of electricity generation, the proposed pathway includes a more rapid build out of renewable energy capacity (wind and solar power generation technology), increased storage and the deployment of zero emissions gas. The decarbonisation pathway for the electricity

sector is seen as challenging given the rapid growth in demand for power as well as the need to ensure security of supply through the decarbonisation journey. It is estimated that between €21 and €22 billion will be required in wind and solar energy.

The plan also seeks to provide carbon budgets and sectoral emissions ceilings with 3 five-year economy wide budget programmes setting a limit for the amount of greenhouse gas emissions that can be emitted for that period. Any failure to achieve targets will be rolled on and will be required to be achieved in addition to the new targets envisaged under the next five-year plan.

Chapter 10 of the plan highlights the importance of mobilising private sector investment in the transition to a low carbon economy.

Section 11 of the Plan relates to electricity generation. It notes that electricity accounted for 16.2% of Ireland's greenhouse gases in 2018. However, the share of electricity from renewable energy increased almost five-fold between 2005 and 2018 from 7.2% to 33.7%. It is noted however that in achieving decarbonisation of the electricity sector this will not be possible without the social licence given by local communities making it vital that we bring them with the State on the energy transition. The plan notes that there is a requirement for a significant step up in ambition and delivery in order to meet the new 2030 target. A share of 80% of renewable electricity will require a significant contribution through local community-based projects. At least 500 megawatts of renewable energy will be delivered through such local community-based projects. Action No. 100 seeks to ensure a supportive spatial planning framework for onshore renewable electricity generation development.

National Planning Framework (NPF)

The NPF contains a number of relevant strategic outcomes and a number of national policy objectives which are relevant to the current application before the Board. These are set out below.

The NPF includes a set out 10 National Strategic Outcomes. The National Climate Policy Position establishes the national objective of achieving transition to a competitive, low carbon, climate resilient and environmentally sustainable economy by 2050. This objective will shape investment choices over the coming decades in line with the national mitigation plan and the national adaptation framework. New

energy systems and transmission grids will be necessary for a more distributed, renewables focused energy generation system, harnessing both the considerable onshore and offshore potential for energy sources such as wind, wave and solar and connecting the richest sources of that energy to the major sources of demand.

The transition to a low carbon and climate resilient society recognises that more diversified and renewables focussed energy systems will be necessary. It aims to deliver 40% of electricity needs from renewable sources by 2020 with further increases through to 2030 and beyond in accordance with EU/National Policy.

NPO21 seeks to enhance the competitiveness of rural areas by supporting innovation and diversification of the rural economy into new sectors and services, including those addressing climate change and sustainability.

The NPF also notes that in addition to legally binding targets agreed at EU level, it is a national objective for Ireland to transition to be a competitive low carbon economy by the year 2050. This will include:

- An aggregate reduction in carbon dioxide emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation-built environment and transport sectors, and
- In parallel, an approach to carbon neutrality in agriculture and land use sector, including forestry which is not compromising capacity for sustainable food production.

NPO54 seeks to reduce a 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 emission reductions.

NPO55 seeks to promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objective towards achieving a low carbon economy by 2050.

7.3. **Wind Energy Guidelines 2006**

These guidelines still constitute the official strategy guidance on wind farms under the provision of Section 28 of the Planning and Development Act 2000 (as amended).

The guidelines set out advice in relation to the design, siting, spatial extent, and height of turbines in various landscape character types. Appendix 4 provides details in relation to best practice for wind farm development on peatlands and flatland areas. Guidance is also provided on matters such as noise, shadow flicker, natural heritage, archaeology, architectural heritage, ground conditions, aircraft safety, wind take and potential cumulative effects.

In terms of noise, a lower fixed rate limit of 45 dB(A) or a maximum increase at 5 dB(A) above background noise at nearby noise sensitive locations is considered to be appropriate to provide protection to wind energy neighbours. However, in very quiet areas the use of a margin of 5dB(A) above the background noise level at nearby noise sensitive properties may unduly restrict wind energy developments which have wider national and global benefits. In low noise environments where the background noise is less than 30dB(A) it is recommended that the daytime level of $LA_{90\ 10\ mins}$ of the Wind Energy Development Noise be limited to an absolute level with the range of 35 to 40 dB(A).

The guidelines state that noise is unlikely to be a significant problem where the distance from the nearest turbine to any noise sensitive property is more than 500 metres.

In relation to shadow flicker, it is recommended that at neighbouring offices and dwellings within 500 metres shadow flicker should not exceed 30 hours per year or 30 minutes per day.

7.4. Draft Wind Energy Guidelines 2019

The Board will note that these guidelines are still in draft form and have not been officially adopted as official guidance. The Supreme Court held in Balz & Anor v An Bord Pleanála [2016] IESC 134, that while statutory guidelines (in this instance the 2006 guidelines) still in force and may be out of date was not an irrelevant planning consideration, and the Board in setting out its reasons and considerations in determining the application, should have it's given reasons for not accepting the guidance set out in the 2019 Wind farm Guidelines.

Section 3.1 of these Guidelines emphasise the need for development plans to incorporate a plan led approach to wind farms identifying areas which are considered

to be suitable or not suitable for wind farm development. There is an emphasis on any development plan highlighting how it is proposed to contribute to overall national renewable targets.

Section 4.3.2 of the Guidelines emphasise the need for community involvement and the need to take community views into account when establishing, siting and designing wind farm developments. Section 4.9 of the Guidelines set out general separation distance to ensure the appropriate siting of wind farms.

Section 5.7 relates to noise. The draft guidelines state that the preferred approach is to propose a relative rated noise limit of 5 dB(A) above existing background noise in the ranges of 35 to 43 dB(A) with 43 dB(A) being the maximum noise limit permitted day or night. The noise limits will apply to outdoor locations at any residential or noise sensitive properties.

In terms of appropriate setback from boundaries, the guidance suggest that four times the tip height or at least 500 metres between the wind turbine and the nearest point of curtilage of any residential property in the vicinity is most appropriate for visual amenity purposes.

7.5. Regional and Local Policy

7.5.1. Regional, Spatial and Economy Strategy for the Eastern and Midlands Region 2019

Chapter 10 of this strategy specifically relates to infrastructure and Section 10.3 to energy. It notes that overreliance of non-indigenous supplies of energy is still a major issue for the region. To meet our energy targets, we need to better leverage natural resources to increase our share of renewable energy. There is a need to diversify our energy production systems away from fossil fuels towards green energy such as wind, wave, solar and biomass together with smart energy systems and the electrification of transport infrastructure will require the progressive and strategic development of a different form of energy grid. The development of onshore and offshore renewable energy is critically dependent on the development of enabling infrastructure including grid facilities to bring energy ashore and to connect major sources of energy demand. It is also necessary to ensure more geographically focussed renewables investment to minimise the amount of additional grid

investment required, for example through co-location of renewables and associated grid connections.

RPO10.22 seeks to support the reinforcement and strengthening of the electricity transmission and distribution network to facilitate the planned growth and transmissions distribution of a renewable energy focussed generation across the major demand centres to support an island population of 8 million people including, inter alia, to facilitate the delivery of necessary integration of transmission network requirements to allow linkages of renewable energy proposals to the electricity transmission grid in a sustainable and timely manner.

7.6. Local Planning Policy

7.6.1. The Westmeath County Development Plan 2021 – 2027

Chapter 5 sets out details of Economic Development and Employment Strategy for the county. A key tenant of the economic development and employment strategy seeks a transition to a low carbon economy/green economy where there is a shift towards the use of renewable energy.

In terms of economic policy objectives CPO 5.59 seeks to support renewable energy initiatives that supports a low carbon transition.

CPO9.34 seeks to 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.

Chapter 10 of the development plan specifically relates to transport infrastructure and energy. Section 10.22 relates to renewable energy sources and Section 10.23 specifically relates to wind energy. The plan notes that in transitioning to a low carbon economy, future diversification and adaptation to new energy technologies is vital. Renewable energy such as wind, solar and biomass will assist in managing the transition of the local economies to such areas in gaining the economic benefits of greener energy.

Policy CPO10.139 seeks to 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 having particular regard to the requirements of the Habitats Directive.

CPO10.140 seeks to facilitate measures which reduce emissions of greenhouse gases and support the implementation of actions identified in the Westmeath County Council Climate Change Adaption Strategy 2019 – 2024 and any future amendments.

CPO10.141 seeks to promote and support the use of renewable forms of energy as a contribution towards energy demand in all new buildings where it is consistent with the proper planning and sustainable development of the area.

The plan notes that Ireland is one of the leading countries in its use of wind energy and that wind energy is the largest contributing source of renewable energy in Ireland. It notes that in 2018 wind provided 85% of Ireland's renewable electricity and 30% of the total electricity demand. The Council recognises the importance of wind energy as a renewable energy source which can play a vital role in achieving national targets in relation to the reduction of fossil fuel dependency and therefore greenhouse gas emissions and seeks to enable renewable and wind energy resources of County Westmeath to be harnessed in a manner that is consistent with the proper planning and sustainable development of the area. There are a number of issues which must be taken into consideration when dealing with applications for wind energy development including visual impact, landscape protection, impacts on residential amenity, impact on wildlife habitats, connections to the national grid and impact of construction and ancillary infrastructure including access roads. In general, the Council will encourage wind energy, provided such development does not have an adverse effect on residential amenities, tourism amenities, special landscape character, views or prospects, Natura 2000 sites, protected structures, aircraft flightpaths or by reason of noise and visual amenity. Applications for such developments will not be encouraged in areas of high amenity.

CPO10.142 states that having regard to the principle of planning guidance set out in the Department of Housing, Planning and Local Government publications relating to wind energy development, and in 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.

CPO10.143 to provide the following separation distances between wind turbines and residential dwellings:

- 500 metres where the tip of the wind turbine blade is greater than 25 metres but does not exceed 50 metres.
- 1,000 metres where the tip height of the wind turbine blade is greater than 50 metres but does not exceed 100 metres.
- 1,500 metres where the tip height of the wind turbine blade is greater than 100 metres but does not exceed 150 metres.
- More than 2,000 metres where the tip height of the wind turbine blade is greater than 150 metres.

CPO10.144 seeks to ensure the security of energy supply by supporting the potential of wind energy resources of the county in a manner that is consistent with the proper planning and sustainable development of the area.

CPO10.146 seeks to strictly direct largescale 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.

In the context of this policy, industrial scale, largescale energy production projects are identified as follows:

Projects that meet or exceed the following criteria.

- Height over 100 metres to blade tip.
- Scale more than 5 turbines or
- Output having a total output of greater than 5 MW.

Development sited on peatlands have the potential to increase the overall carbon losses. Proposals for such developments should demonstrate that the following has been considered.

- Peatland stability.
- Carbon emissions balance.

CPO10.147 seeks to ensure that proposals for energy development demonstrate that human health has been considered, including those relating to 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).

CPO10.148 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 Ministerial Guidelines.

CPO10.149 support the preparation of a management plan for the industrial peatlands in the county, in consultation with stakeholders and adjacent local authorities. The plan should focus on recreational opportunities, renewable energy, hydrological and ecological considerations subject to the environmental assessment and the requirements of Article 6 of the Habitats Directive.

Chapter 11 specifically relates to climate action. Section 11.8 relates to green infrastructure and Section 11.9 relates to clean energy. The plan seeks to reduce harmful emissions and achieve and maintain good air quality for all urban and rural areas in the region and to work with local authorities and the relevant agencies to support local data collection in the development of air quality monitoring and to inform regional air quality and greenhouse gas emissions inventory. In relation to clean energy, the plan recognises the contribution that wind and solar energy make to meeting national renewable energy targets. In this regard the development plan strongly supports the development of renewable energy resources.

CPO11.1 seeks to support the implementation of 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 of this plan including:

- 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 including the emerging regional, spatial and economic strategy for the Eastern and Midlands Region.
- Relevant provisions of any sectoral adaptation plans prepared to comply with 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 2050.
- The Westmeath County Council Climate Change Adaption Strategy 2019 to 2024. Draft Ministerial Direction on the Westmeath County Development Plan 2021 – 2027.

Draft Ministerial Direction

On 29th April 2021, the Minister of State at the Department of Housing, Local Government and Heritage, on the basis of a recommendation made to him by the Office of the Planning Regulator under Section 31AM(8) of the Planning and Development Act 2000, notified Westmeath County Council of its intention to issue a direction to the Westmeath County Development Plan 2021 – 2027. Under this Draft Direction, the Planning Authority is hereby directed to take the following steps with regard to the development plan.

(i) *Delete Wind Energy Policy Objective CPO10.143 in its entirety from Section 10.23.2 of the development plan.*

(ii) *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 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 co-ordination with the objectives for wind energy development in the development plan with those of neighbouring counties as are necessary to ensure a co-ordinated approach with wind energy objectives of the adjoining local authorities having regard to the requirements of Section 9(4) of the Act.

Statement of Reasons

I *The development plan as made is inconsistent with Ministerial Guidelines issued under Section 28 of the Act, specifically items two and three of Specific Planning Policy Requirement contained in their Interim Guidelines for Planning Authorities and Statutory Plans, Renewable Energy and Climate Change (July 2017)' noting the requirement for a planning authority to comply with the aforementioned Specific Planning Policy Requirement under Section 28(1C). In particular, the development plan fails to identify the wind energy production (in megawatts) which county Westmeath can contribute in delivering its share of the overall government targets on renewable energy and climate change mitigation over the plan period.*

II In relation to Policy Objective CPO10.143 renders it impossible to progress a wind energy project with a wind turbine height of over 100 metres or over 150 metres in the vast majority of the county which would significantly limit or constrain renewable energy projects to the extent that it is inconsistent with the requirement to demonstrate the contribution of County Westmeath to realising overall national targets on renewable energy and climate change mitigation.

III *The development plans contains conflicting objectives on wind energy development such that policy objectives supporting wind and renewable energy in Chapters 10 and 11 of the adopted development plan cannot be achieved having regard to the separation distance required by wind energy policy objective CPO10.143.*

IV *The development plan has therefore not been made in a manner consistent with the recommendation of the Office of the Planning Regulator under section 31AM and that the development plan as made fails to set out an overall strategy for the proper planning and sustainable development of the area*

7.6.2. **Meath County Council Development Plan 2021 – 2027**

This development plan took effect on 3rd November, 2021. Section 4.10 of the development plan specifically relates to the green economy and states that the plan aims to recognise and develop the full potential of green energy including biomass for energy production/manufacturing and the export of green electricity to the national grid. The plan seeks to support industries and businesses seeking to generate energy within the confines of their specific sites and to export surplus energy to the national grid.

Section 6.14 of the development plan specifically relates to climate change. It notes that it is necessary to address the causes of climate change by reducing our reliance on fossil fuels and our greenhouse gas emissions. Section 6.15.3 specifically relates to renewable energy and subsection 2 specifically relates to wind energy. It notes that wind energy has been the most significant source of renewable electricity. In 2017 installed wind capacity has increased to 2,851 megawatts across the island of Ireland. If Ireland is to reach the 2030 renewable electricity target, 70% of electricity generation must be from renewable energy. The Council will continue to support and encourage the principle of development of wind energy, in accordance with government policy and having regard to the provisions of the landscape characterisation assessment of the county and the Wind Energy Development Guidelines (2006) or any revisions thereof.

INF POL 34 seeks to promote the sustainable energy sources, locally based renewable energy alternatives, where such development does not have a negative impact on the surrounding environment including water quality, landscape, biodiversity, natural and built heritage, residential and local amenities.

INF POL 35 seeks a reduction in greenhouse gases through energy efficiency and the development of renewable energy sources utilising the natural resources of the county in an environmentally acceptable manner consistent with best practice planning principles.

INF POL 36 seeks to support the implementation of the National Climate Change Strategy and to facilitate measures which seek to reduce emissions of greenhouse gases.

INF POL 38 seeks to encourage that new development proposals maximise energy efficiency through siting, layout, design and incorporation of best practice in energy technologies, conservation and smart technology.

INF POL 41 seeks to encourage the development of wind energy, in accordance with government policy and having regard to the landscape character assessment of the county and the Wind Energy Development Guidelines (2006) or any revisions thereof.

INF Objective 39 seeks to support Ireland's renewable energy commitment outlined in national policy by facilitating the development and exploitation of renewable energy sources such as solar, wind, geothermal, hydro-bio energy at suitable locations within the county where such development does not have a negative impact on the surrounding environment (including water quality), landscape, biodiversity or local amenities so as to provide for future residential enterprise development within the county.

INF Objective 40 seeks to reduce reliance on fossil fuels in the county by reducing the energy demand of existing buildings in particular residential dwellings.

INF Objective 41 to promote the generation and supply of low carbon and renewable energy alternatives, having regard to the opportunities offered by the settlement hierarchy of the county and the built environment.

INF Objective 42 to support the recording and monitoring of renewable energy potential in the county in partnership with other stakeholders including the Sustainable Energy Authority of Ireland (SEAI).

INF Objective 46 to support the implementation of the actions of the Meath Climate Action Strategy 2019 to 2024 and review and update the Energy Management Action Plan 2011 – 2012 “Think Globally Act Globally”.

INF POL 48 seeks to ensure that energy transmission infrastructure follows best practice with regard to siting, design and having the least environmental impact in the interests of landscape protection.

INF POL 50 seeks to require the location of local energy services such as electricity be underground where appropriate.

INF POL 52 seeks to generally avoid the location of overhead lines in Natura 2000 sites unless it can be proven that they will not affect the integrity of the site in view of its conservation objectives (i.e. by carrying out an appropriate assessment in accordance with Article 6(3) of the EU Habitats Directive).

Chapter 8 of the development plan relates to cultural and natural heritage. Section 8.17 relates to landscape.

HER Objective 56 seeks to preserve the views and prospects listed in Appendix 10 of Volume 2 and on Map 8.6 to protect these views from inappropriate development which would interfere unduly with the character and visual amenity of the landscape. The closest designated view is View 52 which is located c.13 kilometres to the north-east of the subject site. Views 10 and 11 at Crossakell are located approximately 17 kilometres to the north of the subject site.

Chapter 10 of the development plan specifically relates to climate change strategy. It highlights the need to reduce the overall quantity of greenhouse gas emissions and to develop an adaptation strategy to futureproof against anticipated climate risks. It sets out a series of regional policy objectives relating to climate change.

Finally, Chapter 11 of the development plan sets out development management standards and land use zoning objectives. Section 11.8.3 specifically relates to Wind Energy. The Council require that any pre-application discussion or planning

application for a wind farm sets out how the proposed development complies with DM POL 27 and DM Objective 76 of the development plan.

DM POL 27 seeks to encourage renewable energy development proposals which contribute positively to reducing energy consumption and carbon footprint.

DM Objective 76 states that in the assessment of individual energy development proposals the Council will take the following criteria into account.

- The proper planning and sustainable development of the area.
- The environmental and social impacts of the proposed development.
- Traffic impacts including details of haul routes.
- Impact of the development on the landscape.
- Impact on protected views and prospects.
- Impact on public rights of ways and walking routes.
- Connection to the National Grid.
- Mitigation features where impacts are inevitable.
- Protection of designated areas – NHAs, SPAs and SACs, Areas of Archaeological Potential and Scenic Importance.
- Proximity to structures that are listed for protection, national monuments etc.
- Cumulative impact from the proposal.

The Council will support innovative designs for wind farms. Topographical enclosures and extensive areas of degraded previously developed land should be identified for wind farm development to help minimise visual impacts and to harmonise wind turbines with the landscape. In general matt finishes and neutral colours for turbine and structures are required. All planning applications should be accompanied by detailed proposals for restoration of the site after removal of turbines and associated infrastructure including access roads. Adequate financial security will be required to ensure site restoration and removal of wind farms.

DM POL 28 requires compliance with the Wind Energy Development Guidelines (2006) and Circular PL20-13 and any updates thereof. Any proposals should be

supported by both the technical and environmental statement prepared to an acceptable standard which sets out how the proposal complies with guidelines.

DM Objective 78 requires that any pre-application discussion and/or planning application proposal for wind farm development sets out how the project complies with DM Policy 28.

DM Objective 79 states that topographical enclosures and extensive areas of degraded or previously undeveloped lands should be identified for wind farm development to help minimise visual impacts and to harmonise wind turbines with the landscape.

DM Objective 80 in general matt finishes and neutral colours for turbines and structures are required.

DM Objective 81 the Council will support appropriate innovative designs for wind farms.

DM Objective 82 states that all planning applications shall be accompanied by detailed proposals for the restoration of the site after removal of turbines and associated infrastructure, including access roads. Adequate financial security will be required to ensure site restoration and removal of the wind farm.

8.0 Planning Assessment

8.1. Introduction

8.1.1. I have read the entire contents of the file, visited the site and surroundings, and have had particular regard to the national and local policy in respect of the wind farm development. I have also had regard to the submissions contained on file including the submissions of the various third-party observers, prescribed bodies and submissions from Westmeath County Council and Meath County Council. All three section of this report (planning assessment, EIAR Assessment and the Appropriate Assessment) should be read in conjunction so as to avoid unnecessary repetition under each of the sections. I consider the following issues are pertinent in determining the current application before the Board.

- The Principle of Development
- Policy Issues
- Legal and Procedural Issues
- Visual Impact
- Biodiversity and Water Quality Issues
- Impact on Livestock
- Residential Amenity and Heath Issues
- Traffic and Transport Issues
- Cumulative Impacts
- Impacts on Cultural Heritage
- Other Miscellaneous Issues

Each of these issues will be dealt with under separate headings below:

8.2. **Principle of Development**

8.2.1. The wealth of reports and guidelines which set out targets, policies and objectives which seeks to reduce dependence on fossil fuels whilst also seeking to encourage and expand development of renewable energy set out in Section 7 of my report above. Perhaps the most important national policy document, entitled ‘Climate Action Plan 2021’ which sets out a road map for taking decisive action to halve our emissions greenhouse gas emissions by 2030 and to reach a net zero emissions by 2050. It emphasises the need to act now and to build a cleaner, greener economy and society. The most important measures set out in the Climate Action Plan is to increase the proportion of renewable electricity to up to 80% by 2030. These legally binding objectives set out in the Climate Action and Low Carbon Development (Amendment) Act of 2021.

8.2.2. In terms of electricity generation, the plan envisages rapid build out of renewable generation capacity particularly in relation to wind and solar power generation technology. Chapter 10 of the Plan highlights the importance of mobilising private sector investment in the transition to a low carbon economy.

8.2.3. In addition to this the National Planning Framework also highlights the national target of achieving transition to a competitive low carbon climate resilient and environmentally sustainable economy by 2050.

8.2.4. NPO1 seeks to enhance the competitiveness of rural areas by supporting innovation and diversification of the rural economy into new sectors and services including those addressing climate change and sustainability.

8.2.5. NPO54 seeks to reduce a carbon footprint by integrating climate into the planning system in support of national targets for climate policy mitigation and adaption objectives as well as targets for greenhouse gas emission reduction.

8.2.6. NPO55 seeks to promote renewable energy generation at appropriate locations within the built and natural environment in order to meet national objectives towards achieving a low carbon economy by 2050.

8.2.7. It is clear from the above, that national policy acknowledges that significant increases in wind energy capacity will be required to meet the mandatory targets set out in the national targets on climate change. The proposed wind farm, with a projected maximum output of up to 54 megawatts, will deliver and build upon the renewable energy resource available in Ireland and will assist in the progress to a low carbon economy and of reducing dependence on fossil fuels. Additional wind generated energy will enable the decarbonisation of the electricity sector in line with European and national climate strategies.

8.2.8. The provision of such renewable energy is all the more important in light of recent geopolitical events in Russia and Ukraine which has undermined the supply of fossil fuels particularly in respect of gas and oil to the European Union as a whole. This accentuates the need to become more reliant on renewable energy sources and less reliant on exogenic sources of fossil fuels to serve the needs of the state.

8.2.9. The Regional Spatial and Economic Strategy for the Eastern and Midlands Region likewise notes the overall reliance of non-indigenous supplies of energy and emphasises the need to diversify our energy production systems and away from fossil fuels towards energy such as wind, solar and biomass. Specifically, RPO10.22 seeks to support the reinforcement and strengthening of the electricity transmission and distribution network to facilitate the planned growth and transmission and distribution of renewable energy.

8.2.10. In terms of local policy, both the Westmeath County Development Plan (2021 – 2027) and the Meath County Development Plan (2021-2027) both recognise the need to develop the full potential of green energy during the life of the Plan. Both plans highlight the need to reduce reliance on fossil fuels and reduce greenhouse gas emissions. In the case of the Westmeath Plan, CPO10.1.44 seeks to ensure the security of energy supply by supporting the potential of wind energy resources of the County in a manner that is consistent with the proper planning and sustainable development of the area. CPO10.140 seeks to facilitate measures which reduce emissions of greenhouse gases and support the implementation of actions identified in the Westmeath County Climate Action Change Adaption Policy 2019 – 2024. CPO10.141 seeks to promote and support the use of renewable forms of energy as a contribution towards energy demand in all new buildings where it is consistent with the proper planning and sustainable development of the area. Numerous policies contained in the Meath County Development Plan seek to ensure that wind energy is harnessed in a manner that is consistent with the proper planning and sustainable development of the area.

8.2.11. It is noted that notwithstanding the above policies contained in the development plan, Westmeath County Council recommended that planning permission be refused specifically on the basis that the proposed development contravenes CPO10.1.46. This issue would be dealt with under a separate sub-heading below.

8.2.12. However, having regard to the overarching policy statements contained in the various documents at national and local level, it is reasonable to assume that the proposed development, subject to qualitative safeguards is acceptable in principle and in accordance with the overall goal of reducing reliance on fossil fuels and promoting and developing more sustainable forms of renewable energy within the State.

8.3. **Policy Issues**

8.3.1. Both the third parties and the Chief Executives Report of Westmeath County Council have expressed concerns that the proposed development is contrary to many policy statements contained in the local development plan and contrary to many statements and guidance contained in the Wind Energy Guidelines of both 2006 and 2019.

8.3.2. The most pertinent concerns expressed by both Westmeath County Council and by a number of third party observers include the following:

- The area in which the proposed development is deemed to be unsuitable for wind farm development due to the nature of the low lying lands in the midland areas of the State. It is suggested that wind farms are more suitably located in elevated areas on the western side of the country in order to avail of greater wind speeds.
- It is considered that the proposal is premature pending the adoption of the 2019 Wind farm Guidelines.
- The proposal is premature pending the preparation of a Wind Energy Strategy for County Westmeath.
- It is argued that the future of wind energy within the State should be more dependent on offshore wind farms rather than terrestrial wind farms.
- The proposal is contrary to Policy 10.1.4.3 and Policy P-WYN6 of the Westmeath County Development Plan.
- The proposal is contrary to Policy CPO10.1.46 which seeks to direct largescale energy projects such as wind farms into areas of cutover and cutaway bogs.
- The proposed development is contrary to Section 10.23 of the development plan which states that the Council are supportive of wind energy provided that such developments do not have adverse effects on residential amenities or sensitive landscapes designated within the development plan.

8.3.3. Each of these issues are dealt with below.

8.3.4. With regard to the prematurity of the development pending the adoption of the 2019 Guidelines and the adoption of wind policy guidance in the Westmeath Development Plan, I would request that the Board note the following.

8.3.5. The prematurity of the proposed development in the context of the 2019 Wind Farm Guidelines and the Westmeath Development Plan should be viewed in the context of the need for generation of energy from renewable sources is of the utmost importance and constitutes a major urgent national and global policy priority in the

context of climate change and also to secure reliable energy supplies within the country that is not reliant on fossil fuel imports from foreign countries. It is not appropriate in my view to postpone or delay such important projects on the basis of any perceived lacuna in local development plan policy or the adoption of national guidelines where there is a wealth of European, national and regional policy all of which supports, promotes and encourages renewable energy developments including wind farm developments in order to provide more sustainable and environmentally appropriate energy supply nationally. It is clear and unambiguous that there is an urgent need to support the diversification and security of energy supplies and accelerate the transition from fossil fuels to renewable energy production and consumption in the shortest timeframe possible. On this basis I consider that the Board can proceed to determine the current application before the Board in the absence of specific detailed and locational policies contained in the development plan, subject to assessing the development in the context of its impact on residential amenity and other environmental qualitative safeguards.

8.3.6. I also note that the Draft Ministerial Direction issued on the 29th April, 2021 requires that Westmeath Co. Council to take such steps to identify on an evidenced-basis using appropriate and meaningful metrics, the wind energy production which Westmeath can contribute in delivering its share of overall Government targets on renewable energy and climate change mitigation over the Plan period. It is therefore envisaged by way of the Ministerial Direction that Westmeath County Council is required to contribute towards national targets on renewable energy and climate change mitigation during the lifetime of this plan. It is my view, which is in line with national policy, that renewable energy projects must be delivered as a matter of utmost priority, and there is sufficient national and international policy to allow for this in the absence detailed local policy.

8.3.7. With regard to the contention that the proposed development does not comply with the more onerous standards set out in the more recent Draft Guidelines (2019), particularly in relation to noise and shadow flicker, these issues are dealt with under separate headings below.

8.3.8. A number of submissions argue that the Midlands are, because of the flat low lying lands are unsuitable for wind farm development primarily because of low wind speeds. It is clear from the EIAR submitted that the applicant has carried out surveys

in respect of wind speed and considers the area in which the subject site is located to have a sufficient wind regime in order to make a wind farm viable. Wind speed data for the area as indicated in the 'Geohive Environmental Sensitivity Mapping' website suggests that the wind regime in the area is 'low to medium' which would support the view that a wind farm development is a viable proposition at this location. Furthermore, I would again refer the Board to the Ministerial Direction issued in respect of wind farm policy in the Westmeath area. The direction clearly requires that Westmeath County Council contributes towards achieving and fulfilling national renewable energy targets within the State. This would again suggest that in overall policy terms, the provision of a wind farm(s) is necessary in order for the county to fulfil its obligations in terms of contributing towards renewable energy targets subject to qualitative safeguards which are assessed in more detail below.

8.3.9. The argument that the proposed development is deemed premature in the absence of a national landscape strategy is noted. However, I reiterate that the provision of renewable energy infrastructure is an urgent national policy priority and this in my view must surpass any requirement to provide and adopt a national landscape strategy in which all wind farm developments can be assessed.

8.3.10. While a number of submissions argue that the future of wind energy is offshore and not terrestrial wind farms, it is apparent from the national guidelines referred to above including the Climate Action Plan (2021) that it is envisaged that both onshore and offshore wind farms would play an important part in reaching the overall renewable targets for 2030 and again for 2050.

8.3.11. In relation to the proposal contravening Policy CPO10.143, I note that this policy statement was specifically referred to in the Ministerial Direction of April 2021. The Ministerial Direction specifically requires the deletion of this policy objective in its entirety from the development plan. On foot of this draft Ministerial Direction, it can be reasonably argued in my opinion that the policy objective no longer forms part of the development plan on the basis that it does not sit comfortably with national policy in relation to increasing renewable energy capacity and with the guidance contained in both the 2006 Guidelines and the 2019 Guidelines in respect of the siting and placing of wind turbines within a baseline environment.

8.3.12. In respect of the current application, this specific policy objective requires that wind turbines be located more than 2,000 metres from residential dwellings within the counties (with the wind turbine blade being greater than 150 metres in height). As the applicant points out in the response to the third-part observations , the implementation of such generous separation distances between proposed wind turbines and residential dwellings would result in, if not the entire county, large swathes of the county being deemed unsuitable for wind turbine development. Again, I reiterate that the implementation of such a policy would not be conducive or appropriate in terms of achieving national targets in respect of renewable energy capacity.

8.3.13. CPO10.146 seeks to strictly direct largescale 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 proposed wind farm is not located on cutaway bog but is primarily located on productive agricultural land. As such, the proposed development contravenes CPO10.146 as set out in the development plan.

8.3.14. As in the case of Policy Objective 143, the requirement to limit wind farm development within the county to areas of cutover/cutaway peatlands severely curtails the potential of the county to meet national renewable energy targets. It is clear and unambiguous from the Draft Ministerial Direction, that it is both envisaged and required that County Westmeath contribute in delivering its share of overall government targets in respect of renewable energy and climate change. While the Board must have regard to policy provisions contained in the development plan, it is not required to slavishly adhere to all such policy statements. In the case of ordinary planning applications and appeals the Board is permitted to exercise its discretion under the criteria set out in Section 37(2)(b) of the Planning and Development Act 2000 where the Planning Authority has issued as refusal on the basis that the proposal materially contravenes a policy statement contained in the development plan. It is respectfully suggested that if the criteria set out in Section 37(2)(b) were to be applied in this instance, it could be reasonably argued that the proposal complies with the criteria set out under:

- Section 37(2)(b)(i) - in that the proposed development is of strategic or national importance,

- Section 37(2)(b)(ii) – in that there are conflicting objectives in the development plan insofar as the proposed development is concerned. In this regard I refer the Board to the previous section of my assessment which indicates that there are many policy statements and objectives contained in the development plan that generally support the provision of wind energy.
- Section 37(2)(b)(iii) – in that the proposed development should be granted having regard to Regional Planning Guidelines for the area and other National Policy Guidelines (referred to in Section 7 above) including the Climate Action Plan and the National Planning Framework.

8.3.15. On the basis of the above, I consider that the Board, notwithstanding the provisions of CPO10.146 can consider granting planning permission primarily on the basis of the overarching national policy objectives in relation to the promotion of renewable energy targets within the State.

8.3.16. Therefore if the Board do come to the conclusion that the proposal is a material contravention of the plan, it can grant planning permission in light of the provisions of S.37(2)(b) of the Act.

8.3.17. Third party submissions also contend that the proposed development is contrary to more general policies contained in the Plan which are generally supportive of wind energy provided that such development do not have an adverse effect on residential amenity, tourist amenities, landscape character, Natura 2000 sites, protected structures or impact on aircraft flight paths etc. Whether or not the proposed development impinges or adversely impacts upon these issues is assessed separately under various headings below.

8.3.18. In conclusion therefore, I do not consider that the proposed development in overall terms is contrary to wind farm policy. While it is acknowledged that the proposed development may be contrary to a number of specific statements contained in the development plan, some of these statements are required to be omitted by way of the draft Ministerial Direction of April, 2021 (as in the case of Policy CPO10.143) whereas other policy statements including Policy CPO10.146 should be assessed in the context of national policy priorities in respect of the current global energy crises and the need to tackle the issue of climate change by supporting diversification and security of energy supplies in the transition to renewable energy production and

consumption. I therefore do not consider that the proposed development is contrary to wind farm policy as suggested in some of the submissions.

8.4. Legal and Procedural Issues

8.4.1. Third party submissions in respect of the proposed development raise a number of legal and procedural issues. These include the following

- the proposal constitutes project splitting (referred to in one of the observations as salami slicing).
- The site notices did not comply with the requirements of the Planning and Development Regulations 2001 (as amended).
- The proposal does not constitute strategic infrastructure.
- Landowners have not been approached for consent of laying of cables within the roadway.
- The applicant has failed to undertake an appropriate level of consultation with the local population in respect of the development.

Project Splitting

8.4.2. I do not accept that the proposed development constitutes project splitting. Project splitting specifically relates to splitting largescale developments into smaller applications in order to result in sub-threshold EIA development so as to circumvent the requirement to carry out a full EIA. The applicant in this instance has carried out what I consider to be a robust and comprehensive EIAR (see Section 9 below of my report). There has been no attempt to circumvent the EIA process in respect of the current application.

8.4.3. It is also contended (see submission by Eco Advocacy) that the proposal represents project splitting whereby the proposal should be assessed in association with the neighbouring prospective Ballivor Wind farm. The Ballivor development is at planning stage. It relates to a separate wind farm development to be located on a separate site which is to be undertaken by a separate applicant (Bord na Mona, Powergen Limited). As at the time of writing this report this application was the subject of pre-application consultations. There is no application before the Board at the time of writing in respect of the Ballivor Wind Farm. The two developments have not been

partitioned in an attempt to circumvent the EIA process. Furthermore, the EIAR has to the best of the applicant's ability in my opinion, carried out a full cumulative impact assessment of the proposed development in combination with the perspective Ballivor development. It is fully acknowledged that the Bord na Mona application at Ballivor may be subject to change. However, the applicant in my view has endeavoured to assess the cumulative impact arising from both developments on the basis of the information that is currently available in respect of the Ballivor Wind farm. Furthermore, for the purposes of a visual impact assessment, the applicant the applicant has also assessed the proposal in the context of the Yellow River Wind farm located c.20 kilometres to the south-west of the site. On this basis, I am satisfied that the applicant has carried out, as far as practicably possible, a robust and comprehensive assessment of potential cumulative impacts arising from other wind farm developments in the area and I do not consider that the applicant has attempted to circumvent the EIA process by way of project splitting. Again it is reiterated that, in view of the ambitious and stringent targets for renewable energy targets set out in national plans, it is not appropriate to delay a decision on the current development pending the submission of applications to either the Board of the planning authority for similar developments in the wider area, which could still be some time away.

Site Notices

8.4.4. The Board is not in a position to determine whether or not all the site notices were in place all of the time in accordance with the Regulations. The applicant in its response to the observation submitted states that in the case where any site notices were defaced and/or removed, they were replaced with the utmost urgency. Having inspected the site and its surroundings it was noted that a large number of site notices were still in-situ and were conspicuous and legible from vantage points along the public thoroughfares. Furthermore, it would appear that defacement or removal of public notices did not inhibit or jeopardise the making of submissions in respect of the application and in no way prejudiced observers in terms of making observations on the development.

Strategic Infrastructure Development

8.4.5. On the issue of whether or not the proposal constitutes SID under the provisions of the Act, it is argued on some of the submissions that this is the theoretical output from the wind farm and in reality, actual output is likely to be significantly less than that the 50 megawatt threshold and therefore the proposal fails to qualify as strategic infrastructure. In relation to this argument, I note that the Board in its original Direction has already determined that the development constitutes strategic infrastructure in accordance with the 37E of the Act as the proposal falls within the Seventh Schedule being an installation for the harnessing of wind farm production having an output greater than 50 megawatts. The Board's decision in this instance cannot be revisited and on the basis of the submissions made.

8.4.6. With regard to the laying of cables within the road, information submitted with the application indicates that all cabling associated with the proposed grid connection will be located within the metalled carriageway. Any infringement on third party lands, should such a scenario arise, are a civil matter between the parties involved and not a matter for the purposes of determining the current application.

Public Consultation

8.4.7. A number of submissions also argued that there was no meaningful consultation with between the applicant and local stakeholders within the community in respect of the proposed development.

8.4.8. In response to this assertion, the applicant states that very significant and comprehensive consultations and communications were made to engage with locals and gather the views of the local community and businesses to inform the design of the development particularly in respect of the likely environmental impacts. The level of community consultation is set out at 1.10 of the EIAR. It involved consultations with both Planning Authorities (Westmeath County Council and Meath County Council). In respect of community consultation and participation, it is stated that in addition to the statutory public consultations under the EIAR, the applicant also undertook public consultation in the form of written correspondence or telephone calls with the community. Furthermore, consultation clinics were also organised and details of the consultation set out in Annex 1 of the EIAR. Details of consultation with prescribed bodies are also set out in Annex 1 of the EIAR. Thus, the applicant has in conjunction with the statutory consultation process, also undertook a non-statutory

consultation exercise with the local community in respect of the proposed application. Based on the information contained in the EIAR, it appears that the level of consultation undertaken went beyond the statutory obligations and as such can be regarded as acceptable.

SEA

8.4.9. One of the submissions argue that the applicant failed to carry out a Strategic Environmental Assessment of the project. As referred to above, the proposed development has been informed and guided by various national plans and guidance in relation to wind farm developments. Under law, there is a requirement that such plans are the subject of a separate Strategic Environmental Assessment. As the applicant points out in its response to the observers submission, it is a requirement that plans are subject to Strategic Environmental Assessment as opposed to individual projects.

8.5. Visual Impact

8.5.1. Concerns are expressed in all most all third part observations in respect of the visual impact arising from the proposed wind farm development. Concerns are also expressed in the submission of the Meath Co Council and to a lesser extent Westmeath County Council in respect of the visual impact arising from the proposed development. Meath County Council requested that the applicant assess the visual impact of the proposed development from numerous listed scenic views and views from protected structures contained in the development plan. These issues are dealt with below in the assessment.

8.5.2. The landscape can be described as a relatively sparsely populated area and is generally devoid of largescale structures which may provide a reference in terms of scale for the development of the size and scale proposed. There are no large buildings with tall spires, silo's, chimneys etc that could be used as a visual reference that significantly protrudes above the skyline. The overall landscape is relatively flat terrain at c. 70 to 80 m AOD with rolling hills in the wider area. In terms of land use, the receiving environment comprises in the main of open fields with exposed peatlands in the wider area. There are a number of conifer plantations on

the land surrounding the site and in some cases this planting will screen the turbines from public vantage points from roadways particularly in close proximity to the site.

8.5.3. In terms of the surrounding settlement, there is one major centre located within a 5km radius of the subject site. This is the village of Delvin which is c.4.5 km to the north of the wind farm site.

8.5.4. In terms of landscape designation, the proposed wind farm located in Landscape Character Area 3 and the River Deel Lowlands as designated in the Westmeath County Development Plan. This landscape designation is not deemed to be particularly sensitive in landscape terms.

8.5.5. The works to be carried out associated with the grid connection also extend into the administrative area of Meath County Council. The works involve laying cable along existing roads. While the end masts are also to be located within the administrative of Meath County Council, these masts will link into the existing Mullingar – Corduff 110kV line which already traverses the landscape. In this regard it is not considered that the proposed end masts would be congruous or out of context with the existing environment.

8.5.6. The overall character of the landscape will be altered to some extent, either profoundly or less so, by the visual prominence of the wind turbines. Having regard to the relatively flat nature of the land and the fact that the proposed turbines will protrude significantly above existing skyline, distant views of the turbines will be afforded across extensive flat open fields and peat bogs over large areas surrounding the site. The impact will be mitigated to some extent by the treelined field boundaries, particularly the mature linear hedgerows and trees along the access roads in the case of middle distant views. The visual impact will also be mitigated to some extent from the blocks and strips of conifer woodland surrounding the site. However, this will only mitigate the visual impact to a modest extent.

8.5.7. I would agree with the conclusion from the EIAR that there is a general absence of views of scenic quality and recreation amenity areas within immediate surrounding areas of the site. I note that there is no designated scenic areas located (either in the Westmeath or Meath County Development Plans) in the immediate study area which would be profoundly impacted upon as a result of the proposal.

8.5.8. While the site is located within Bracklyn Demesne, this cannot be considered a pristine historic demesne which includes recreational gardens, historic walks etc. On the contrary the estate has been significantly altered and is a good example of working agricultural demesne. In this regard it cannot be considered very different from a rural agricultural environment. The fact that the area in the immediate proximity to the wind farm (designated as the centre c.5 km radius in the EIAR) is devoid of landscape designation in terms of scenic or high amenity, is an important and material consideration in adjudicating on the landscape impact arising from the proposed development.

8.5.9. There is little doubt that the impact of the proposed development in the immediate vicinity of the subject site will be significant and material due to the height and scale of the proposed turbines which reach an overall height of 185 metres. However, any such adverse visual impact needs to be assessed against the national and strategic needs and objectives of providing such wind farms in order to meet our renewable energy targets. Furthermore, I do not consider that the receiving environment significantly sensitive in scenic amenity terms or from a visual amenity point of view that it could not accommodate the turbine size and scale proposed.

8.5.10. With regard to the overbearing impact arising from the turbine, while it is acknowledged that the turbines are significant in height and scale, the nearest sensitive receptor that is not directly involved in the project is located over a kilometre away. This in my view represents a sufficient and adequate separation distance to ensure that the proposed wind farm will not have a disproportionate or profound adverse impact in terms of being overbearing. Furthermore, the proposed turbines located on a generously sized site over 200 hectares in size. This enables all turbines to be located at least 400 to 500 metres from each other. The generous spacing between turbines will only have a positive effect in terms of reducing the overbearing nature of the structure in the surrounding receptors.

8.5.11. With regard to wider landscape, it is acknowledged that highly sensitive landscape, archaeological and cultural heritage features and monuments exist, particularly in the case of County Meath. There are also importance recreational amenity areas within a 20 km kilometre radius of the subject site.

8.5.12. It is my considered opinion having to the photomontages submitted with the application, that the proposed wind farm development has been adequately comprehensively assessed from various vantage points in the immediate vicinity and at vantage points in the wider area. The photomontage submitted in my considered opinion, demonstrates that the overall proposed wind farm will result in an acceptable visual impact on the wider landscape.

8.5.13. The proposed development will have a significant impact within a 5 kilometre radius of the site and these impacts are accurately depicted in VP10, VP11, VP12, VP13, VP14, VP15, VP19, VP21, VP24, VP25, VP26 and VP28. I refer the Board to the photomontages submitted notwithstanding the conclusions in the EIAR, I consider that the impact of the proposed turbines on the receiving landscape in the immediate vicinity of the turbines would be significant particularly in the case of vantage points VP13, VP14, VP18 and VP19. The proposed turbines rise significantly above the level of the existing tree line and would have a profound impact on the skyline particularly in the area 1-4 km from the wind farm.

8.5.14. Vantage points further afield beyond the 5 kilometre radius as can be expected, will be less profoundly affected. Turbines from this distance will become a less strident feature on the landscape and skyline. In fact, it is apparent from many of the vantage points depicted in the photomontages that the wind farm will not be readily visible and will be totally or partially screened by intervening hedgerows, walls, and buildings etc. Thus, intermittent and truncated views of the turbines will only be available to the viewer in most instances.

8.5.15. Furthermore, the proposed turbines would, should the Ballivor Wind farm proceed, become part of a larger wind farm development associated with the wider area. Having reviewed the proposed development both in isolation and in conjunction with the Ballivor Wind farm from the various vantage points contained in the landscape and visual assessment together with my own site inspection, I consider the visual impact arising from the proposed development and particularly in conjunction with the Ballivor Wind farm development to be acceptable from a visual amenity point of view.

8.5.16. In terms of the visual impact arising from the surrounding settlements, I note that VP10 and VP11 assess the visual impact of the proposal from the village of Delvin to

the north which is c.4.5 kilometres from the subject site. For the purpose of the assessment Viewpoint 11 is particularly pertinent. It is clear that the turbines will be clearly discernible on the skyline from vantage points to the south of the village. However, the visual impacts in my view cannot be described as profound or significant. The village of Ballivor is located approximately 7 to 8 kilometres to the south-east of the subject site. The impact of the proposed wind farm from vantage points in the vicinity of this settlement is indicated in VP27. It is clear from the wireline analysis undertaken, that only the upper portion of the turbines will be visible from vantage points in the vicinity of the settlement. The photomontage in the case of VP27 indicates that the turbines will be effectively screened by existing mature and semi-mature hedgerows at the point in which the photograph has been taken. However, from the point of view of the analysis, the wireline gives an indication of that portion of the wind farm that will be visible above ground level from vantage points in the vicinity. Having assessed the visual impact from this location I again consider that the turbines in question will be discernible, but the visual impact could not be described as being significant or profound.

8.5.17. The impact of the proposal from the village of Raharney, 5 to 6 kilometres to the south of the wind farm development is indicated in VP30 and VP31. Again, in the case of these viewpoints, the photomontages presented show that the turbines will to a large extent be obscured by existing vegetation and buildings. However, the wireline depiction of the turbines indicate that even where truncated views of the turbines are available along the public roadways, the turbines while being discernible, will not have a significant profound impact. The potential impact of the proposal when viewed from the outskirts of Kinnegad c.12 kilometres to the south is indicated on VP37. It is clear from this photomontage that the wind farm will be barely discernible from this location.

8.5.18. Indeed, it is clear from all the photomontages produced from viewpoints in excess of 10 kilometres from the subject site that the wind farm in question is barely discernible to the naked eye and will not have a significant or material impact on the visual amenities of the area.

8.5.19. I note that both Planning Authorities requested additional visual assessments in the form of photomontages to be included in the landscape assessment carried out as part of the proposal. In the case of Westmeath County Council, the Council

specifically requested that the applicant assess the development from the Hill of Uisneach. The Hill of Uisneach is located over 30 kilometres from the wind farm in question and as the applicant points out over such a distance the wind farm in question will not be visible.

8.5.20. Additional vantage points were included in the applicant's response to the observations submitted. This included additional views from Kells (FI VP2 and VP3). It is apparent from these additional vantage points provided that views of the wind farm will not be readily discernible from the outskirts of Kells. The impact will be imperceptible.

8.5.21. Viewpoint 1 at Darcey's Crossroads c.12.5 kilometres north of the site also indicates that the proposed wind farm will have a negligible impact from vantage points in the vicinity of this location. Additional photomontages from Trim Castle also indicate that the wind farm, while being discernible, will not have a significant impact even from the elevated location depicted.

8.5.22. Having regard to the existing photomontages produced and the separation distances between the proposed wind farm development and the protected and listed views referred to in Meath County Council's submission it is clear due to the separation distances involved that the proposed wind farm will not be discernible because of the large separation distance involved over 30 kilometres. This includes vantage points from the Hill of Slane, the Hill of Tara, Skryne Church, Knowth and Dowth Passage Tombs and Newgrange Passage Tomb. I am satisfied that the separation distance between these features of national significance and the subject site are such that the proposal will have no material impact on these sites.

8.5.23. Finally, I refer the Board to Figure 1 of the applicant's response to the submission made which sets out a viewpoint location map. On it the various features listed on the Sites and Monuments Record of County Meath and features listed on the National Inventory of Architectural Heritage in County Meath are indicated. To request visual impact assessments from all these features which amount to over 400 individual features would not feasible and would not particularly assist the Board in its deliberations with regard to the overall visual impact.

8.5.24. The suggestion that the photomontages submitted do not provided an accurate depiction of the impact arising from the proposal is not accompanied by any

supporting evidence to back up this claim. I note that the submission in question has not detailed the perceived shortcomings of the photomontages presented and therefore it is difficult to adjudicate upon what aspects of the proposed exercise is deemed to be insufficient. The Landscape Section of the EIAR including the photomontages were carried out by competent experts (Macro Works and GES) and the methodology and rationale employed in assessing the visual impact is set out in 9.2 of the EIAR. I have no reason to believe that that the proposed photomontages submitted to not adequately depict the visual impact arising from the proposed turbines.

8.5.25. Arising from my assessment above therefore, I consider the visual impact of the proposed development has been adequately assessed and I find the impact to be acceptable. I base this conclusion on the following.

- While the proposed development due to its height and scale will have a significant and profound and visual impact when viewed from vantage points in the immediate vicinity of the subject site and up to a distance of 5 kilometres from the subject site, I note that the receiving landscape constitutes a working agricultural landscape in a rural area and that is devoid of any specific designation in terms of scenic quality or high amenity.
- Wind farms by their very nature due to their overall height and scale will undoubtedly have a profound impact on the immediate receiving environment in which they are located. To refuse planning permission purely in this context would result in no or at the very least a very small number of wind farms being permitted, and this would undoubtedly jeopardise national targets in respect of renewable energy.
- I further consider that the applicant has carried out a robust and comprehensive visual impact assessment from appropriate vantage points in the vicinity area and has adequately demonstrated in my opinion that while the wind farm will be discernible from various vantage points in the wider study area, the impact cannot be considered significant or profound in visual terms.
- I am also satisfied based on the analysis undertaken that the proposed wind farm will have absolutely no impact on the setting and context of the

particularly sensitive and world renowned heritage sites of the Bru na Boinne and other important protected views in Meath including the Hill of Slane, the Hill of Tara, Skryne and the Hill of Ward.

8.5.26. On the basis of the above assessment and notwithstanding the concerns raised in the third party submission, I am satisfied that the visual impact arising from the proposed development is acceptable.

8.6. Biodiversity Issues

8.6.1. A number of issues were raised in respect of biodiversity in the NPWS and other third-party submissions to the Board and these issues including the following:

- Cumulative impact from multiple wind farms on bird collisions.
- Micro-siting of wind farms in order to achieve zero biodiversity loss.
- Potential impact on bats.
- Impact on livestock.
- Removal of forestry.
- Impact on barn owls.
- Lack of comprehensiveness in the surveys undertaken.
- Loss of flora and fauna along access roads.

8.6.2. Many of the above concerns were specifically raised in the submission by the Development Applications Unit of the Department of Housing, Local Government and Heritage. It raises concerns with regard to the cumulative impact from multiple wind farms.

National Windfarm Plan

8.6.3. It also argues that an overall strategic national plan is required for the siting of windfarm developments. In relation to this latter point, the provision of a national plan is beyond the remit of the Board as it have no statutory plan making functions. As no such national plan exists it would not be appropriate to hold up all wind farm

developments as being premature in the absence of such a plan, having regard to the priority of achieving the targets set out in the National Climate Action Plan.

Bird Collisions and Cumulative Impacts

8.6.4. In relation to the initial point, it is clear that the applicant has undertaken comprehensive surveys and comprehensive modelling particularly in relation to bird collisions. Section 5.4.3.5 of the EIAR (Chapter 5, page 140) sets out the likely direct effects on ornithological receptors during the operational phase. Much of the potential effects relate to collision risk. A collision risk model has been developed by Scottish National Heritage and has been utilised for the purposes of the modelling undertaken in the EIAR. Annex 5.7 of the EIAR sets out details of the avian collision risk modelling undertaken as part of the assessment. The model is based on flight data collected from October, 2018 to August, 2020. The model was also based on the potentially worst-case scenario. The highest calculated collision risk was from the Golden Plover at approximately four collisions per annum. However, it is again stated that this is a worst-case scenario and it is likely that avoidance ratings for this species are likely to be considerably higher. In the case of all other birds less than one collision risk per annum was predicted to occur as a result of the wind farm. The main body of the EIAR assesses the collision risk with all species of birds encountered during the survey period and the impacts on each bird species are assessed individually in the documentation submitted.

8.6.5. The likely cumulative effects arising from the operational phase is set out in Section 5.4.3.8 of the EIAR. In this regard consideration was given to other currently operational wind farms and those consented are under construction. A total of 10 wind farms within a 45 kilometre radius were assessed for the purposes of bird collision modelling. It is noted that the proposed wind farm and the Ballivor Wind farm is not likely to cause a significant cumulative impact in terms of bird collisions. The dimensions and spacings of the turbine array for the proposed development does not represent a significantly elongated or dense barrier effect to bird populations utilising the area or moving through the area. The area is not considered to be a significant migration route or regularly utilised flight line between any roosting

or breeding sites and foraging areas. The cumulative impact from both sites combined are considered unlikely to contribute significantly to the disruption of migrating birds or birds using regular flight paths to and from foraging areas. Based on the outputs from the collision risk models conducted, it is acknowledged that local populations of Kestrels and Wintering Golden Plovers are species for which collision risk may be increased as a result of the cumulative impact of both wind farms.

8.6.6. It is anticipated that any cumulative operational effects on the local bird population will be adequately addressed through mitigation measures and this includes a detailed monitoring programme. Ornithological monitoring surveys will commence at construction and post construction phase in Years 1, 2, 3, 4, 5, 10 and 15.

8.6.7. Mitigation measures will also be implemented to limit Kestrel foraging activity around the turbines. Contingency measures will also be considered to reduce the attractiveness of the site for Golden Plover, Kestrels and Breeding Woodcock, the bird species which are identified as being most at risk from collision.

8.6.8. On the basis of the above I am satisfied that the applicant has adequately assessed the cumulative impact arising from the proposed development in terms of bird collisions and the impact on the vast majority of species are negligible. The species most at risk in terms of potential collision with turbines are identified as Kestrels, Golden Plover and Breeding Woodcock. Post development consent monitoring will be undertaken and measures will be put in place should they be required to make the wind farm area less attractive to these species.

8.6.9. The submission from the DAU also request that the Board consider changes in the micro-sting of the turbine in order to further reduce potential bio-diversity loss. In this regard it is argued that the turbines should be located in the centre of intensive agricultural fields where biodiversity impacts will be further minimised.

8.6.10. Both the EIAR and the applicant's response indicates that the location of the individual turbines were decided through an iterative process which took into consideration a range of technical and other environmental and social constraints. The turbines on the whole have been placed in the least environmentally sensitive habitats within the site and for the most part are within fields that are used for intensive agriculture. While some woodland will be removed in order to accommodate the turbines the woodland in question is not considered to be

particularly important from a habitat perspective. All the habitats in question are determined to be of low importance in ecological terms. Much of the woodland in question comprises of commercially planted conifers namely Sitka Spruce and some larch.

8.6.11. While it would be possible to site the turbines further away from the wooded areas, the re-siting of such turbines could have significant implications for noise propagation, shadow flicker and visual assessment etc. Any re-siting of the turbines by way of condition in order to comply with the aspirations of the DAU would not be possible in the absence of a full rigorous assessment of potential amenity impacts. The proposal as put forward in my view would have an acceptable impact on receiving habitats having particular regard to the generally low ecological value of the habitats to be affected. Any alteration in the siting of the turbines within the wind farm would have to be the subject of a significant additional information request, if not a revised application.

8.6.12. Bearing in mind that the proposed development will have a negligible impact on biodiversity as proposed, and the fact that any proposals to further reduce the potential impact on biodiversity would have significant implications in terms of delaying the project and therefore would contribute to undermining the ambitious targets set out in the Climate Action Plan, I do not consider that the Board should accede to such a request.

8.6.13. It should also be acknowledged that global warming is the biggest contributor to biodiversity loss on a global scale and any delay in meeting targets in terms of facilitating and providing renewable energy infrastructure must be balanced against any proposals for re-siting turbines in order to potentially reduce biodiversity loss at a more local level.

Bats

8.6.14. With regard to the potential impact of the proposal on bats, Section 3.5.10.2 of the EIAR sets out details of the bat risk assessment. A key mitigation measure in respect of bats is to provide clear fell to zones of commercial forestry around each of the proposed wind turbines. This results in a reduction in the level of usage of these areas by bats and limits the potential for collision. The mitigation will include a minimum separation distance of 50 metres to the rotor swept areas of all turbines.

Potential impacts of each of the species of bat identified in the study area is assessed in Section 5.4.3.7 of the EIAR. A very comprehensive survey and assessment on the potential impacts of the proposed development on bats is contained in Annex 5.5 of the EIAR. It is noted that iterative design process has insofar as possible avoided the removal of older growth tree lines and woodland habitats likely to be utilised by roosting bats. While both direct collision with rotor blades and barotrauma (injuries to the internal air cavities and blood vessels caused by sudden changes in air pressure behind the moving blade have been identified as potential impacts). However, disturbance of roosting bats and disturbance of foraging bats was considered to be unlikely as the installation of additional lighting proposed will be minimal.

8.6.15. A series of mitigation measures by creating bat buffer zones will reduce the potential for bats flying near turbine blades and thus will avoid the risk of collision barotrauma. Mitigation measures are also proposed by way of smart curtailment, whereby turbines identified in high risk locations by post construction monitoring are feathered to run at less than 2 rotations per minute while optimum flight conditions for bats occur. Any requirement for a smart curtailment would be guided by comprehensive post construction monitoring.

8.6.16. With regard to collision risks, it is noted that a two-year survey of bats have been undertaken to inform the EIA process and in total of the total record passes within the vicinity of the turbines c.98% were recorded at wind speeds of less than 3.5 metres per second which is the cut in wind speed for the proposed wind turbine. This suggests that the potential for collision and barrow trauma in respect of bats is quite limited in the case of the subject site. On the basis of the above, I am satisfied that the both the surveys and assessments in respect of bats are robust and comprehensive. I am satisfied that, with the incorporation of appropriate buffer zones, and if necessary, smart curtailment measures incorporated into the operation of the turbine, together with the monitoring measures proposed post construction; that the proposed wind farm will not have a significant adverse impact on bat populations in the area.

Bird Collision Modelling

8.6.17. Third party submissions also express concerns in relation to a number of biodiversity issues associated with the development. One of the submissions suggest that bird collisions are grossly underestimated and that no evidence has been provided to support the conclusions in respect bird collisions in the EIAR. I do not accept this to be the case. The applicant has undertaken extensive bird surveys over a two-year period and this point has been acknowledged by the NPWS. Furthermore, the applicant has employed robust modelling exercises to assess the extent of bird collisions that could theoretically take place as a result of the proposal. The model has been developed by Scottish National Heritage. The model has been peer reviewed and found to be statistically robust. Further details of the model is set out in Annex 5.7 of the EIAR. I note that the submission in question has not detailed the perceived shortcomings of the modelling exercise undertaken and therefore it is difficult to adjudicate upon what aspects of the proposed modelling exercise is deemed to be insufficient. However, I am satisfied that the modelling in question is fit for purpose, and I further note that it has been used to assess other wind farm developments in the State and internationally.

Peatland Removal and Destruction

8.6.18. Concerns were expressed in a number of submissions that the proposed development will result in a significant reduction of peatlands. It is suggested that constructing a wind farm on bogland is extremely problematic in terms of creating bog slides and it can also affect the drainage associated with the bog.

8.6.19. The Board will be aware from the information contained in Chapter 6 of the EIAR which relates to land and soils. It is clear from the GSI/Teagasc Soils Mapping that the central, southern and western areas of the proposed wind farm are underlain by deep well-drained mineral soils and are not located on bogland. In fact, the Board will be aware that Westmeath County Council recommended a refusal of permission on the basis that the proposed development contravened CPO10.146 which recommends a refusal of planning permission on the basis that large wind farm developments such as that proposed should only be located on cutover and cutaway peatlands. The only turbine where extensive peat underlays the foundations is T10 on the east of the site. It is acknowledged that some peat will be required to be removed in order to facilitate the turbine foundations. However, the proposal will not give rise to excessive or largescale excavation of cutover raised bog in order to

facilitate the proposed development. As such the proposal will have a negligible impact on removing peatlands which in themselves provide an important carbon sink.

Peat Stability Risk

8.6.20. With regard to concerns in respect of peat stability risk, this issue is dealt with comprehensively in Annex 6.2 of the EIAR. The findings of the peat assessment shows that the proposed development site has an acceptable margin of safety and is suitable for the proposed development. The site comprises of relatively flat gently undulating terrain comprising of agricultural land with the exception of peat present in the north and east of the site. Peat thickness recorded during the site walkover ranges from 0 to 2.5 metres with an average depth of approximately 0.6 metres. An analysis of the peat stability was carried out at the main infrastructure locations across the site for both undrained and drained conditions. For the undrained condition (i.e. the subject site), a calculated factor of safety showed that all locations have an acceptable factor of safety of greater than 1.3. This indicates a low risk of peat failure. The peat stability risk assessment identified a number of mitigation/control measures which can be implemented at each turbine location to reduce the potential risk of peat failure. The findings of the peat assessment show that the site has an acceptable margin of safety and is suitable for the proposed wind farm. The site is considered to be at low risk of peat failure.

8.6.21. I am therefore satisfied on the basis of the analysis undertaken that the proposed development does not pose a significant risk in terms of peat stability failure.

Impact on Livestock

8.6.22. A number of third-party submissions express concerns that the proposed operational phase of the wind farm development could impact on the physical and mental health of livestock in the vicinity of the development. This issue had arisen in the case of other wind farm developments and I note that the applicant has made reference to Case No. ABP300746-18. This application related to a large wind farm development comprising of 47 turbines in North County Kildare in close proximity to extensive good quality pastural land and a number of equine studs. While the Board refused planning permission for the proposed development, it did not accept the recommendation of the Inspector to refuse planning permission on the basis that the

proposed development would have an adverse effect on the equine industry. While it was acknowledged that the industry was a major significance to the economy of County Kildare, the Board noted that there was a lack of specific evidence that wind turbines pose a threat to the welfare of horses in this instance. On the basis of the above, I would conclude that the Board have already concluded that the presence of wind farm developments do not pose a significant threat to the welfare or health of livestock. There are numerous precedents where wind farm turbines are located within and in close proximity to working farms and no evidence has been adduced that livestock grazing in close proximity to operational turbines are not mutually conducive.

Removal of Forestry

8.6.23. Concerns are expressed that the proposed development will result in the removal of 28 hectares of forestry. It is acknowledged that the proposed development will result in the removal of a relatively large area of woodland within the site. However, the biodiversity chapter notes that the woodland in question in the main comprises of commercial conifer plantations which would be removed in any case for commercial purposes. Additional woodland is also being removed to create appropriate buffer zones in order to protect bats and birds species from venturing too close to the turbines. The removal of the woodland in question must be assessed in the context of protecting biodiversity, particularly birds and bats and the need to provide an increase in renewable energy outputs within the State in order to meet greenhouse gas and climate change targets.

Removal Of Agricultural Land

8.6.24. With regard to the removal of agricultural land, the loss of such lands in order to facilitate turbine foundations is negligible in the context of the availability of agricultural land in the immediate vicinity and the wider area of the subject site.

Impact on the Barn Owl

8.6.25. A number of submissions also make specific reference to the potential impact of the proposed development on the Barn Owl. The impact of the proposal on the Barn Owl is discussed in Chapter 5, (p.153 & 154) of the EIAR.

8.6.26. The development site is within 1.5 kilometres of a known breeding site of Barn Owls. Arable fields and woodland edges within the proposed development provide foraging

opportunities for the Barn Owl. Surveys indicate however that usage of the site for the Barn Owl is low. Furthermore, the development site was considered to offer limited suitable breeding locations for the Barn Owl. The only potential breeding site identified was an abandoned cottage adjacent to the access track close to the site entrance. There is no evidence of any occupation of this building by Barn Owls.

8.6.27. It is generally considered that the low level flight behaviour of Barn Owls typically 3 to 4 metres limits collision risk with larger turbines. On this basis and on the basis of surveys undertaken by the UK Barn Owl Trust (2015) the level of threat posed to Barn Owls by wind turbines in Britain is considered to be low. Based on the survey information and literature produced it is in my view reasonable to conclude that the proposal represents a low risk to the Barn Owl population in the vicinity of the site.

Quality of the Information Provided on Biodiversity

8.6.28. More general concerns are expressed that the surveys undertaken in the EIAR are not comprehensive. I have read the entire EIAR and the various annexes associated with the Chapter 5 and I am satisfied that the surveys undertaken were comprehensive and robust for the purposes of evaluating the potential impact arising from the proposed development on biodiversity and the natural environment.

Loss of Flora and Fauna along the Access Road

8.6.29. One of the third-party submissions laments the loss of flora and fauna along the access road, particularly the L5508 as a result of road widening works which will take place to facilitate the transportation of turbines to the site. It is acknowledged that some road widening will take place along the local access road which would result in the removal of some of the roadside flora. However, this flora is not designated as a area of high ecological value and any modest loss of such flora must be balanced against the requirements of providing renewable energy and reduce reliance on fossil fuels. To refuse planning permission on this basis would be disproportionate.

8.7. Water and Drainage Issues

8.7.1. A number of issues and concerns were raised also in relation to water and drainage issues.

IFI Comments

8.7.2. I note the comments in respect of the Inland Fisheries Ireland submission. This submission makes a number of comments and suggestions including mitigation measures with regard to the implementation of the proposal. I note that the applicant has committed to ensuring that all guidance/best practice requirements will be incorporated into the design and the construction phases of the proposed development in accordance with IFI requirements.

Water Pollution Issues

8.7.3. A number of the observations submitted, express concerns that the proposed development could give rise to water quality issues, groundwater quality issues, drainage and flooding issues. The surface water and groundwater environment is extensively assessed in Chapter 7 of the EIAR. It is noted that there are three streams traversing the site that discharge into the Stoneyford River to the east and south-east of the subject site and discharge into the Deel River Catchment to the west of the subject site. With respect to the main streams flowing through the site there will be a requirement to provide six watercourse crossings and seven drain crosses in order to facilitate the proposed development. The EIAR acknowledges that the proposal will have the potential to significantly affect the hydrological regime or water quality within the site. Hydrological connections to surface water bodies off site could have implications for larger rivers downstream. The main potential adverse impacts identified relate to sediment input from run-off and hydrocarbon spillages during the course of the construction works. The potential impacts are all identified and described in detail in Section 7.5 of the EIAR.

8.7.4. The main objective of the proposed mitigation measures is to ensure that all surface water run-off is comprehensively treated and attenuated so that no silt or sediment laden waters or other deleterious discharges such as hydrocarbons are released into the local drainage system. The various mitigation measures to be employed to ensure that no such pollution occurs within the site is set out on pages 34 to 42 of Chapter 7 of the EIAR. Buffer zones will be employed to ensure that works are carried out a sufficient distance (50 metres) from streams where possible. Source controls including interceptor drains and treatment systems to fully attenuate silt laden waters will also be employed. Silt busters, silt fences and silt bags will also be put in place where necessary in order to trap any silt laden discharges during the construction works. Detailed mitigation measures are set out for the management of

run-off from soil deposition areas and strict monitoring will also take place. The incorporation and employment of such mitigation measures should be the subject of a condition in any grant of planning permission. In my view having inspected the documentation and the site in question I see no impediment as to why the proposed mitigation measures cannot be employed in full so as to ensure that no contaminant release occurs.

Groundwater Impacts

8.7.5. Furthermore, it is not envisaged that the groundwater regime will be adversely affected by the proposed construction works. It is noted that based on trial pit investigations, the groundwater table in the areas of limestone tills beneath the site are more than 2.5 to 3 metres below ground level. Based on existing groundwater levels therefore, there is little or no potential of the turbine foundations resulting in the displacement of groundwater or altering the water table. Again, appropriate mitigation measures will be put in place to ensure that no groundwater contamination takes place as a result of the proposed development. No impact will occur during the operational phase on the groundwater regime. No water will be sourced on site, nor will any wastewater be discharged on site which could result in the contamination of groundwater. All wastewater generated by workers during the construction phase will be tinkered of site for treatment. On the basis of the above, I am satisfied that with the employment of appropriate mitigation measures, the proposed development will not adversely affect the drainage regime nor will if adversely affect the surface water or groundwater in the area.

8.7.6. Potential impacts on Natura 2000 sites are assessed under a separate heading below.

Flooding

8.7.7. With regard to the potential of the proposed development to exacerbate flooding, I note that the only areas identified within the site which are at risk of flooding are the access road to the north-west of the proposed entrance and the area where it is proposed to locate the end masts to the east of the site in the administrative area of Meath County Council. I am satisfied however that any works to be carried out will not displace any flood waters and will not increase the risk of flooding anywhere else. The fact that it is proposed to construct lattice type masts to connect into the

existing 110 Mullingar to Corduff kV line will ensure that the proposal has no potential to reduce flood storage or impede flood flows across the site. The provision of the mast therefore will have no effect on the flooding regime.

8.7.8. Any localised pluvial flooding which occurs along the access road will not be exacerbated by the proposed development. It is not considered that any infrequent flood events which would occur will have any significant impacts on the wind farm development during the operational phase. The increase in hard standing associated with the turbines bases will increase surface run-off be approximately 0.33%. This is considered negligible it terms of its potential to increase surface run-off and exacerbate flooding. It is my conclusion therefore that the issue of flooding is not a significant or pertinent issue when adjudicating on the application.

8.8. Residential Amenity and Heath Issues

8.8.1. A major issue contained in the vast majority of third-party observations related to the potential impacts arising from the wind farm on residential amenity and health particularly, in relation to noise impacts and shadow flicker impacts. These issues are dealt with under separate headings below.

Noise Impacts

8.8.2. In relation to noise impacts, the main concerns relate to the 24 hour nature of noise impacts which could arise from the operation of the turbines throughout the life of the wind farm project. It is argued that the proposed wind farm is located in a quite rural area where ambient noise levels in the existing environment are very low. It is also stated that a number of families living in the area have children that experience autism and sensory issues and any noise impact could exacerbate the mental health of these children. Furthermore it is contended that any conclusions set out in the EIAR should be subject to an assessment by an independent consultant prior to the Board determining the application.

8.8.3. Section 11 of the EIAR specifically assesses noise impacts. I note that the reference material in assessing noise levels during the operational phase is predicated on the 2006 Wind Energy Development Guidelines for Planning Authorities. These guidelines note that “in general a lower fixed limit of 45 dB(A) or a maximum increase of 5 dB(A) above background noise at nearby noise sensitive locations is

considered appropriate to provide protection to wind energy development neighbours". It is noted however that in very quiet areas the use of a margin of 5 dB(A) above background noise at nearby noise sensitive properties is not necessary to offer a reasonable degree of protection and maybe unduly restrict wind energy developments which should be recognised as having wider national and global benefits. Instead in low noise environments where background noise is less than 30 dB(A) it is recommended that the daytime level of the LA90 10 minutes of the wind energy development be limited to an absolute level within the range of 35 to 40 (dB(A)). Furthermore, a fixed limit of 43 dB(A) will protect sleep inside properties at night-time.

8.8.4. The EIA does not rely on the Draft Wind Energy Guidelines of 2019 to inform the assessment carried out in Chapter 11 of the EIAR. While these statutory guidelines are still draft form, the Supreme Court held in Balz Anor -v- An Bord Pleanála [2016] [IESC134] that the Board in setting out its reasons and considerations in determining the application should also have given reasons for not accepting the guidance set out in the 2019 Guidelines. Section 5.7 of these guidelines relate to noise. The draft guidelines state that the preferred approach is to propose a relative rated noise level of 5 dB(A) above the existing background noise in the ranges of 35 to 43 dB(A) with 43 dB(A) being the maximum noise limit permitted day or night.

8.8.5. The derived noise levels at the four baseline locations chosen in proximity to the wind farm (HO3, HO7, H28, and H32) are set out in Table 11.4.7.5 of the EIAR. Notwithstanding the fact that the applicant did not specifically refer to the 2019 Draft Guidelines, it is clear from the table below that the noise impact arising from the proposed development during the operational phase would comply with both the noise criteria set out in the 2006 Wind farm Guidelines and also the criteria set out in the Draft 2019 Guidelines when applied to the nearest noise sensitive receptors to the proposed wind farm and this is illustrated in the table set out below.

Table 4. Noise Limits at nearest sensitive locations:

Location	Baseline Environment (7m/s)	Estimated Cumulative Noise Impact (7m/s)	Daytime Limit (2006) Guidance (45dB(A)) or increase of 5dB(A) above background)	Daytime limit (2019) Guidance 43dB(A) or 5dB(A) above existing background in ranges from 35 to 43 dB(A)

H03	35.5	39.9	Complies	Complies
H07	30.5	35.1	Complies	Complies
H28	31.1	32.8	Complies	Complies
H32	28.7	33.6	Complies	Complies

8.8.6. It is apparent from the above Table that at the nearest noise sensitive locations, the estimated cumulative impact from the proposed wind farm development in conjunction with other wind farm developments in the area at a speed of 7 metres per second (estimated in the modelling undertaken where the predicted noise levels emanating from the wind turbines would be the highest noise levels over the various standardised 10 metre height wind speeds) would be within the specified limits.

8.8.7. In all the above cases the estimated cumulative noise impact would be below the limit of 45 dB(A) set out in the 2006 Guidelines and also the limit of 43 dB(A) set out in the 2019 Guidelines. In addition to this, in the above cases of the nearest noise sensitive receptors that do not form part of the landowners associated with the proposed development, the increase in noise levels associated with the wind farm developments will be less than 5 dB(A) below the recorded background levels.

8.8.8. Furthermore, the Board will note that in the case of the noise sensitive receptors in question, the cumulative impact arising from the wind farm developments would not exceed the night-time noise criteria of 43 dB(A) under the Draft Wind Energy Guidelines.

8.8.9. One of the submissions suggests that the EIAR should undertake noise modelling assessments for all 78 houses within 1.85 kilometres of the turbines. In this regard I refer the Board to Annex 11.7 of the EIAR. It provides cumulative noise modelling results for all 78 dwellings located within 1.85 kilometres of the subject site. In all case the modelling undertaken predicts that all the dwellinghouses within the 1.85 kilometre radius of the subject site will comfortably meet the noise limits set out both the 2006 and the Draft 2019 Guidelines with the exception of House No. 78 to the east of the wind farm. In this instance at wind speeds of 7 metres per second the predicted noise levels at this dwellinghouse is 40.8 dB(A) which is 0.8 dB(A) above the 40 dB(A) daytime criteria of 40 dB(A). It is however comfortably below the specified limit of 45 dB(A) set out in the 2006 Guidance and the 43 dB(A) limit set out

under the Draft 2019 Guidelines. The daytime excess amounts to 0.8 dB(A) which is imperceptible to the human ear.

8.8.10. On the basis of the above analysis undertaken, I am satisfied that the proposed wind farm development will not give rise to any material impacts in terms of noise generation to the extent it would adversely affect the amenity of residentials living in the vicinity of the proposed wind farm.

8.8.11. It is of course open to the Board, as suggested in one of the 3rd Party observations, to seek advice and a report from independent consultant in relation to the noise conclusions reached in the EIAR, should it deem it to be appropriate.

8.8.12. With regard to construction impacts, I am satisfied that the information contained in the EIAR adequately assesses the potential adverse impacts which could arise from the proposed development. The main impacts which will arise will most likely be associated with heavy goods vehicles transporting abnormal loads to the wind farm. These heavy goods vehicles will pass within close proximity of dwellinghouses along the designated route. Elevated noise impacts are also likely to arise during excavation and construction of the turbines and substation. However, the construction of the turbines and the substation are located a considerable distance from the nearest noise sensitive receptors; in all cases over a kilometre from those households not directly involved in the project. Noise propagation will be attenuated to a considerable extent over such a distance so as to ensure that construction impacts will not be significant in amenity terms for those residing in the vicinity. Furthermore, any construction noise impacts will be temporary in nature and will be relatively short-term in duration.

Shadow Flicker

8.8.13. Shadow flicker was a major concern raised in many of the third-party observations submitted to the Board in respect of the proposed wind farm development. Chapter 12 of the EIAR specifically relates to shadow flicker. Wind Pro, a detailed computer software model was used to estimate the likely occurrence of shadow flicker resulting from the proposed development. The EIAR notes that the 2006 Guidelines require shadow flicker to be limited to 30 minutes per day and 30 hours per year at sensitive receptors. The EIA estimates based on the modelling undertaken (see Table 12.2), that under a worst-case scenario, results indicate that 9 receptors are

likely to experience shadow flicker in excess of 30 minutes per day. However, it is stated that the expected results over the course of the year are more realistic. The prediction model indicates that none of the 78 receptors surveyed are likely to experience shadow flicker in excess of 30 hours per annum even prior to the curtailment of any wind turbines. The modelling therefore indicates that the proposed development will not give rise to shadow flicker levels in excess of 30 minutes per day or 30 hours per year at any dwelling and as such no adverse impacts are proposed.

8.8.14. I reiterate that the EIAR utilised the adopted 2006 Guidelines. It is clear that more stringent controls are proposed under the latter Draft 2019 Guidelines. Again, on the basis of the Balz Anor -v- An Bord Pleanála Supreme Court judgement of [2016] [IESC134] the Board in deliberating on the application, should have some regard to the guidance set out in the latter draft guidelines. These guidelines note that 'if a suitable shadow flicker prediction model indicates that there is potential for shadow flicker to occur at any particular dwelling or any other potentially affected property, then a review of the site design including the possible relocation of one or more turbines is required. Following such a review if shadow flicker is not eliminated for any dwelling or any potentially affected property then clearly specific measures which provide for automated turbine shutdown to eliminate shadow flicker should be required as a condition of the grant of planning permission'. The guidelines note that 'modern wind turbines have the facility to measure sunlight levels and reduce or stop turbine rotation if conditions were to occur which would lead to shadow flicker at any neighbouring property'. The guidelines highlight the fact that the use of appropriate equipment and computer software should enable that no existing dwelling or other affected property should experience shadow flicker.

8.8.15. Having regard to the draft guidelines, and the applicant's acknowledgement that technological mitigation is available to reduce shadow flicker levels it is recommended that a condition be attached which limits or curtails the operation of the turbines during the probable infrequent periods where shadow flicker occurs at any dwellinghouse. The attachment of such a condition should allay any third party's concerns in relation to shadow flicker.

8.8.16. Electromagnetic and other Interference

8.8.17. With regard to potential impacts on telecommunications and electromagnetic interference etc. these issues are dealt with in Chapter 13 of the EIAR. The applicant has carried out a desktop assessment and undertaken extensive consultation with stakeholders. It is concluded on foot of this assessment that any impact in terms of electromagnetic interference or interference with telecommunications are unlikely to occur as a result of the proposed development. If any significant signal interference in any form is identified, the applicant has given an undertaken in the EIAR that appropriate remedial measures will immediately be implemented. It is stated that a range of technical measures are available to mitigate against any instances of interference with signals or transmitters.

8.8.18. On the basis of the above I do not consider that the proposed development will have an unacceptable impact on amenity through excessive noise levels or shadow flicker. On this basis I can only conclude that the proposed development will not adversely impact on the physical or mental health of persons living in proximity to the proposed wind farm. I am satisfied that the applicant has undertaken detailed and vigorous analysis of the potential impacts of the proposed development on residential amenity in the area and I am satisfied that any potential impact will not be significant and would be acceptable.

8.9. Traffic and Transport Issues

8.9.1. Many of the concerns raised in respect of traffic and transport are raised in the Transport Infrastructure Ireland's submission which can be summarised as follows:

- The EIAR made no reference to national planning policy in relation to access onto national roads.
- The character and total number of trips in an out of the proposed development are significant.
- There is a need for a traffic and transport assessment.
- An assessment should be undertaken by the applicant to confirm roads have sufficient strength can accommodate abnormal loads.

8.9.2. Chapter 13 of the EIAR specifically deals with roads and traffic elements associated with the proposed development. Details of the roof access survey for the likely

turbine delivery haul route is set out in Annex 3.9 of the EIAR. The route assessed is from the Port of Waterford to the proposed site. It details where road widening is required, third party land is required and modifications to street furniture is required. Details of the abnormal load profiles are also indicated in the route selection. It is clear that any works required along the national road network are minor in nature. I do not agree with the suggestion or assertion that the proposed development will have any impact on the strategic capacity of the national road network as suggested by the TII submission. What is proposed in this instance is a wind farm that is not located adjacent to, or with direct access onto, the national road network. While obviously construction traffic associated with the development will utilise sections of the national road network, the construction traffic will be temporary in nature and will not result in a development that will generate traffic on or off the national road network on a permanent basis. The proposal will not therefore undermine the strategic capacity of the national road network over the medium or long term.

8.9.3. The requirement for a traffic impact assessment which includes the requirement to assess the potential impact of the proposal on the strategic capacity of the national road network is in my view unnecessary and unjustified. The turbine components will be delivered to the site over a period of 4 to 6 weeks after which all civil works will be completed. I would concur with the applicant that the construction impacts arising from the development will not result in a significant adverse impact on the strategic capacity, safety or operational efficiency of the national road network. I note that the applicant has committed to agree a traffic management plan with the local authority prior to the commencement of development and this plan will co-ordinate and manage all access arrangements with the local authority and with members of the public. Furthermore, the applicant will obtain all necessary road licences and permits as required by Transport Infrastructure Ireland. The applicant is also committed to ensure that any maximum axle loadings for abnormal loads will be carried out in accordance with TII requirements and publications.

8.9.4. Third party concerns mainly centre around the contention that the proposed upgrade to the road network could impact significantly onto the residential amenities of the area and that the presence of HGV's, moving large turbine parts to the site could have a significant and profound impact on road safety, particularly having regard to the narrow nature of the roads and the fact that roads surrounding the sites are

popular for walks and recreation. It is fully acknowledged that the presence of heavy traffic in the area particularly on local narrow roads has the potential to adversely impact on the residential amenities of those properties fronting onto, and located within close proximity to the road network serving the site. However, any such impacts will be temporary in nature and will only last a matter of months. The total number of deliveries are estimated to be in excess of 6,000 and this undoubtedly will give rise to significant levels of HGV traffic. However, to refuse a wind farm development which will contribute to the State's targets in respect of reducing greenhouse gases and providing additional renewable energy on the basis that the proposed development could give rise to short-term adverse impacts in terms of construction traffic is in my view inappropriate and disproportionate. It is extremely likely that impacts of this nature are likely to occur in respect of any wind farm development in any location within the state. Furthermore, I am cognisant of the fact that the applicant has set out a suite of mitigation measures in Section 13.1.5.1 of the EIAR which will limit traffic movements to certain times of the day include a detailed traffic management plan to be included as part of the construction and environmental management plan. Other more detailed measures in respect of traffic management and road safety are set out in the EIAR.

8.9.5. Concerns were also expressed that the road widening in the area will significantly alter the rural character transforming local roads into 5 metre wide carriageways. In response to this I note that only certain sections of the local roads will be widened to facilitate the proposed development. I do not consider that the widening of such roadway will alter the rural character of the area to any significant extent and the widening of such roadways would not constitute reasonable grounds for refusal for the project as a whole.

8.9.6. With regard to any landowner consent in respect of laying cables on the side of the road, the information submitted with the application indicates that any cable laying will take place within the metalled carriageway and will not relate to any third-party lands. If the case arises where cables are required to be laid on third party lands this is a civil matter which can be agreed between the parties concerned.

8.10. **Cumulative Issues**

8.10.1. Some of the third-party submissions and the submission from the DAU have argued that the assessment has not fully evaluated cumulative impacts particularly in respect of other wind farm developments proposed in the area namely the Ballivor wind farm which comprises of 26 wind turbines to the east of the application site. This development is currently at pre-application consultation stage at the time of writing this report. The EIAR has considered the potential cumulative impacts arising from this development and other developments where appropriate, under each of the chapter headings. I further refer the Board to Table 1.4 of the EIAR which indicates other developments which have (where appropriate) been considered in the cumulative impact assessment of this EIAR (see Chapter 1, pages 17 & 18). Each of the chapters of the EIAR assess cumulative impacts under specific headings within each chapter.

8.10.2. Perhaps the greatest potential for cumulative impacts to arise relates to noise, shadow flicker and visual impact and biodiversity. As already stated, the photomontages submitted as part of the environmental assessment depict where appropriate the cumulative impact arising from other wind farms in the area specifically the Ballivor wind farm to the east and south-east and the Yellow River Wind farm to the south-west. Cumulative noise impacts are assessed for each of the identified 78 sensitive receptors in Annex 11.7 of the EIAR and the potential cumulative impacts in respect of shadow flicker are set out in Section 12.5.4 of the EIAR. I am satisfied therefore that the EIAR has fully assessed the potential cumulative impacts which could arise as a result of the proposed development.

8.11. **Impacts on Cultural Heritage**

8.11.1. Many of the submissions presented to the Board argue that the size and scale and location of the proposed turbines will have an unacceptable impact on national monuments and protected structures in the area. Concerns are expressed that the foundations of the turbines could adversely impact the structural integrity of protected structures in the vicinity. It is also argued that dwellinghouses in the vicinity were refused planning permission on the basis that the dwelling would impact on the setting and context of Martinstown House.

8.11.2. There are a number of protected structures in the area including three protected structures within the landholding boundary associated with the proposed development. These include:

- The gate lodge of Bracklyn House.
- Bracklyn House itself
- and a freestanding mausoleum to the north of Bracklyn House and approximately 140 metres to the south of the access road leading to Turbine No. 1.

8.11.3. There are also over 50 additional protected structures within a 5 kilometre radius of the proposed development. There are also a number of RMPs within 1 kilometre of the proposed development. These primarily comprise of ringforts but also include Martinstown House located approximately 930 metres north-east of the access road leading to Turbine No. 1. It is fully acknowledged that the proposed development will to some extent impact on the setting and context of the protected structures and recorded monuments within the vicinity of the site. The proposed development however, because of the distance between the turbines and the protected structures and recorded monuments will not damage the structural integrity of the monuments in question. Martinstown House is located almost 1 kilometre from the access road leading to Turbine No. 1. Any works associated with the foundations of the turbine are sufficiently separated from the house to ensure that no structural impacts will arise. The mausoleum is the closest of all the protected structures to the turbines. At its closest point it is located 140 metres south of the access track leading to Turbine No. 1 and 370 metres to the west of Turbine No. 2. Again, it is considered that the turbines in question are located a sufficient distance away from the protected structures to ensure that the structural integrity of these structures will be in no way affected by the proposed development. I note that there are no recorded monuments within 100 metres of the proposed grid connection nor are there any recorded monuments within 100 metres of the proposed road upgrade works.

8.11.4. With regard to the operational phase, the turbine locations will impact to some extent on the structures and recorded monuments on site and in the vicinity of the site. However the impact will not be so significant as to warrant justification for refusal. The proposed turbines are not contiguous of indeed adjacent the RMP's, with

perhaps the exception of the mausoleum. The proposal will to some extent affect the setting of the structure will be no means affect the structure itself. To refuse planning permission on the basis that turbines are located in close proximity to such features would be unreasonable having regard to the need to provide such important renewable energy infrastructure. The Board will note that the life of the permission is for 30 years, after which point the turbines will be removed and the landscape and setting in which the monuments are located will be reinstated back to its original character.

8.11.5. While a dwelling house may have been refused planning permission in the vicinity of Martinstown house, one off houses cannot be considered strategic infrastructure and should not be given the same level of priority in terms of its contribution to renewable energy targets as 9 wind turbines.

8.12. **Other Miscellaneous Issues**

8.12.1. A range of miscellaneous issues were raised by the various third party observations and these are briefly dealt with below. It is my considered opinion that the various miscellaneous issues raised are not critical in the Board's determination, as may be the case with the other issues associated with the application above, and for this reason are only given cursory consideration in this assessment.

Cancer Concerns

8.12.2. Concerns were expressed in one of the third-party observations at the high voltage cables between the turbines and the grid connection could give rise to cancer concerns. This is a health issues that is not strictly a relevant consideration under the Planning Acts. According to the information submitted, all cables are to be laid within the public road and therefore will be located a considerable distance from the nearest residential receptors. Furthermore, the cabling in question is to be located underground at least a meter below ground level. All cabling and electricity lines are required to comply with the international guidelines set by the International Commission on Non-ionizing Radiation Protection. On this basis I do not consider that the proposal will pose a health risk in terms of cancer.

8.12.3. Community Gain

8.12.4. Westmeath Co Council note that a broader community gain is required to ensure that all recreational users of the area would benefit from funding available. Having regard to the information contained in the EIAR, I note that the applicant is committed to operating a community benefit fund in accordance with the Wind Energy Ireland best practice and it will be available to the community at a rate of €2 per Megawatt. It is estimated that this will generate a approximately €16,000 per turbine over a 15 year lifetime of the operation of the turbines. It is not altogether clear why the community gain fund will only operate over half the lifetime of the wind farm. If the Board deem it appropriate it could require that the operator contribute over the full lifetime of the wind farm. How the money derived from the community gain fund is used and distributed is ultimately a matter for the developer and the community at large. Precise arrangements in this regard can be agreed post consent.

8.12.5. Imported Aggregates

There is no evidence to suggest that the applicant, in constructing the turbines, seeks to import aggregate and other materials from unauthorised quarries. Furthermore, the applicant has given an undertaking in the response to the submissions that all aggregate will be sourced from authorised quarries.

Private Sector Investment

Concern is expressed in one of the third-party observations that wind farm development should be state-led and not left in the hands of private sector investment. Chapter 10 of the Climate Action Plan is clear and unambiguous in highlighting in the importance of mobilising private sector investment in the transition to a low carbon economy. Private sector involvement in wind farm development throughout the state therefore is not only acceptable but forms a key component of the climate change strategy.

The Proposed Wind farm is heavily reliant on finite resources

It is acknowledged that the construction of the turbines is reliant on some finite non-renewable resources such as steel, concrete and neodymium magnets. But this in itself, would not justify a refusal of permission in my opinion. There is a significant benefit to be derived from the proposal in terms of harnessing renewable energy which will produce c.149 GWh of renewable energy over the lifetime of the proposed development. This will lead to a considerable savings in terms of reducing

greenhouse gases and this positive outcome most be balanced against any reliance on finite and non-renewable resources at construction stage.

There should be more emphasis on forms of Renewable Energy other than Wind farms

One submission argues that emphasis should be placed on more cost-efficient renewable energy sources such as biomass, tidal and micro-renewable energy. This point is not disputed in this assessment, but it is not accepted that the promotion of other forms of renewable energy should be at the expense, or to the detriment of wind energy. All types of renewable energy available to the State should be promoted and explored in order to address the issue of climate change and wind farm developments should be part of this integrated and multifaceted solution. Finally in relation to this matter I again emphasis it is clear and unambiguous that both on-shore and off-shore wind farm energy is seen as a critical component of the Climate Action Plan, and as such the provision of additional wind farm energy is fully in accordance with this strategy.

Potential Impacts on Airfields in the Vicinity

Concerns are expressed the proposal could interfere with the flightpaths associated with light aircrafts flying in and out of Ballyboy Airfield which is located within 15 kilometres from the proposed wind farm. The Irish Aviation Authority has assessed the application and have expressed no objection in principle. Section 13.2 point 7.1 of EIAR Dictate set out a range of mitigation measures in relation to aviation. The Irish Aviation Authority have also set out a number of requirements in respect of notifications prior to the commencement of development and the requirement for electronic terrain and obstacle data to be provided in accordance with International Civil Aviation Organization Requirements. Details of all coordinates of the wind farms and details of the ICAO light type to be attached to each of the turbines are set out in the submission. I am satisfied and it appears that the IAA are also satisfied that mitigation measures will ensure the safety of light aircraft associated with the Ballyboy airfield will not be compromised as a result of the proposed development.

Potential problems with Decommissioning

One third party observation suggest that the decommissioning of the turbines associated with the wind farm development will be impossible. The EIAR clearly

identifies and assesses the potential impacts which could arise from the decommissioning phase. There's no evidence to suggest that will be any particular problems associated with decommissioning the turbines. The turbines will be deconstructed and disassembled and removed off site in a similar manner to the construction phase. Lands affected by the turbines will be reinstated in full according to the information contained in the EIAR. The substation may remain in situ beyond the life of the wind farm as it will form part of the National Grid.

Impact on Tourism

The EIAR assess the impact of the proposal on tourism. The area is not a premier destination in terms of tourism. The site is not located in a particularly sensitive landscape in aesthetic terms. No tourism accommodation businesses have been identified in the LSA other than local Airbnb and self-catering accommodation. There are no major tourist destinations in the local study area. In the wider area, particularly in County Meath, there are very important and significant heritage sites and landscapes which are very important tourist destinations. However, it has been adequately demonstrated that the proposed turbines will not adversely impact upon or detract from these tourist destinations. I therefore do not consider that the proposal will impact adversely on tourism in the area.

Supply of Data Centres

One observation suggests that the wind farm in question is merely being constructed to serve new data centres with energy supply. There's no information contained in the EIAR to support this contention. Energy generated from the wind farm development will feed into the National Grid. It will not produce energy exclusively or solely for the purposes of providing power to data centres.

Property Devaluation

The previous sections of my assessment concluded that the proposed development, primarily due to the separation distances between the turbines and the nearest sensitive receptors, will not adversely affect the heath or residential amenity of the area. As such it follows that the proposal will not result in the devaluation of property in the area. The fact that a community benefit fund will be established which will fund projects for the local community, will improve communal and recreational infrastructure in the area, and may have positive impacts on property values in the medium to long term.

9.0 Environmental Impact Assessment

9.1. Statutory Provisions

9.1.1. The European Union Directive 2014/52/EU, amending Directive 2011/92/EU, on the assessment of the effects of certain public and private projects on the environment, requires Member States to ensure that a competent authority carries out an appraisal of the environmental impacts of certain types of projects, as listed in the Directive, prior to development consent being given for the project. The EIA Directive was transposed into Irish law under the Planning and Development Regulations 2001 to 2018 (as amended). Part 1 of Schedule 5 of the 2001 Regulations, includes a list of projects for which mandatory EIA is required. Part 2 of Schedule 5 provides a list of projects where, if specified thresholds are exceeded, an EIA is also required.

9.1.2. 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 (j) of Part 2 of the Fifth Schedule of the Planning and Development Regulations 2001, as amended:

9.1.3. *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 of greater than 5 megawatts' require EIA.

9.1.4. The proposed development with a total of 9 no. turbines with an estimated installed capacity of with a maximum total rated output of 54 megawatts exceeds these thresholds and is therefore subject to mandatory EIA.

9.1.5. Directive 2014/52/EU amending the 2011 EIA Directive was transposed into Irish legislation on September 1st, 2018 under the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018. The EIAR was

submitted to the Board with the application on the 5th of October 2021 and is therefore assessed under the newest Directive.

9.1.6. The EIAR submitted with the application consists of 2 separate volumes;

- Volume 1: Main Text which is set out in a grouped format structure whereby each environmental factor as prescribed in the Directive is presented and assessed in an individual chapter.
- Volume 2 (In 2 separate folders): Comprises as a range of annexes and report including technical data.
- A Photomontage Booklet and a non-technical summary are also submitted as standalone documents.

9.2. Compliance with legislation

9.2.1. The impact of the proposed development is addressed under all relevant headings with respect to the environmental factors listed in Article 3(1) of the 2014 Directive, which include:

(a) population and human health

(b) biodiversity, with particular attention to the species and habitats protected under Directive 92/43EEC and Directive 2009/147/EC

(c) land, soil, water, air quality and climate

(d) material assets, cultural heritage and the landscape

(e) the interaction between the factors referred to in points (a) to (d).

9.2.2. There are also separate chapters on shadow slicker and noise and vibration. The environmental factors listed in Article 3(1) of the Directive are discussed in Chapters 4 to 10 and also Chapters 13 & 14.

9.2.3. Chapter 1 includes an introduction to the EIA process, the screening for EIA, details of the format and structure of the document and details the competent persons that make up the EIAR project team. Chapter 1 also provides details of the scoping and consultation undertaken as well and providing details of the various methods impact assessment undertaken. It is also stated that no general difficulties or limitations were encountered in compiling the documentation. Where specific difficulties arose,

they are referred to in the document. The alternatives considered by the applicant are discussed in Chapter 2 and a description of the development is provided in Chapter 3. Interactions are set out in Chapter 15.

9.2.4. Article 3(2) of the Directive requires the consideration of effects deriving from the vulnerability of the projects to risks of major accidents and/or disasters that are relevant to the project concerned. This is addressed in Chapter 5 (Population and Human Health – S.4.5.1.2, Accidents and Natural Disasters). In addition, a peat stability assessment report (Annex 6.2) has been prepared and are contained in appendices to the EIAR.

9.2.5. The EIAR complies with Article 5 of the Directive and Schedule 6 of the Planning and Development Regulations 2001, as amended. It provides a comprehensive description of the project comprising information on the site, design, size, construction and operation of the project and other relevant features associated with the development of the project (Chapter 3). It describes the likely significant effects of the project on the relevant environmental factors (Chapters 4 -10 and chapters 13 & 14) and it provides a description of the measures envisaged in order to avoid, prevent or reduce and, if possible offset likely significant effects on the environment.

9.2.6. The Directive requires that the description of likely significant effects should also include an assessment of cumulative impacts that may arise from the proposed development in combination with other plans or projects. Section 1.11 of the EIAR sets out the methodology for the cumulative assessment, where applicable, and details of other projects considered. Cumulative effects are also considered, (where applicable), under the various environmental factors in the individual chapters of the EIAR.

9.2.7. The EIAR includes a standalone Non-Technical Summary of the information referred to in Article 5 (a) to (d) and additional information specified in Annex IV. It provides an adequate description of the forecasting measures used to identify and assess the significant effects on the environment. The Non-Technical Summary is concise and comprehensive and is written in a language that can easily be understood by a lay member of the public.

9.2.8. In compliance with the provisions of Article 5(3), the EIAR tabulates the inputs and qualifications of the study team and contributors under Section 1.8 of the document. I

am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality. I also consider that the information contained in the EIAR is up to date.

9.2.9. Details of the consultations entered into by the applicant as part of the application are set out in Section 1.10 of the document. It includes pre-application consultation, stakeholder consultation and consultation undertaken with prescribed bodies. Consultation with the public included e-mails to individual households, telephone calls and a number of consultations clinics. In accordance with Covid public health guidance in force at the time, no largescale community meetings were held. Details of the community consultation undertaken are set out in a Community Report contained in Annex 1.7 of the Appendices. I am satisfied that the participation of the public has been undertaken, and the application has been made accessible to the public by electronic and hard copy means with adequate times afforded for submissions in accordance with the requirements of Article 6 of the Directive.

9.2.10. I am satisfied that the information provided in the EIAR is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the project on the environment, taking into account current knowledge and methods of assessment.

9.3. **Alternatives**

9.3.1. Under the provisions of Article 5(1)(d) of the 2014 Directive it is a requirement that an EIAR contain:

"(d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment".

9.3.2. Chapter 2 of the EIAR addresses the matter of alternatives in terms of the 'do-nothing option' and alternative locations, layout/design, turbine numbers/model and alternative renewable energy technologies.

9.3.3. In a 'do-nothing' option, the site would remain as it currently is and would be managed as commercial agricultural land and forestry. Some felling of forest lands would most likely occur in the absence of the development This alternative was

rejected on the basis that it would represent a lost opportunity to capture the positive environmental effects arising from the project including the opportunity to harness a Westmeath's renewable energy resource and it would fail to contribute to meeting Government and EU targets; including commitments under the current programme for Government for the production and consumption of energy from renewables and the reduction in greenhouse gases.

9.3.4. In terms of alternative technologies, consideration was given to the development of a photovoltaic solar energy project. However, such a development would necessitate a substantial land-take with substantial changes to existing agricultural practices. A solar farm to provide similar output to that of the 9 turbines proposed would require a land take of c. 100 ha. It is considered that wind turbines would also be more efficient at producing renewable energy. This would make a solar farm significantly less competitive in an auction process in obtaining a grid connection offer from the CRU.

9.3.5. With regard to alternative locations, the site analysis screening process was subject to a 'sieve analysis'. Where different sites are assessed on different criteria which are detailed in S.2.4.3 of the EIAR. Policies set out in county development plans (CDP's) were also considered. It is noted that there are no preferred areas for wind farms in the Westmeath CDP, there are therefore no identified strategic areas earmarked for wind farm development within the county.

9.3.6. The assessment undertaken identified two potential areas, the preferred site and a larger site to the southwest, to the north of the R156 between Killucan and the Downs near the M4. Table 2.1 assesses both sites under the various environmental factors set out under Article 3 of the Directive. On foot of the analysis undertaken, it was considered that both sites were suitable but the site an Bracklyn was the preferred option. The preferred option was chosen on the basis of the lower population density, the lesser environmental sensitivity, the lack of protective landscape designations and the proximity of the national road network.

9.3.7. The turbine layout and design considered two options; Option D1 was the provision of 11 turbines with a maximum tip height of 170 m while Option D2 was the current option before the Board. Both sites were assessed under the various environmental factors set out under Article 3 of the Directive. Again, the preferred option scored

better on the basis of its potential to impact on sensitive habitats and the reduction of the footprint of the works to be undertaken. It is also considered that the fewer turbines will have a more positive visual impact.

9.3.8. An initial turbine layout was developed to take account of all identified constraints and detailed site investigations were conducted including habitat mapping, hydrological and geotechnical investigations. There have been numerous revisions and amendments to the layout and number of turbines proposed on the site.

9.3.9. The EIAR also considers alternative grid connection routes it is noted that the preferred option is located within 3 km Corduff- Mullingar 110 kV electricity transmission network. 2 no. electricity and substation grid connection options were identified. Option G1, the construction of a 110kV substation in the townland of Joristown near Raharney and linking the substation via an underground electricity line along the public roads and private lands to the site. And Option G2 a grid connection to the preferred site. Both Options were again assessed under the various environmental factors set out under Article 3 of the Directive. Further details of the two options are contained in Annex 2.3 of the EIAR. Either option were not considered to give rise to significant environmental effects. Option G2 however was considered to be preferential in terms of its overall environmental impact.

9.3.10. The EIAR also assess alternative substation design technologies, including air-insulated switchgear substation (AIS) or gas-insulated switchgear substation (GIS). Both were determined to be technically feasible with AIS technology deemed to be preferable due to greater flexibility in the design.

9.3.11. In terms of turbine delivery routes, it is noted that the exact haul route cannot be confirmed until the completion of the turbine tendering process. The turbine manufacturer will ultimately determine the port of entry and subsequent haul route. However, given the location of the preferred option, the M4/N52 will be part of the haul route. All the main ports within the State a suitable for the delivery.

9.3.12. I consider that the matter of examination of alternatives has been satisfactorily addressed in the EIAR. I consider that the level of detail is reasonable and commensurate with the project. It indicates how the proposed development evolved and how it was adjusted to take into consideration environmental effects. I am

satisfied that the process is robust and that the requirements of the Directive are fully complied with.

9.4. Likely Significant Effects on the Environment

This section of the EIA identifies, describes and assesses the potential direct, indirect and cumulative effects of the project under each of the environmental factors referred to in Article 3(1) of the Directive. The assessment follows the headings used in the EIAR which are as follows:

- Population and Human Health
- Biodiversity
- Land, Soils & Geology
- Water
- Air Quality & Climate
- Landscape
- Cultural Heritage
- Noise & Vibration
- Shadow Flicker
- Material Assets.
- Interaction of the foregoing

9.5. Population and Human Health

9.5.1. Chapter 4 of the EIAR identifies, describes and assesses the impact of the proposed development in the context of population, employment, economic activity, changes in social and land use activity, potential impacts on community severance, rights of way amenities, health and safety. The potential impacts on population and human health arising from other environmental factors (air pollution, water contamination etc) are considered in other chapters of the EIAR.

9.5.2. The chapter also provides details of the planning policy context and guidance relating to wind farm development in the State. Details of the desk-based research undertaken in relation to population and human health is also set out.

9.5.3. The site, which extends across a number of townlands, is located in a rural area with a low population density. The predominant land use surrounding the site is farmland with some forestry. The population of Westmeath at 88,396 represents 1.9% of the population of the state. Meath with a population of 194,942 represents 4.1% of the population.

9.5.4. The EIAR also provides details of employment by socio-economic group (Fig 4.2). Details of the visitor economy with details of visitor trips to the region broken down by numbers of visitors from Ireland, overseas and Northern Ireland are also provided in this chapter. Details on the main tourist attractions are listed in the chapter for both counties.

9.5.5. The nearest village settlement, Delvin had experienced substantial population increase from 416 (2006) to 697 (2011). It is noted that the local study area (LSA) has limited opportunities for recreational facilities because of the extensive peat areas and the relative remoteness of the area. Recreational activities and centres in the area are listed and described in the EIAR. It is noted that there are no designated fishing areas and no 'national way' marked trails in the LSA. There are however a number of recreational walking routes. No tourism accommodation businesses have been identified in the area.

9.5.6. In terms of likely effects, it is noted that during the construction phase, positive economic effects will accrue from employment opportunities, with a peak on-site work force estimated to be 120 persons, a significant proportion of which will be sourced from the local market. The procurement of goods and services will also have a positive impact on the local economic market. Details of local supply chain businesses that could benefit from the development are listed. Accommodation of construction workers could also benefit the local economy.

9.5.7. The impact on the tourism is considered to be low on the basis that the LSA is not a significant tourist area and the potential of the proposed turbines to affect tourism is considered to be low.

9.5.8. In terms of impact on humans living in the area, it is stated that a detailed CEMP will be prepared prior to the commencement of development. It will ensure that residents will be informed of all construction works being undertaken, including temporary road closures etc. The impact during the construction phase is deemed to be temporary and not significant.

9.5.9. In terms of accidents and natural disasters, the EIAR notes that the development is not recognised as a significant source of potential pollution either during the construction or operational phases. There is also limited likelihood for natural disasters to occur as Ireland is geologically stable with a mild temperate climate. Maximising the distance to residential receptors further limits the likelihood of potential accidents of natural disasters. The development is not regulated by or located in an area proximate to any site regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations (SEVESO Sites) so there is no likelihood for cumulative effects or interactions with such sites.

9.5.10. In terms of cumulative impacts, it noted that there are a number of developments permitted are currently proposed within the wider study area including the proposed Ballivor wind farm. The EIAR considers that none of these projects are of a sufficient scale or nature to likely result in cumulative social economic population or human health effects.

9.5.11. The likely significant effects during the operational phase will include the employment of up to 4 engineers and technicians as well as some indirect employment through maintenance contracts etc. It is acknowledged that the proposed development will be visible in and around the wider study area. However, the EIAR suggests that there is no evidence to support the conclusion that the proposal may adversely affect the visitor appeal of the area.

9.5.12. Furthermore, the applicant is committed to operating a community benefit fund in accordance with Wind Energy Ireland Best Practice. It will be available to the community at a rate of €2 per MWh, and an investment of approximately €16,000 per turbine, per year, for a period of 15 years will be provided to the local community. The fund will be administered by a committee which will likely include members of the local community to prioritise funding for local projects. The project will also make an annual business rates payment to Westmeath County Council. The long-term

nature of the income will allow the community to plan ahead where it can rely on a steady source of income to the community.

9.5.13. Impacts in terms of noise, visual amenity and shadow flicker are assessed separately under specific chapter headings in the EIAR.

9.5.14. In terms of ice fall, this can be a significant potential impact in colder climates. Due to Ireland's temperate climate however, no recorded incident has occurred in Ireland. Turbines can be fitted with vibration censors which can detect any imbalance in the turbine caused by ice build-up. Furthermore, all dwellings in the vicinity are located in excess of 500m from the turbines and therefore outside the range of the potential ice throw.

9.5.15. In terms of potential electromagnetic interference (EMF), the proposed substation is located well away from any residence and therefore no possible EMF impact would occur simulation will comply with ICNIRP and EU Guidelines in relation to exposure to EMF.

9.5.16. In terms of decommissioning the same effects are anticipated as the construction phase.

9.5.17. No mitigation measures are required to reduce or remedy any adverse effect from a human health or socio-economic receptors. Where potential impacts could occur on the population in the study area, these are dealt with separately under the various chapter heading described and assessed below.

9.5.18. No residual impacts in terms of the construction, operational or decommissioning phase are likely to occur.

Assessment

9.5.19. The main issues in the submissions raised relate to impacts on human health, shadow flicker, noise, traffic, cultural heritage and potential impacts on tourism in the area. While there is no scientific evidence that the operation of the wind farm would result in negative health outcomes, it is recognised there is potential for increased annoyance associated with noise. Subject to compliance with the recommended noise levels for the protection of human health, which is discussed in more detail below, the potential for significant effects on human health does not arise.

9.5.20. Many of the observers have raised concerns regarding potential shadow flicker exceedances at residential properties. Shadow flicker can cause annoyance and can impact on the amenity of residential properties or other sensitive receptors. The issue of shadow flicker is dealt with under a separate heading under the EIAR and in my main assessment and therefore will be evaluated separately in this assessment.

9.5.21. While concerns have been raised regarding potential impacts on property values arising from the proposed development, having regard to the separation distances between the turbines and residential dwellings in the area there is no evidence that adverse effects will occur. The community fund will assist in providing and contributing to new projects and infrastructure in the local area which will increase and improve facilities which could contribute to enhancing property values in the area.

9.5.22. Due to the separation distance to tourist attractions in the wider locality, and the absence of designated tourist facilities in the immediate study area, no significant impacts are likely to arise. While the upper sections of the turbines will be visible from vantage points associated with tourist attractions in the wider area, these matters are dealt with further below in my assessment.

9.5.23. I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development to be fully assessed. I am satisfied that the impacts identified on population and human health can be avoided, managed or mitigated by the measures forming part of the proposed scheme. I am, therefore, satisfied that the proposed development would not have any direct, indirect or cumulative significant effects on population and human health.

9.1. **Biodiversity**

9.1.1. Biodiversity is addressed in Chapters 5 of the EIAR. Details of the competent experts and biodiversity is set out.

9.1.2. Details of the existing baseline environment is set out from a range of surveys, which include desk-top and field surveys. The desk top study included a review of online web maps, recognised data bases and records to establish baseline conditions. The field surveys included multi-disciplinary walkover surveys covering the entire study area. These included habitat surveys and surveys designed to detect the presence/likely presence of protected species and invasive alien species,

invertebrate habitat suitability assessments, aquatic and fisheries assessments amphibian and reptile surveys, bird and bat surveys. Details of the survey methodologies are also set out. Details of all the surveys undertaken are set out in Table 5.1 and section 5.2.3 of the EIAR. S. 5.2.3.7 of the document specifically relates to bat surveys. Details of the assessment criteria for each of the surveys undertaken are also set out.

9.1.3. Section 5.3 sets out a description of the proposed development site and the baseline environment. All species of ecological importance within a 10 km radius are set out in Table 5.14 of the EIAR. European sites within a 15km radius of the site are identified in set out in Table 5.16. (7 SAC's and 2 SPA's).

Habitats

The main habitats identified within the proposed development site are (using Fossit's classification):

- BC1 - Arable Crops – 82.98 ha
- BL3 – Buildings and Artificial Surfaces – 4.33 ha
- WF4 – Drainage Ditches – 10,703 m
- FL8 – Artificial Lakes and Ponds – 0.19ha
- GA1 – Improved Grassland – 70.89 ha
- GA2 / WS3 Amenity Grassland with Ornamental / Non-native Shrubs – 0.15 ha
- GS2 – Dry Meadows and Grassy Verges – 1.65 ha
- PB4 – Cutover Bog – 0.48 ha
- WD1 (Mixed) Broadleaved Woodland – 26.5 ha
- WD4 Conifer Plantation – 57.68 ha
- WL1 – Hedgerows – 1,065 m
- WL2 – Treelines – 7,902 m
- WN1/WN7 Mosaic of Oak/Birch/Holly Woodland and Bog Woodland - 7 ha.
- WN 7 Bog Woodland -0.2 ha

- WS1 Scrub – 0.05 ha
- WS5 Recently Felled Woodland – 3.45 ha.

9.1.4. With the exception of the Bog Woodland (WN7) which is of regional importance, all the other habitats are of local important (either higher or lower value). No plant species listed under the Third Schedule of the EU (Birds and Habitats Regulations 2011 - 'non native species subject to restrictions under S49') were recorded. A list of non-native species are set out in Table 5.19.

Invertebrates

9.1.5. In terms of invertebrates, it is considered that the site is unsuitable for the Marsh fritillary butterfly. The River Boyne Catchment does not support the freshwater pearl mussel. It is unlikely that the freshwater cray fish would occur in the ditches and streams as the site is located too far up the River Boyne catchment to support populations of crayfish. The water bodies are also unsuitable for spawning salmon and lamprey. No newts, frogs or lizards were recorded within the site area.

Birds

9.1.6. Of all the surveys undertaken, 81 bird species were recorded adjacent to the 500m turbine buffer zone. 11 were on the red list and 23 were on the amber list. 47 species of bird were recorded breeding within 500 m of the turbine site. 8 species are listed in Annex 1 of the EC Bird's Directive. The various species are their sensitivity status are listed on Table 5.22. Detailed surveys accounts of each of the Annex 1 species (Little Egret, Whooper Swan, Greenland White Fronted Goose, Golden Plover, Merlin, Peregrine, Hen Harrier). Detailed target species counts are also provided. The Red, Amber and Green Species encountered during the survey are detailed in the baseline study.

Mammals

9.1.7. Otter spraints were recorded along the ditches and drainage channels within the site. No lay-up or holts were recorded. The otter appear to use the drains that traverse the site as commuting channels.

9.1.8. Two large badger setts were recorded on site, just north of T2 and near the substation. Other smaller setts were identified throughout the site on foot of the survey.

9.1.9. Pine martin activity (scats) were recorded throughout the woodland. No suitable dens were identified throughout the corridor of works. Irish Hares were recorded throughout the site. No evidence of red squirrel was found. It is considered that the woodland may be too immature to support a foraging habitat.

Bats

9.1.10. The EIAR included a bat risk assessment for the various types of bats (common pipistrelles, soprano pipistrelles, Leislers and natuhusius pipistrelles).

Description of Likely Effects

9.1.11. Under a 'do-nothing' scenario, it is considered that the site would remain as pastoral land and forest woodland.

Construction Phase

9.1.12. The Construction phase will have a direct impact through destruction of habitat, clearance of woodland, creation of temporary infrastructure such as site compounds, trench excavation, stock piling of materials etc. It could also lead to increased surface water run-off, the spreading of invasive species and displacement of species through excessive noise etc. The type and area of habitat loss is set out in table 5.26 of the EIAR.

9.1.13. The construction works could result in water pollution and water quality degradation. However, there is limited potential for impact as no natural rivers and only a few streams and ditches exist within the site boundary. The impact on water courses are therefore deemed to be not significant within the site. There is potential for indirect effects for waterbodies downstream through pollution. These impacts have the potential to be significant and could impact on species which are sensitive to pollution such as lamprey, crayfish, salmon and otter.

9.1.14. In terms of avifauna. The EIAR sets out an evaluation of impacts which could arise on of each ornithological species that could potentially be affected. This is briefly summarised below

- *Hen Harrier* – significant impact unlikely as the nearest breeding site is 30 km away. Hen Harriers only occasionally forage in the vicinity of the site.
- *Golden Plover* – no risk of direct impact on nesting birds. The site is only occasionally used for foraging.

- *Woodcock* – Areas of woodland that is potentially used by Woodcock will be removed. Construction activity close to nesting sites could impact on nesting birds. The magnitude of the impact is difficult to assess as there is currently no Irish population estimate for Woodcock. The potential impact is however estimated to be low.
- *Lapwing* – low significance of impact due to sub-optimal habitat conditions.
- *Snipe* – Turbine construction will be away from the wetter areas which are conducive for breeding snipe. The impact is therefore considered to be not significant.
- *Kestrel* – The nearest nesting site is over a km away from the nearest turbine - T5. The construction activities may have a localised impact on the foraging areas associated with the Kestrel, but the impact is assessed as negligible.
- *Swift* – this bird species does not breed locally and infrequently forages in the area. The impact is therefore classed as insignificant.
- *Barn Owl* – No Barn Owl breeding sites were not identified within the construction corridor and only two observations were recorded during the study period.

9.1.15. The EIAR goes not to assess the potential impacts on Red and Amber listed passerines that were recorded in the area, and it was concluded that the impact arising from construction activities would not be significant or in some case very low significance.

9.1.16. In terms of mammals, it is noted that in the absence of mitigation, the potential impact on badgers and badgers' setts, are considered to be significant at a local scale. No otter holts, pine martin dens, or red squirrel dreys were recorded during the surveys within the proposed works corridor and thus it is concluded that no direct effects were identified. The infrastructural footprint will result in the loss of potential foraging commuting and sheltering habitat utilised by mammals. Disturbance by construction machinery is likely to occur. In the absence of mitigation, the deterioration in water quality also has potential to impact on aquatic species such as the otter.

9.1.17. In terms of bats, any tree felling (either conifer or broadleaf) during the construction of the turbines is considered to be unlikely to have any effects on bat roosts. Tree line removal in the absence of mitigation is assessed as being significant at local level. Likely indirect or secondary effects resulting from construction works would be limited to the loss of foraging and commuting habitats. However, there will be no night-time working, so this will significantly reduce the impact. With the exception of one case, the proposal seeks to avoid the removal of linear features which are important for foraging purposes

9.1.18. The main cumulative impact is essentially limited to changes in water quality downstream in combination with other plans or projects.

Operational Phase

9.1.19. The likely direct effects are identified as collisions or barotrauma with turbines for bats and collision risks for birds. Loss of habitat is also identified as a direct effect.

9.1.20. The potential risks associated with bird populations which are of special conversation interest associated with the SPA are considered to be non-existent. This conclusion is predicated on the distance between the proposed development site and the surrounding SPA's and on ornithological studies confirming that there were no source receptor pathways fight lines along the route of the turbine location.

9.1.21. In terms of collision risk, the EIAR refers to a collision risk model developed by Scottish Natural Heritage. The predicted impact on various bird species on the red list is set out in table 5.27. In most cases the predicted collision rate is less than one collision a year, only in the case of the Golden Plover does the collision exceed this (4.3 birds per year). This higher level is attributed to presence of tillage farming in the area. The EIAR sets out a detailed assessment on the potential impact during the operational phase on each of the most sensitive species recorded within the study area. The EIAR also notes that increased water pollution could impact on aquatic feeding grounds for birds.

9.1.22. In terms of mammals, based on the surveys undertaken, there is no potential for direct impacts as no otter holts, pine martins dens, or red squirrel dreys were recorded during the surveys within the proposed works corridor. In terms of indirect effects, mammal species are considered to be generally tolerant of operating wind farms and as such no secondary impacts are expected. In the absence of mitigation

potential deterioration in water quality within drainage channels may result in reduced prey availability.

9.1.23. In respect of the bat population in the area, both barotrauma and collision present risks. To counteract any potential impact, the turbine layout and the requisite felling areas are to maintain a minimum 50 meter turbine bat feature standoff (bat buffers). These are designed to minimize the amount of clearance of semi natural woodland hedgerows and treelines that is required. Mitigation measures will include a minimum separation distance from likely foraging and commuting features of 50 meters from the rotor swept areas for all turbines. Both the common pipistrelle and soprano pipistrelle are considered to be of high risk of injury or mortality from turbines from either barotrauma or collision. Both species typically show an affinity to habitat features such as woodland and plantation edges including treelines and hedgerows. Vulnerability to wind farm developments for both species are classed as 'medium'. Without mitigation, potential impacts of the operational phase upon the common pipistrelle, soprano pipistrelle, Nathusius pipistrelle and Leiser's bats are considered to be 'significant at regional level'. Potential impacts on other bat species are considered to be lower, as these species to not fly at the commensurate height of the turbine blades.

9.1.24. Impacts due to additional lighting on the substation in the absence of mitigation measures could potentially impact on less commonly recorded bat species in the area (brown long-eared bats). The more common species refer to above, which have been recorded in the study area, are less likely to be affected by lighting.

9.1.25. In the absence of mitigation, a key potential cumulative impacts upon ecology during the operational phase are identified as

- the deterioration of water quality locally within the Stoneyford River Catchment and within the Deel River Catchment and the potential downstream effects on qualifying the interests and habitats associated with these attachments.
- Collision risk and barrier effects on sensitive bird populations. Due to the relatively low density of operational and consented wind farms within a 50 kilometer radius of the proposed development, and the relative low densities of SPA's in the Midlands area, the likely significant effects due to

displacement and collision risk can essentially be ruled out. The layout and separation distances between the turbines proposed at the Ballivor wind farm will ensure that the wind farm does not provide a dense barrier effect to bird populations utilising and moving through the area. Based on the outputs from the collision risk models, there is potential to increase collision for populations of kestrels and wintering golden plovers. However, mitigation and enhancement measures are proposed to limit potential significant effects on local bird populations.

- Collision risk impacts on bat species. Without mitigation, the in-combination effects from the proposed development and the 26 turbines proposed at Ballivor could adversely impact on bat species. The EIAR suggests that the potential collision risk will be sufficiently reduced by implementing 'bat feature buffers' around the turbines and ensuring that the proposed replacement planting maintains an appropriate level of foraging habitat and connectivity through the proposed development site. A post construction monitoring programme for bat activity will be implemented.

Mitigation Measures

Section 5.5 sets out Mitigation and Monitoring Measure for both the construction and operational phase.

9.1.26. During the construction phase a suite of measures are set out to mitigate against potential adverse impacts arising from construction activity. These include specific measures to address issues in respect of:

- Avoidance of water pollution and excessive sedimentation for water courses and downstream designated sites.
- Protection of important habitats such as semi-natural woodland habitats within the site.
- Measures to prevent the introduction and distribution of non- native and invasive species on to the site and also to arrest the spread of existing non-native and invasive species within the site.
- Mitigation measures to avoid the widespread disturbance to birds.
- Mitigation measures to address widespread disturbance to mammals.

- Mitigation measures avoiding direct effects to roosting bats and the potential indirect effects on bat foraging and commuting habitats.

9.1.27. During the operational phase, a separate suite of measures are set out to mitigate against potential adverse impact arising from the operation of the wind farm. These include specific measures to address issues in respect of:

- Avoidance of water pollution and excessive sedimentation for water courses and downstream designated sites.
- Measures to avoid collision risk or both bats and birds.
- Specific measures will also include 'bat feature buffers' to avoid collision and barotrauma in bats.
- Detailed measures will be incorporated for habitat management and replacement planting to provide compensatory measures for foraging breeding and nesting.
- Turbine control measures will also be implemented should they be required on foot of post construction monitoring activity.

Section 5.6 set out details of the monitoring measures to be undertaken which will include:

- Preconstruction ecological monitoring
- Monitoring of bat feature buffers and general activity.
- Bird monitoring.

9.1.28. In terms of residual effects, the EIAR concludes that assuming mitigation measures are adopted and implemented in full, there are likely to be no significant residual effects on important biodiversity and ecological features. The exception being the impact on the local kestrel population due to collision risk however this impact is deemed to be of 'low significance'. Details of the residual impacts following the implementation of the proposed mitigation measures are set out in a detailed Table 5.29.

Assessment of the Biodiversity Chapter

9.1.29. The observers refer to the sensitivity of the area for wildlife, flora and fauna and question what plans are in place for the protection of habitats. The Department of

Housing Local Government and Heritage raised issues in respect of bats and bird surveys and collision risks. The applicant's response to further information addresses these matters.

9.1.30. I consider that the potential impacts of the proposed development on the biodiversity of the site have been comprehensively assessed in the application and the surveys and assessments have been carried out in accordance with best practice and by competent experts. I consider that the nature and scope of the surveys is robust, acceptable and proportionate.

9.1.31. I accept that the impacts of the proposed development on habitats and species on the site have been reduced by avoidance and design. Habitats rated of higher ecological significance, including native woodland are avoided by the development and the majority of the habitats that will be impacted upon, are of local importance and low ecological value. The proposed development occupies a very small proportion of a vast agricultural and forested landscape, with large areas remaining undisturbed and creating opportunities for habitat enhancement.

9.1.32. The habitats present on the site are suboptimal for fauna identified as key ecological receptors including badger, otter in terms holts and setts. Known badger setts will be avoided. There is potential for some impact on foraging and commuting, particularly during the construction phase through standard mitigation and monitoring, management and habitat enhancement there will be no significant impacts on these species arising from the development.

9.1.33. The proposed development avoids watercourses, and no instream works are proposed. The surveys indicate that habitats present are suboptimal for aquatic species identified as key ecological receptors including salmon, lamprey and white-clawed crayfish. However, the is potential for cumulative impacts particularly downstream of the catchment area. The main impact would occur through sediment laden discharge during both the construction/operational phases. Subject to the mitigation measures proposed, which are standard best practice protocols, significant impacts on the water environment are not predicted.

9.1.34. Having regard to all the submissions received in respect of the application, I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development to be fully assessed. I am satisfied

that the impacts identified on biodiversity would be avoided, managed or mitigated by the measures forming part of the proposed scheme. I am, therefore, satisfied that the proposed development would not have any direct, indirect or cumulative significant effects on the biodiversity of the area.

9.2. **Land, Soil and Geology**

9.2.1. The potential impacts of the proposed development on land, soils and the geological environment are assessed in Chapter 8 of the EIAR. This should be read in conjunction with the Geotechnical and Peat Stability Assessment Report included as Annex 6.2.

9.2.2. Information on the existing environment was obtained from a desk top study, a walk over survey and site investigations. The desk top study included a review of data sources from EPA database, and GSI mapping and data bases (groundwater and geology, bedrock geology, general soil map, geological heritage site mapping). The walk over surveys included detailed drainage mapping and baseline monitoring/sampling. Geotechnical ground investigations and a peat stability assessment were also undertaken. The receptor importance and sensitivity criteria applied to the assessment methodology is set out in Tables 6.1 to 6.3 of the EIAR. As part of the scoping process the GSI were notified of the proposal. It concluded that the GSI does not envisage any impact on geological sites by the proposed development. No incidents of landslides have been recorded in the townland of Bracklyn.

9.2.3. The areas to containing the turbines are located on either agricultural land or forestry mixed woodland. The proposed 110kV electricity substation is located within an area of commercial forestry.

9.2.4. The published soils map for the area shows that the central southern and western areas of the site are underlain by deep, well-drained mineral soils with cut over bog mapped on the northern and eastern portion of the site. The soil type mapped along the proposed grid connection route is mainly cut peat bog with some peaty gleys at the eastern end of the site. Summary logs at each of the trial hole locations for the wind turbine locations are set out Table 6.5. The turbines are underlain by a mixture of sandy/gravelly silt, silty/clay with cobbles and boulders and sandy gravelly silt.

9.2.5. The peat stability assessment undertaken is detailed in Annex 6.2. The finding of the peat assessment showed that the proposed development site has an acceptable margin of safety, is suitable for the proposed development and is considered to be at low risk of peat failure.

9.2.6. No historic mines or licensed waste facilities are located in the vicinity of the proposal. As such, it is extremely unlikely that any soil contamination exists within or in the vicinity of the site.

9.2.7. In terms of bedrock geology, the majority of the proposed development is underlain by dinantian pure unbedded limestones. While the far eastern portion of the proposed wind farm and section of the proposed grid connection are underlain by dinantian upper impure limestones. In terms of aggregate potential, the local bedrock has a 'Low to High' importance. There are no geological heritage sites in the vicinity of the site.

Assessment of Likely Effects

9.2.8. The proposed development will involve to removal of peat soil and subsoil to facilitate the emplacement of access tracks, turbine foundations, crane hard standings, a substation and site compounds. The removal of bedrock is deemed to be unlikely. Crushed rock to facilitate foundation structures will be sourced from local authorised quarries. Overburden and spoil will be utilised for reinstatement of excavated areas and for landscaping purposes. Excess material which cannot be used will be stored in two designated spoil deposition areas or will be spread across areas where felling has occurred. The two deposition areas are located between turbine 3 and turbine 4 and adjacent to the proposed meteorological mast. Turbine foundations will generally be constructed on the underlying mineral soil deposits with the exception of turbine 10 which may require a piled turbine foundation. Foundation depths are expected to be c.3 m deep with an approximate diameter of 22m. The trench within the proposed underground electricity line (grid connection) will be typically 0.6m wide and 1.2m deep. Estimated volumes of overburden and rock to be removed for each element of the proposal is indicated in Table 6.7 of the EIAR. In total c102,000 m^3 of material is calculated to be excavated.

9.2.9. This will result in a direct permanent loss of peat, soils, subsoils and perhaps some bedrock of low to medium importance. The magnitude of the impact is determined to be ‘small and adverse’.

9.2.10. There is also potential so contamination of peat soils and subsoil by leakages are spillages of hydrocarbons or other chemicals during the construction phase.

9.2.11. The proposal will also result in the loss of c. 5ha of agricultural which is considered to be imperceptible. It will also result in the felling of 28ha of commercial forestry. The impact of this is also considered to be insignificant. Additional forestry will be planted at an alternative location which will be subject to a separate licence.

9.2.12. Very few (if any) impacts on lands and soils are anticipated during the operational phase. Hydrocarbon spillage as a result of maintenance of the turbines and substations is the only identified adverse impact which could potentially occur, but this impact is considered negligible.

9.2.13. In terms of cumulative effects, significant effects are unlikely to arise, predominantly due to the localised and near surface nature of the construction works. Given the small construction footprint and shallow earthworks, it is assessed that significant cumulative effects on land soils and geology are unlikely to arise.

9.2.14. In terms of monitoring and mitigation, a number of design measures are proposed to reduce erosion effects of exposed peat soil and subsoil at excavation storage areas. Also, a suite of mitigation measures is proposed to specifically prevent contamination of peat soils and subsoils. 28 hectares of commercial forests are to be felled to accommodate the development and it will be replaced by replanting on alternative lands through a separate consenting process. The full suite of mitigation measures is set out in section 6.5 of the EIAR.

9.2.15. The residual effects are identified as being the loss of land for agricultural and forestry production during the construction phase. No significant residual effects are identified as likely to occur during the operational or decommissioning phase.

Assessment of the Land and Soils Chapter

9.2.16. The findings of the geotechnical and peat stability assessment report in Annex 6.2 which has been prepared in accordance with best practice guidance suggests that the site is suitable for a wind farm development and is at low risk of peat failure. I

would concur that the impact in terms of soil, subsoil and bedrock as a resource is negligible. Likewise, the loss of agriculture as a land use is negligible. The loss of commercial forestry can be adequately mitigated against by way of compensatory planting elsewhere.

9.2.17. I consider that the information provided in the planning application documents are sufficient to allow the impacts of the proposed development to be fully assessed. I am satisfied that the impacts identified on lands, soils and geology would be avoided, managed or mitigated by the measures forming part of the proposed scheme. I am, therefore, satisfied that the proposed development would not have any direct, indirect or cumulative significant effects on these environmental factors.

9.3. **Water**

9.3.1. The potential significant effects of the proposed development on the water environment are considered in Chapter 7 of the EIAR. The assessment describes the existing environment and identifies the likely significant effects on surface water and groundwater during the construction, operational and decommissioning stages of the proposed development. It also sets out a suite of mitigation measures to offset any potential impacts. The EIAR also assesses potential cumulative impacts.

9.3.2. The EIAR provides details of legislation and guidance in relation to water. Desktop studies and site investigations are set out to describe the existing baseline environment. The desk top study involved collecting all relevant geological, hydrological, hydrogeological and meteorological data for the area using recognised data bases, records, reports and map viewers. Site investigations included walkover surveys, hydrological mapping and baseline monitoring and sampling.

9.3.3. The site consists agricultural and forested lands c. 275 ha in size. Details of the long-term average rainfall is also set out for the local area. It is stated that the majority of the site (inc. turbine locations and grid connection) is located in the Stoneyford River surface water catchment. A small area of the western part of the site forms part of the Deel Catchment. No works are proposed on this catchment. Both rivers flow into the River Boyne. Three main headwater streams drain the site, two of which are relatively large streams (Stream A and Stream B). Both streams converge near T7. Stream C is located at the southwestern corner of the site and

drains to the River Deel. In the case of streams A & B, there will be a requirement for six water course crossings and several drain crossings. Along the route of the grid connection there will be 4 watercourse crossings.

9.3.4. In terms of flood risk, the subject site is not located within, or proximate to, a recorded flood event according to the OPW website. The PRFA mapping shows a 100 year mapped flood event on the north western corner of the site near the access road leading to the development. This is associated with an off-site stream to the north. As the streams traversing the site are headwater streams, the potential for fluvial flooding is minimal. A key mitigation measure in terms of flood risk would be measures to ensure that surface water runoff is treated (for water quality control) and attenuated prior to diffuse discharge at pre-existing greenfield rates. Flooding potential is therefore prevented and controlled through avoidance by design.

9.3.5. Details of the surface hydrochemistry indicated that the Stoneyford River has a moderate to good status (Q3-4). Whereas the Deel River has a High Status Q5. Field chemistry measures were taken from water bodies in the vicinity of the site (electrical conductivity, pH, temperature, dissolved oxygen etc.). Details are provided in Table 7.9. Some of the parameters exceeded the limits set out for High and Good Status (BOD, orthophosphate and ammonia).

9.3.6. In terms of groundwater, the proposed development is located within the Athboy Ground Waterbody (GWB), which has been assigned ‘good status’. The bedrock aquifer is classed as being of low importance. The water table levels are estimated to be 2.5 -3.0 m bgl. Aquifer vulnerability is classed from ranging from low to high within the site. There are no mapped groundwater Source Protection Areas for either public water supplies or group water schemes in the area of the proposed development. There are no private wells mapped within 1km of the proposal. Groundwater flow is assumed to follow the existing topography and therefore flows in a northwesterly direction.

9.3.7. Increases in surface water runoff as a result of the development of hardstanding areas our estimated under a worst case scenario of being an additional 20.4M^3 per day. This represents a 0.33% increase in the average volume of runoff from the site in comparison to baseline predevelopment site runoff conditions. This is considered to be a very small increase.

9.3.8. In terms of changes in drainage, a self-imposed buffer zone of 50m has been put in place for on-site streams where feasible. It is proposed to utilise existing access tracks so as to minimize the alterations to the existing drainage regime. The EIAR states that the existing land drains have no notable hydrological value and can readily be integrated into the proposed drainage scheme using methods set out in the document. Measures will be implemented to avoid disturbance to natural drainage features by minimising any works in and around artificial drainage features and diverting clean surface water flow around excavations, construction areas and temporary storage areas. Furthermore, and where necessary, drainage waters from works areas within the site that may be silt-laden will be directed towards settlement ponds prior to controlled diffuse release over vegetated surfaces.

9.3.9. Effects on groundwater are considered to be negligible due to the small footprints and shallow foundations involved in constructing the development. The primary risk the groundwater at the site would be from cement materials and hydrocarbons. The fact that the bedrock is generally unproductive and classified as a 'locally important aquifer' will reduce the potential impact on groundwater.

Description of Likely Potential Impacts

9.3.10. Under the do-nothing scenario there would be no alteration to the hydrological environment.

9.3.11. Construction phase activities that will require earthworks could result in potential sources of sediment laden water. Stockpiling of materials could also give rise to sediment laden water. Construction of the grid connection and erosion of sediment from emplaced site drainage channels could also result in the release of suspended solids to surface water courses which could affect water quality and fish stocks.

9.3.12. Dewatering of deep excavations primarily associated with turbine foundations have the potential to impact on local groundwater levels and nearby wells. No groundwater impacts are anticipated from the construction of the grid connection including underground cabling due to the shallow nature of the excavations. The hydrogeological setting below some of the proposed turbine locations means groundwater dewatering will be likely but pumping volumes will not be significant. No potential wells downgradient of the turbine locations will be affected by the proposed development

9.3.13. Surface water/shallow groundwater seepages and direct rainfall input will likely occur in the excavations pits which will create additional volumes of water to be treated as part of the water management regime. Accidental spillage during refueling of construction plant poses a significant risk to groundwater, surface water and associated ecosystems. Morphological changes to surface water courses and drainage patterns may also occur, with diversion culverting and bridge crossing of surface water courses. Potential impacts on designated sites are deemed to be unlikely due to the separation distances between the proposed development and the designated sites in question. Any likely surface water effects are not deemed to be significant due to the dilution/assimilative capacity of the water courses between the site and the sensitive receptors.

9.3.14. During the operational phase, the main impact on the water regime relates to the increase in hardstanding areas which will increase surface water runoff. However, it is reiterated that the calculated increase in surface water runoff is estimated to be 0.33%. This is deemed to be negligible.

9.3.15. The decommissioning phase is likely to give rise to the same impacts as the associated with the construction phase.

9.3.16. In terms of cumulative impacts, it is stated that then likelihood of cumulative effects is more likely to be hydrological rather than hydrogeological. However, due to construction methodologies and the transient nature of the works within the catchment area over several kilometers, significant surface water quality impacts are not anticipated. It is noted that there are only two other permitted and proposed wind farms within a 20km radius of the proposed development. All wind farm developments are located within the Boyne catchment area which is estimated to be 600 sq.km in size. The cumulative hydrological effects from the three wind farms planned and permitted (c.46 turbines – Bracklyn, Ballivor and Yellow River to the south west) in such a large catchment area is considered to be negligible. In terms of flood risk assessment, the likelihood of increased runoff from the proposed development is likewise deemed to be negligible.

9.3.17. In terms of monitoring and mitigation, the overarching objective of the proposed mitigation measures is to ensure that all surface water is comprehensively treated and attenuated so that no silt or sediment laden waters or deleterious material is

discharged into the local drainage system. A Preliminary/Outline Surface Water Management Plan has been prepared (Annex 3.8) and incorporates the principles of SuDS through an arrangement of surface water drainage infrastructure. The EIAR sets out detailed mitigation measures in respect of:

- Mitigation by avoidance.
- Mitigation by prevention (silt busters, silt fences silt bags, management of runoff some soil deposition areas).
- Mitigation by preemptive site drainage management.
- Timing of construction works
- Specific plans to address potential release of hydrocarbons and cement materials during construction and storage
- Provision of chemical toilets to avoid proprietary wastewater treatment issues.
- Morphological mitigation measures to surface water courses and drainage patterns (bottomless culverts, single span bridges, best practice construction methods etc).

Details of mitigation measures during the operational phase are also set out. These include where appropriate the provision of check dams, settlement ponds, swales where required in order to maintain water quality.

It is concluded therefore that overall the proposed development presents no likelihood for significant effects on surface or groundwater following the implementation of the proposed mitigation measures furthermore there is no likelihood for significant cumulative effects arising from the construction operation or decommissioning phases.

Assessment of Water Quality Chapter

9.3.18. The main issues raised in the submissions relate to potential impacts on public water sources, impacts on water quality in rivers, flooding and potential impacts on public health.

9.3.19. The EIAR outlines significant measures to protect surface water. There will no direct discharges to any watercourse during any phase of the development. Mitigation will be achieved by avoidance and design. A 50m buffer zone will be maintained from

the main watercourses during construction and proven best practice methodologies will be employed to mitigation impacts on water quality during each phase of the development. New settlement ponds and silt traps are proposed which will provide an increased level of treatment and attenuation. Subject to the implementation of these measures and appropriate monitoring, I do not consider that the proposed development will impacts on water quality in adjacent water courses, including the River Boyne.

9.3.20. I am satisfied therefore that the impacts identified can be avoided, managed or mitigated by these measures and through suitable conditions. I am, therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impact on surface water or groundwater in the area. I consider that the information provided in the planning application documentation is sufficient to allow the impacts of the proposed development to be fully assessed.

9.4. **Air and Climate**

EIAR summary

9.4.1. The potential direct and indirect effects of the proposed development on air quality and climate from each phase of the development are considered in Chapter 8 of the EIAR. The document sets out the background to the proposal and the relevant legislation and guidance on air quality. It also provides details of the existing environment (based on air quality monitoring stations being Castlebar, Kilkitt, Claremorris and Enniscorthy). The site lies within Zone D of the Air Quality Zones for Ireland designated by the EPA, which represents rural areas located away from large population centres.

9.4.2. The main emissions likely to be generated during the construction phase are identified as dust emissions through earth movement works and movement of vehicles on or off site. Materials with the highest potential for dust emissions will be concrete and aggregates for the construction of hardstanding areas and access tracks. However only ready-mix concrete will be used, and all concrete will be delivered in enclosed trucks. This will reduce the potential for dust emissions it is noted that the majority of properties in the facility of the site are a significant distance from the actual work areas. The potential nuisance of dust impacts in the absence of mitigation is in this instance considered to be high for ecology and generally low for

humans. The risk of significant nuisance dust impacts as a result of vehicular movement prior to mitigation is assessed as being 'medium' with the overall risk to human health impacts predicted to be 'low'. A dust management plan will be formulated based on best practice measures. This plan will be reviewed at regular intervals. With the implementation of mitigation measures, it is considered that fugitive dust emissions will be imperceptible during the construction phase and will pose no nuisance to human health impacts at nearby receptors.

9.4.3. The construction phase of the proposed development will result in a number of GHG emissions from various sources. Details of the likely source of material are set out (cement suppliers, quarries etc) and the approximate amount of aggregates needed to develop the proposal. From this the construction phase emissions (tonnes CO_2 Eqv) are calculated. These are estimated to be 3,750 tonnes CO_2 Eqv or 0.006% total annual emissions as a % of Irelands total GHG emissions of 2019. The total energy consumed in the turbine production is estimated to be 32,724 MWh. The total energy produced is estimated to be 4,467,600 MWh. Equating to a payback period of 2.6 months.

9.4.4. During the operational phase, the generation of electricity will result in result in a decrease in emissions. The proposal will decrease No_x emissions and CO_2 emissions. The predicted impact of the wind farm on Ireland's national emissions ceiling obligations and the greenhouse gas benefit from the proposed development as a result of the electricity generation are indicated on Tables 8.11 & 8.12 of the EIAR.

9.4.5. It is acknowledged that vehicles and generators associated with the removal of the turbines during the decommissioning phase will cause a temporary negative impact on local air quality in the short term. This impact however is described as imperceptible.

9.4.6. Significant cumulative effects are not likely to occur following the implementation of mitigation measures which are set out in section 8.6 of the EIAR. These include a series of mitigation measures in respect of dust control and best practice construction methods. The proposal will not give rise to any significant adverse impacts on air quality during the construction phase. With the effective implementation of mitigation measures, no residual adverse impacts are expected.

During the operational phase the residual impacts are deemed to be positive and long-term due to the production of 149 GWh of renewable electricity per annum to the National Grid and this will lead to a net savings in terms of CO_2 emissions which may have been emitted from fossil fuels to produce electricity.

9.4.7. One of the observers considers that the reduction of CO_2 emissions is not a reality when all the factors concerning wind energy generated electricity is considered. I consider that the matter has been adequately addressed in the EIAR as set out above. I consider that the information provided in the planning application documentation is sufficient to allow the impacts of the proposed development to be fully assessed. I am satisfied that the impacts identified in respect of air and climate would be avoided, managed or mitigated by measures forming part of the proposed scheme and I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect impacts on air quality or climate.

9.5. Landscape

9.5.1. Chapter 9 of the EIAR relates to landscape. The defined study area is predicated on the turbine height. The turbine tip in this instance is 185m, and therefore a defined study area of 20km is included for the assessment as per the guidance documents. The methodology involved a desk study, fieldwork and a landscape appraisal. Details of the assessment criteria in evaluating the landscape impact is also detailed in this chapter.

9.5.2. The baseline environment is described with specific reference to landform, drainage, vegetation and land use. Reference is made to the landscape character assessment contained in the Westmeath Co Development Plan. The proposed development is situated in 'LCA 3 – River Deel Lowlands'. Details of the landscape policies contained in the Westmeath County Plan are set out. It is noted that some ancillary elements of the development (grid connection) are located in Co Meath also. The landscape assessment in the Co Meath Plan characterises the landscape in which the development is located as 'lowland landscape', and 'southwest lowlands'. A summary of the landscape character areas that fall within the central and wider study area of the proposed development including their value, sensitivity and importance is contained on Table 9.5 of the EIAR. The landscape importance ranges from local to

national / international. The landscape sensitive ranges from ‘medium’ to ‘high’ and the landscape value ranges from ‘medium’ to ‘exceptional’.

9.5.3. The northeastern corner of Kildare is also located within the study area. The landscape character assessment for that part of Kildare in the study area has been characterised as being of ‘low sensitivity’.

9.5.4. Details of the policies and strategies in relation to wind energy in relation to Meath and Westmeath are set out in the strategy. The zone of theoretical visibility is indicated in Figure 9.6 of the EIAR.

Details of all protected scenic views set out in both development plans are assessed in the EIAR. It concludes that only two views will be potentially impacted upon in Westmeath (Cycle Loop 1 of the Mullingar Cycle hub, and views from the Royal Canal Way). There are no designated views of relevant in Kildare. The EIAR also details centres of population and housing, transport routes, tourism recreation and heritage features.

9.5.5. The visual impact of the proposed development is assessed using the 6 categories of receptor type listed below

- Key views
- Designated scenic routes and views
- Local community views
- Centres of population
- Major routes
- Amenity and heritage features.

9.5.6. A total of 40 vantage points were assessed ranging in distance from 1.3km to 20.4 km from the site. Each of these views are depicted in the separate A0 sized booklet submitted with the application. Landscape impacts are assessed within a localised setting (< 5km) and in a wider setting (<20km). It is noted that in the immediate area there is a general absence of scenic and recreational amenity. There are no designated views within this area in either county development plan. The village of Delvin has some heritage associations, and the development site is located to the rear of Bracklyn demesne. However, this cannot be considered as a pristine example of a demesne landscape as most of the lands are used as an active farmstead with

extensive commercial forest plantations. The central study area is classed as a 'highly modified landscape'. It is fairly typical of a rural landscape in the midlands area. The sensitivity of the central rural area is classed as 'medium to low'.

9.5.7. The wider is described as being more complex with a series of highly contrasting wider landscapes. The Boyne valley flows through the eastern part of the wider study area and it has a distinct heritage value. Landscapes of heritage value in the wider area include the Loughcrew Cairn Complex, the Hill of Ward, and Spire of Loyld all of which are included in the Boyne Valley scenic drive. There are also a number of notable demesnes, including Ballinlough Castle and Demesne and Loughcrew Estate and Gardens. The Royal Canal to the south of the site is also of significant recreational and amenity value. High Amenity Designations are located in the western half of the study area mainly associated with scenic lakes in the area (Lough Lene, Derravaragh and Owel). However, these are mainly contained in contained inter-drumlin hollows and are located on the periphery of the wider study area. The key sensitivity of the wider area relates to heritage features in the main. It can nevertheless be considered a typical rural landscape comprising of productive agricultural land. Overall, it is considered that the wider study area has a 'medium sensitivity'.

Magnitude of Impact

Construction Phase

9.5.8. The impact is deemed to be modest because of the relatively small construction footprint of the works. The topography of the landscape will remain unaltered. Any excavation works will be reseeded and regraded as part of the mitigation works. It is noted that 28 ha of tree felling will be required to accommodate hardstanding areas for the turbines as well as set down areas tracks and the 110 kV substation. However due to the substation's location within a conifer plantation, there will be a high degree of screening. The grid connection will result in minor local disturbance and the removal of small pockets of vegetation. Trenches will be reinstated will very minor construction effects. The two end lattice masts c.16m in height will not appear incongruous, as such structures are an inherent part of the rural working landscape.

9.5.9. More general construction effects on the landscape character due to machinery and stockpiling of materials etc as identified in the CEMP will short term and temporary and therefore will not be considered to be significant.

Operational Phase

9.5.10. The proposal will involve a notable intensification of built development within the central study area and will impact on the character of Bracklyn Demesne in which it is situate. The 30-year lifespan of the development although long term, is not permanent. When decommissioned, the road routes, and hard standing areas will be reinstated. The substation may remain beyond the 30-year lifespan of the wind farm as part of the national grid system. The scale of the proposed development during the operational phase will be well assimilated within its landscape context without undue conflicts of scale with the underlying landform and the land use patterns in the area as a result of the development will not be significantly altered. For these reasons the impact is deemed to 'medium' within the central area and between 'low and negligible' within the wider study area. The magnitude of impact from the various vantage points contained in the photomontages are summarized in the Table below:

Viewshed Ref Point		**Direction of View**	**Distance to WF (km)**	**Visual Receptor Sensitivity**	**Impact magnitude**	**Significance of Visual Impact**
VP1	Slieve Na Calliagh	SE	18.5	V High	Low / Negligible	Slight
VP2	Spire of Lloyd	SE	20.4	V High	Negligible	Slight - imperceptible
VP3	L1633 SW of Crossakiel	S	14.9	Medium / Low	Low /negligible	Slight - imperceptible
VP4	Girly Bog Loop walk	SW	14	Medium	Negligible	imperceptible
VP5	Cemetery Clonmellon	SW	10.2	Medium -low	Negligible	Imperceptible
VP6	R395 at Drumcree	SE	8.3	Medium -low	Low – Negligible	Slight – imperceptible

VP7	Ballinlough Castle	SW	7.3	Medium	Low Negligible	Slight imperceptible
VP8	Hill of Ward	SW	12.6	High	Low Negligible	Slight imperceptible
VP9	N51 SW of Athboy	SW	9.5	Medium - Low	Negligible	imperceptible
VP10	N52 at Delvin	SE	3.7	Medium Low	Negligible	imperceptible
VP11	N52 south of Delvin	SE	3.5	Medium Low	Medium Low	Moderate Slight
VP12	N51 at Crowinstown	S	4.5	Medium Low	Low	Slight
Viewshed Ref Point		**Direction of View**	**Distance to WF (km)**	**Visual Receptor Sensitivity**	**Impact magnitude**	**Significance of Visual Impact**
VP13	Local Rd Martinstown	SE	1.7km	Medium - Low	High / Medium	Moderate
VP14	Local Rd Ballyhealy	S	2.1km	Medium-Low	Low	Slight
VP15	Cemetery Pasonstown	E	14.6	Medium-Low	Negligible	Imperceptible
VP16	St Dympna's NS Kildalalkey	W	10.2	Medium- low	Negligible	Imperceptible
VP17	N5 NE of Lough Owel	E	18.9	Medium-Low	Negligible	Imperceptible
VP18	Local Road Brackin W of Site	E	1.6	Medium-Low	Medium	Moderate
VP19	Local Road Brackin E of Site	W	1.3	Medium-Low	High - Medium	Moderate
VP20	N52 at Killynan	E	7.7	Medium-Low	Low	Slight
VP21	L1501 at Killagh	E	3.3	Medium-Low	Medium Low	Slight

VP22	Trim Castle	W	17.8	Very High	Low Negligible	Slight imperceptible
VP23	R161 west of Trim	W	17.1	Medium-Low	Negligible	Imperceptible
VP24	Local Rd at Cloghbrack	NW	3.2	Medium-Low	Medium-Low	Moderate - Slight
VP25	Local Road Craddanstown SE of site	NW	2.6	Medium-Low	Medium-Low	Moderate - Slight
VP26	Local Road at Craddanstown SW of site	NE	2.4	Medium-Low	Negligible	Imperceptible
Viewshed Ref Point		**Direction of View**	**Distance to WF (km)**	**Visual Receptor Sensitivity**	**Impact magnitude**	**Significance of Visual Impact**
VP28	R156 at Grangemore	N	3.6	Medium-Low	Low	Slight
VP29	Lakepoint Park, Mullingar	NE	15.7	Medium-Low	Negligible	Imperceptible
VP30	R156 Raharney Road	NE	4.7	Medium-Low	Low Negligible	Slight Imperceptible
VP31	Cemetery south of Raharney	N	4.5	Medium	Negligible	Imperceptible
VP32	Old Glebe Road Killucan	NE	6.8	Medium-Low	Negligible	Imperceptible
VP33	N4 Overpass at Newdown	NE	12.1	Low	Low Negligible	Slight Imperceptible
VP34	Royal Canal Way/ Greenway at Cushinstown	NE	8.3	High Medium	Negligible	Imperceptible
VP35	R161 Killyon Bridge	NW	10.8	High Medium	Low - Negligible	Slight - Imperceptible
VP36	L8030 Blackshade	NW	12.5	High-Medium	Low Negligible	Slight – Imperceptible

	Bridge					
VP37	Manorfield housing estate Kinnagad	N	11.4	Medium -low	Negligible	Imperceptible
VP38	Abbeyfield Housing Estate Clonard	NW	12.6	Medium -low	Negligible	Imperceptible
VP39	L5001 Overbridge over M4	NW	15.1	Low	Negligible	Imperceptible
V40	Local Road At Rathcore	NW	19.2	Medium	Low-negligible	Slight-Imperceptible

Cumulative Visual Impacts

9.5.11. Cumulative impacts are also assessed in the photomontages submitted depicting the permitted and proposed developments within a 20km radius. Due to the considerable separation distance between the proposal and the Yellow River wind farm, the potential for cumulative impacts is significantly reduced. The highest potential for cumulative impacts arises from the more elevated areas to the southern half of the study area. They will however for the most part be viewed as two separate developments and will not exude a strong sense of wind farm proliferation. The Yellow River wind farm will only be faintly discernable from vantage points in the southern half of the study area. Much of the Roadways from the M4 and M6 are fully enclosed which will not result in any major views of both wind farms. The cumulative impact is therefore considered to be 'low to negligible'.

9.5.12. With regards to the Ballivor Wind farm, the proximity of this development makes it likely that both developments will be perceived as a single development. 6 specific viewpoints were chosen to representatively access the cumulative impacts (VP1,11,18.19.25.28) arising from all proposed and permitted wind farm developments. VP1 shows that the visual envelope of potential visible turbines when looking southwards. It provides a vast panorama and the proliferation of wind turbines in the area in very notable. The EIAR argues that the entirety of the developments will form part of a distant backdrop setting within the rural plains rather than an intrusion on the immediate heritage setting. Consequently, cumulative

impacts are not considered significant. VP 11 shows the impact from the settlement of Delvin, which is deemed to be considerable. And will result in some level of overbearance for the community in this area and from vantage points along the R156. The impact from these areas is classified as 'high – medium'. The cumulative impact arising from the Ballivor wind farm is pronounced from a number of vantage points to the east and south east.

9.5.13. In terms of mitigation, no measures are proposed during the construction phase. The progressive re-instatement of the site with local landscaping will remediate any short term adverse impacts. During the operational phase, this is acknowledged that due to the size of the turbines, it is not feasible to landscape as a mitigation measure. Some general mitigation measures include:

- The colour will be industry off-white or grey semi matt finish.
- All transmission lies between turbines will be placed underground.
- Counter rotation of blades sets will be avoided.

Conclusion in relation to the Visual Assessment

9.5.14. I consider that the EIAR as accurately assessed and demonstrated that proposed development can be accommodated without resulting in significant adverse effects on the overall landscape character and sensitivities of the area, notwithstanding the fact that wind energy is a relatively unfamiliar feature within the study area. The area immediately surrounding the site does not attract any landscape or sensitive designations. I consider that the applicant has comprehensively demonstrated that there will be moderate but no significant effects on the wider area. The moderate effects will mainly be confined to the study area around wind farm, particularly along the N52 at Delvin and expressly in conjunction with the proposed Ballivor Wind farm. While the proposed development will introduce tall structures into the landscape, the site is relatively flat which limits the potential for open views over long distances. I accept that views will be pronounced from some locations and that most of the visual impacts will occur within close proximity of the site, and to a lesser extent the more elevated lands in the southern portion of the study area.

9.5.15. In terms of the key visual receptors identified in the EIAR, I accept that the proposed development will not result in significant adverse effects on views from designated amenity routes, settlements, recreational/tourist destinations, recreational routes or

transport routes. The visual impacts are for the most part restricted to the central portion of the study area. The impact of the wind farm on areas located at distance greater than 5km, are assessed as being slight and imperceptible. The photomontages submitted with the application would support this conclusion.

9.5.16. The majority of views and lands in the vicinity are of low sensitivity and are reflective of a rural working landscape. As a result of the flat landscape and the numerous layers of hedgerows and mature treelines most views incorporate a degree of containment. This is particularly the case in respect of amenity areas in the wider study area including the Royal Canal corridor and Girley Bog National Looped Walk.

9.5.17. I accept that there is increased potential for cumulative visual impacts, particularly in relation to the Ballivor wind farm which is only at design stage, but is a much larger wind farm to the east and south east of the subject site. However, in overall visual terms the overall turbine development will read as one wind farm development. The separation distance between the proposed wind farm and the Yellow River Wind farm to the south west, between 17 and 20 km away will not result in any significant and discernible impacts.

9.5.18. Overall therefore, it is considered that the major visual impacts will be confined to the inner study area within 5 km of the proposed wind farm development. The impacts within this range are considered to be moderate rather than high or significant. In the wider area and due to the flat nature of the study area and dense layers of vegetative screening the impacts are considered to be slight or imperceptible. It is assessed therefore that the proposed development will not give rise to significant landscape of visual impacts or significant cumulative impacts with other wind farms planned for the area.

9.5.19. I consider that the applicant has provided a comprehensive assessment of the landscape and visual impacts of the proposed development on the landscape and visual amenities of the area. Detailed assessments and photomontages from 40 separate vantage points within a 20 km radius of the subject site has been undertaken. Each of these locations have been assessed in terms of visual receptor sensitivity, visual impact magnitude and the significance of the visual impact. I consider that the information provided in the planning application documentation is sufficient to allow the impacts of the proposed development to be fully assessed. I

am satisfied that the proposed development would not give rise to any significant additional adverse visual impacts on scenic views, scenic routes, settlements, recreational/tourist destinations or transport routes.

9.6. **Cultural Heritage**

Chapter 10 of the EIAR relates to cultural heritage. In terms of defining the extent of the study area, a 1 km study area has been included around the perimeter of the site to assess the presence of archaeological remains. A 5km buffer area has been applied around the proposed development to assess the potential impact on World Heritage sites. Details of the sources of information for the desktop study are set out. Sources include RMP lists, topographical files of the National Museum of Ireland, cartographic sources, documentary sources, aerial photography and the National Inventory of Architectural Heritage. Field inspections were also undertaken on the 12th of March 2020 and the 1st of February 2021. Details of the criteria used in assessing the impact are also set out. Section 10.3 of the EIAR provides details of the policy and legislation relevant to the archaeological and cultural heritage assessment. Section 4.10 of the EIAR sets out a description of the existing environment. It is noted that's while there are two recorded monuments located within the planning application boundary, the footprint of the proposed development is not located within the extent of either of these recorded monuments nor will it infringe on the footprint of these recorded monuments. The EIAR sets out the archaeological and general background to the subject site and its surroundings. It is noted that there are 14 recorded monuments within 1 km of the proposed development. These are set out in the Table below:

RMP Number	Archaeological feature	Distance from nearest turbine or other works
RMP WM013-064	Flat cemetery	1 km NW of the access road leading the T1
RMP WM013-065	Ringfort	830m NW of access road leading to T1
RMP WM013-066	Earthwork	520m NW of the access road leading to T1
RMP WM013-067	Ringfort	620m NW of the access road leading to T1
RMP WM013-070	Ringfort	630m SW of the proposed road upgrade works
RMP WM013-071 RMP WM013-071001	Ringfort & Hut Site	In Ballynacor Townland 900m west of the access road leading to T1.
RMP WM013-073	Ringfort	360m south of the proposed road upgrade and 690m west of the access road leading the T1
RMP WM013-104	Ringfort	In Bracklin townland approx.. 1km south of the access road leading the T1
RMP WM013-105	Ringfort	In Bracklin townland approx 850m south of the access road leading the T1
RMP WM013-105	Ringfort	In Bracklin townland approx. 850m south of the access road leading the T1
RMP WM014-017	Tower House	Martinstown c930m north east of the access road leading to T1
RMP WM014-018	Tower House	750m west of T3 in Bracklin Townland
RMP WM014-019	Ringfort	140 m north of T3
RMP WM014-023	Field System	200m west of T11

There are no recorded monuments within 100m of the proposed grid connection.

There are no archaeological features recorded within the land take /footprint of the proposed wind farm as indicated on historic cartographic sources. Some human remains were recorded in the vicinity of the site on various dates. There are no National Monuments in state care within the proposed development site or within 1 km of the proposed development. Kells Is the closest site to be included in the

tentative list as being under consideration for nomination to the World Heritage list and is located 21 km northeast of the proposed development.

9.6.1. In terms of protected structures there are no protected structures within the boundary of the proposed development. There are 3 protected structures within the landholding boundary associated within the proposed development.

- Gate Lodge – Bracklyn House (RPS no. 013-021) c.1.8km from Turbines 2,3, and 5.
- Bracklyn House (RPS no. 014-019) c.750m west of Turbine 3 and
- A free standing mausoleum (RPS no. 014-020) c.140m south of the access track leading to Turbine no.1 and c370m west of Turbine 2.

9.6.2. There are 54 additional protected structures recorded in the Westmeath Development plan within 5km of the proposed development. These are listed in the EIAR. There are no protected structures recorded 100 of the proposed grid connection works. Furthermore, there are no ACA's within 5km of the development.

9.6.3. There are no structures on the NIAH within the lake take of the proposed development. The 3 protected structures referred to above are also on the NIAH.

9.6.4. Details of the walkover surveys are set out in the EIAR. Photos of each of the turbine locations are set out in the EIAR.

9.6.5. In terms of likely effects, it is noted that all elements of the proposed development have the potential to impact on any archaeological remains that may occur within the footprint of the development. While there are 2 recorded monuments within the application boundary, there will be no construction activities undertaken within the extents of these RMP's. There are 14 protected structures within 1 km of the sites.

9.6.6. It is assessed that there will be a likely permanent, direct and imperceptible effect during the construction phase on any previously unrecorded archaeological material that may exist within the proposed development site and which may be discovered during the construction phase. No likely direct or indirect impacts will occur on identified architectural or cultural heritages resources and no such resources will be affected by the proposal.

9.6.7. During the operational phase it is considered that there will be a long-term reversible and moderate impact on the protected structures and RMP resulting from the visual

impact of the turbines. However, the effect will be reduced in magnitude as a direct consequence of the increased separation distance between the receptors and the turbines. Monuments in state care will be affected to an imperceptible amount due to the significant separation distances involved. There will be likely long term (but not permanent) impact on Brackylin House. The impact on the Gate Lodge is assessed as 'slight'. The impact on the 54 protected structures within 5km is assessed in the context of the photomontages prepared. It is concluded that the impact will be likely long term reversible and slight during the operational phase. Following decommissioning of the turbines, any slight effects will be reversed. It is assessed that there would be no operational phase impact on the setting of the mausoleum within Bracklyn house.

9.6.8. In terms of cumulative effects, it is assessed that there will be no likelihood of the constituent components of the proposed development to act in combination with each other to result in cumulative effects during the construction, operation or decommissioning phases of the proposed development. It is acknowledged that the proposed wind farm will be located in close proximity to the Ballivor wind farm. During the operational phase, the Ballivor wind farm may result in a long term reversible and imperceptible cumulative visual impact on the archaeological and cultural antiquities of the baseline environment.

9.6.9. In terms of mitigation measures, a post consent preconstruction archaeological geophysical survey shall be carried out in all areas of the land take associated with the proposed turbine bases and crane hardstandings. Post-consent, pre-construction, test trenching shall be carried out in all areas of land take associated with the turbine bases and hard standings. Archaeological monitoring of all excavations associated with the construction of all aspects development shall be carried out. given their proximity to existing heritage features, it is recommended that micro siting should not be considered in respect of T3 and T11.

9.6.10. In terms of residual effects, it is considered that with the incorporation of the above mitigation measures, there will be no likely residual effects during the construction or decommissioning phases of the proposed development.

9.6.11. In terms of the operational phase, impacts on the archaeological, architectural and cultural heritage resource are, on the whole, considered to be long term, reversible

and moderate on Bracklyn House and the other recorded monuments in the vicinity of the site. It is assessed up there will be no likely residual effects on the wider cultural heritage resource of the area.I accept that some impacts on the archaeological, architectural resource of the area are likely to arise on the setting and context of these features. The impacts range from moderate to slight, depending on the separation distances involved. A key consideration however is that while the impacts will be long-term they will be irreversible.

9.6.12. I consider that the information provided in the planning application documentation is sufficient to allow the impacts of the proposed development to be fully assessed. I am satisfied that the impacts identified on archaeology, architecture and cultural heritage would be avoided, managed or mitigated to an acceptable extent by measures forming part of the proposed scheme. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on the archaeological, architectural or cultural heritage of the area.

9.7. Noise and Vibration

9.7.1. The noise and vibration impacts associated with the proposed development are assessed in Chapter 11 of the EIAR. Cumulative impacts were also considered. As part of the background assessment, details of the methodology and the noise modelling undertaken are set out in the document. Details of the geographical co-ordinates for the proposed 9 turbines and the 26 turbines for the proposed Ballivor Wind farms are detailed in the EIAR. Details of the sound power levels associated with 2 types of turbine models are set out (Vestas V162-6.0: and the Siemens Gamesa SG 170-6MW). Details for the Noise Guidance standards for both the construction and operational phase are set out. During the operational phase reference is made to:

- *The Wind Energy Guidelines for Planning Authorities 2006.*
- *The Assessment and Rating of Noise from Wind farms – ETSU-R-97*
- *World Health Organisation (WHO) Noise Guidelines for the European Region.*

9.7.2. Details of the special characteristics of wind turbine noise are set out, with specific reference to Low Frequency Noise and amplitude modulation

9.7.3. 4 no. noise sensitive locations were identified to establish typical background noise levels. The locations are indicated on Figure 11.6 of the EIAR.

H03 – is Brackylin House c.700m to the west of T3.

H07 - is located on a local road in Bolandstown c.1.1km north of T1.

H28 – is located in Ballynacor c1.6 km to the northwest of the T3.

H32 – A dwelling in Craddanstowm c 1.5 km of T5.

9.7.4. The background noise levels at various windspeeds for each of the noise sensitive locations are set out in the Table below:

Location	Period	Derived $L_{A90\ 10min}$ Levels (dB) at various standardised 10m height windspeeds (m/s)							
		3	4	5	6	7	8	9	10
A (H03)	Day	26.5	27.3	29.2	32.0	35.5	39.2	43.0	46.5
	Night	24.8	25.2	27.2	30.4	34.4	38.7	42.9	46.7
B (H07)	Day	23.5	24.3	25.8	27.9	30.5	33.6	37.0	40.7
	Night	18.5	19.0	21.1	24.5	28.6	33.2	37.8	41.9
C (H28)	Day	22.6	23.7	25.6	28.1	31.1	34.3	37.7	41.1
	Night	18.0	18.7	20.9	24.2	28.3	32.8	37.3	41.5
D (H32)	Day	20.6	22.0	23.8	26.1	28.7	31.7	35.0	38.7
	Night	16.4	16.9	19.0	22.3	26.3	30.8	35.1	39.1
Envelope	Day	20.6	22.0	23.8	26.1	28.7	31.7	35.0	38.7
	Night	16.4	16.9	19.0	22.3	26.3	30.8	35.1	39.1

9.7.5. The above figures are based on a background noise curve measured at noise location to be used at other locations in a similar setting. The above figures are considered to be a conservative worst-case approach.

9.7.6. In terms of likely effects during the construction phase, construction activities (plant activity, vehicles) will all give rise to noise above background levels. The nearest noise sensitive location H01 is located 720 m from the proposed nearest turbine. The closest earthworks to be carried out at an approximate distance of 450m. At the nearest noise sensitive location (H01) the predicted noise levels from construction works are predicted to be below the appropriate category A value of 65 dBA L_{AeqT}).

There are no items of plant or machinery that would be considered out of the ordinary in terms of noise generation. The combined L_{Aeq} for plant noise level at the nearest noise sensitive location is estimated at 51 dB(A) at 450m. This is assessed as being negative temporary and not significant.

9.7.7. With regard to vibration, having regard to the nature of activities and separation distance involved any vibration impacts from the construction activities would be negligible. With regard to the upgrading of the existing site entrance and forestry track, the nearest noise sensitive location (NSL) is H17 c170m to the NW of the track. Again, any work carried out at such a separation distance would result in noise levels of less than 60dB(A) which is below the maximum permitted level of 65dB(A). Vibration levels will be also imperceptible.

9.7.8. Construction of the substation is c.960m from the nearest dwelling and at such a distance no impacts are anticipated in terms of noise. Predicted noise impacts from works to be carried out on haul routes are also predicted to be below the category A value of 65dB $L_{Aeq, 1hr.}$). Likewise significant levels of vibration are not assessed as being likely.

9.7.9. In terms of vehicular HGV movements predicted noise levels at 5m distance from the vehicle path is estimated to be 55 L_{Aeq} to 62 L_{Aeq} – depending on the level of vehicular trips to and from the site[2]. This again is below the maximum permitted level of 65dB(A). Due to the remedial works to be carried out in the haul route and the nature of the vehicles to be used, vibration impacts are not deemed to be significant.

Operational Noise Levels

9.7.10. The proposed operational limits in $L_{A90,10\ mins}$ for the proposed development set out in the EIAR are:

- 40 dB $L_{A90,10\ min}$ for quiet daytime environments of less than 30 dB $L_{A90,10min:}$
- 45 dB $L_{A90,10\ min}$ for daytime environments greater than 30 dB $L_{A90,\ 10\ mins}$ or a maximum increase of 5 dB above background noise (whichever is higher), and

[2] based on a mean level value of Sound Exposure Level for a HGV movement of the order of 82 dB L_{Ax} for a vehicle at a distance of 5m

- 43 dB $L_{A90, 10min}$ or a maximum increase of 5 dB above background noise (whichever is higher) for night time periods.

9.7.11. Table 11.16 outlines the derived noise criteria curves based on the information obtained for the 4 representative NSL as the various wind speeds. Noise levels generated by the operation of the turbines have been calculated for all NSL's within 1,850 m of the proposed wind farm.

9.7.12. Annex 11.5 presents the results of the noise prediction exercise at all 78 NSL's At the closest NLS's, (H01, H02, H03, H04 and H06) at 7 m/s (the predicted level at which the turbines reach their highest sound level). The estimated sound level at these locations are 34.9 dB(A) $L_{A90\ 10min}$ to 39.4 $L_{A90\ 10min}$.

9.7.13. In terms of the noise generation emanating at the substation, the nearest NSL (H03) at 1km away. At this separation distance, the noise level is considered to be inaudible. Traffic to and from the site during the operational phase, will be negligible and 1-2 light vehicles per week. This will have no significant effect on the noise climate.

9.7.14. Cumulative effects from the proposed Ballivor Wind farm. A worst-case assessment has been completed assuming all noise locations are downwind of all turbines at the same time. Annex 11.7 presents the results of the cumulative noise predictions exercise at all 78 NSL's. The predicted noise levels at the most sensitive dwellings ((H01, H02, H03, H04 and H06 &H78) are presented in Table 11.18. The predicted levels range (at windspeeds of 7 m/s) from 36.5 dB(A) $L_{A90\ 10min}$ in the case of H06 to 40.8 dB(A) $L_{A90\ 10min}$ in the case of H78. Predicted cumulative noise levels at H78 are compared against daytime and nighttime criteria in Table 11.18 of the EIAR, where exceedances of 0.5 at 6m/s and 0.8 at 7m/s are noted. H78 is located to the east of the proposed Bracklyn wind farm and to the west of the most northern group of turbines at the Ballivor wind farm. The EIAR points out the day-to-day operations of the proposed development will not result in a worst case scenario of all NSL's being downwind of all turbines at the same time. A review of expected noise levels downwind of the turbines has been prepared for various wind speeds in accordance with the IOA GPG Guidance. To provide a more realistic prediction of the likely noise effects further details are provided on Table 11.19 of the EIAR. In all instances the predicted noise levels at a wind speed of 7m/s is below 40 dB(A) $L_{A90\ 10min}$. It is

therefore confirmed noise levels associated with the proposed development in conjunction with the anticipated Ballivor Wind farm will be within the noise criteria curves recommended in the 2006 Wind Energy Development Guidelines.

9.7.15. Finally, the EIAR states in relation to the decommissioning phase, similar overall noise levels as those calculated for the construction phase would be expected as similar plant machinery and equipment will be used. Noise Levels at the nearest NSL's would during this phase remain below 65dB $L_{Aeq\ 1hr}$).

9.7.16. A range of mitigation measures are proposed, particularly in relation to plant and machinery during the construction phase. In relation to vibration, it is stated that prior to the commencement of development, a visual inspection (with photographic record) will be undertaken for all structures within 50 meters of the L1504 and the L5508 by a suitably qualified engineer to identify any pre-existing evidence of structural deterioration. A vibration monitor will be installed at each of the properties along the above routes which will allow actual vibration levels to be carefully monitored. A speed limit of 20 km/h will be enforced for all construction traffic. These along with other measures will ensure that any damage to buildings, including residential dwellings will be minimised.

9.7.17. During the operational phase it is stated that the predicted noise levels will be within relevant best practice noise criteria curves for wind farms. Therefore, noise mitigation measures are not required for the operational phase of the development. In the unlikely event that an issue with low frequency noise or potential amplitude modulation associated with the proposed development becomes an issue or a complaint is received, an appropriate detailed investigation by an independent acoustic consultant will be undertaken. No issues will arise in respect of significant vibration effects during the operational phase. Strict monitoring regimes will be undertaken during both the construction and operational phases.

9.7.18. In terms of residual effects, it is likely that some NSL's will experience an increase in noise levels arising from emissions from site traffic and other construction activities however these will be temporary in nature and will be within binding noise limits. The predicted noise levels associated with the operational phase both individually and in combination with the proposed Ballivor wind farm will be within best practice noise criteria curves recommended in the 2006 guidelines.

9.7.19. I consider that the issues raised by the observers have been comprehensively addressed in the information contained in the EIAR. I consider that the noise assessment which represents a worst-case scenario is robust and identifies all of the potential impacts associated with the construction and operational stages of the development. Critically the EIAR considers and assesses the cumulative effects. I accept that subject to the mitigation measures outlined in the EIAR that noise associated with the development is not likely to result in significant effects on sensitive receptors and no significant vibration effects are predicted which would impact on nearby receptors.

9.8. Shadow Flicker

9.8.1. The assessment of shadow flicker has been carried out in accordance with all statutory guidelines on techniques which are recognized as being best practice. The likely effects of shadow flicker have been central to the environmental constraints analysis process undertaken and described in chapter 2 of the EIAR. It is noted that only the turbines in this instance are capable of generating shadow flicker and this is the only aspect of the proposed development which is assessed in this chapter.

9.8.2. The EIAR notes, that the 2006 guidelines specify that shadow flicker shall not exceed 30 minutes per day or 30 hours per year at particular dwelling. In the event that shadow flicker is predicted to exceed either of these thresholds, mitigation measures shall be installed to switch off turbines at times when exceedances are predicted to occur.

9.8.3. It is further noted that the Draft Wind Energy Development Guidelines of 2019 proposed to fully eliminate the occurrence of shadow flicker and all dwellings to the installation of automated turbine shutdown software. However, it is further stated that this option should only be explored following an exhaustive evaluation of alternative project designs. It is noted however that as the Draft 2019 guidelines remain in draft form, the 2006 guidelines remain the applicable guidelines under which all wind energy development must be currently assessed.

9.8.4. It is noted on average Ireland receives 3.6 hours of sunshine per day. Shadow flicker intensity is greatest at short distances since the rotor blades screened the whole of the sun at these shorter distances. Longer distances create lesser shadow intensity.

For the purposes of the modeling exercise each receptor is modelled in ‘greenhouse mode’. Where it assumes a conservative impact whereby each receptor is constructed entirely of glass and with no intervening screaming in the form of walls vegetation or other opaque objects between the receptors and the wind turbine. It is also assumed that the turbines will be operational 85% of the time. Also, for the purposes of the modeling, a worst-case scenario is assumed whereby when the sun is shining, the wind direction is such that shadow flicker can be caused at all receptors simultaneously. Therefore, in accordance with best practice, the shadow flicker values presented in the EIAR are conservative and represent a worst-case scenario. All 78 houses within 1,850 m of the turbines area assessed for shadow flicker. The assessment is presented on Table 12.2 of the EIAR. The modelling indicates that under a worst case scenario the vast majority of dwellings will comply with the 2006 guidelines. In the case where compliance may not be achieved (H01, H02, H03, H04 and H06 are cases in point but each of these landowners are involved in the scheme) and H12, H18 and H67 will incorporate wind farm shut off to ensure compliance with the limits.

9.8.5. In terms of cumulative impacts, the modelling indicates a total of 4 potential exceedances, 3 of which relate to houses belonging to landowners who are involved in the scheme the other being H078 c1.5 km to the east of T10.

9.8.6. In terms of mitigation measures, it is stated that none are required for the construction phase. In terms of the operational phase the wind turbines will be fitted with shadow flicker curtailment software to facilitate their shut down as required. This approach will be implemented as necessary to ensure that actual levels of shadow flicker do not exceed relevant limits. A site visit will be carried out by a suitably qualified person during each calendar season, to obtain representative samples of year- round conditions to monitor the site when shadow flicker is predicted to occur in order to verify the effectiveness of the technological solutions. Any third-party complaints raised in respect of shadow flicker at any time during the lifetime of the proposed development will also be subject to robust investigation.

9.8.7. In terms of residual effects therefore the proposed mitigation measures will ensure that shadow flicker levels experienced at receptor locations from the proposed development will fall below the prescribed limits set out in the 2006 guidelines. It can

therefore be confirmed but no receptor will experience likely significant shadow flicker effects.

Material Assets

Transport and Access

9.8.8. This assessment was carried out by Jennings O Donovan & Partners Ltd. It provides an assessment of the local road network for construction, operation and decommissioning traffic including the turbine component haul route. Details of the relevant transport policies and objectives contained in the Westmeath and Meath CDP are set out. A desk study has also been undertaken using aerial imagery and visualisations to assess the existing road network.

9.8.9. The likely turbine delivery haul route is described in the Route Access Survey (RAS) in Annex 3.9 and Annex 13.1. Waterford Port is the most likely point of arrival for the turbines. The Haul route will be via the N29, N25, N9, M9, M50, N4, M4, N52 L1504 and L5508. Details of the construction vehicles and abnormal truckloads are detailed. Road improvement works will be required at a total of 12 locations, 11 will require temporary works while one site will require permanent works - along the L5508 between its junction with the L1504 and the access to the site. Rock and hardcore materials will also be required for foundations and will be sourced from a licensed facility, most likely a local authorized quarry. The construction phase will last 15-18 months. This allows 12 months for civil construction and approximately 3-6 months for the erection and commissioning of the turbines. A total of 6,346 loads are estimated to be required during the construction phase. This equates to approximately 529 loads per month, equivalent to c. 21 loads per day. An estimated 100 ready mix trucks will be required per turbine foundation. Details of the breakdown of the deliveries are set out in theTable below:

Material	Quantity	No. of Deliveries
Concrete & Reinforcing Steel	8,623m^3	1,078
Substation Building electrical equipment	-	25
Other – Geotextile Mats, Tools, Fencing etc.	-	25
Grid Connection Materials	-	68
Met Mast Materials	-	4
Steel Tower Sections	-	27
Nacelles	-	9
Rotor Blades	-	54
Transformers, Panels and Cabling	-	9
Crane Deliveries to site, including ballasts and booms etc.	2 Cranes	10
Imported rock for road and hardstandings	32,788m^3	2,732
Imported Rock for 110kV Substation	5,014m^3	418
Imported materials for grid connection (Clause 804, sand etc.)	9,950m^3	829
Rock for Haul Route Upgrades	1,309m^3	109
Grid connection cable ducting	6,770m x 4 (110mm ducts)	14
Export of excess spoil material from grid connection works in public roads	4,056	338
Tree Felling	28ha	345
Movement of excavated material at road widening locations	2,544m^3	212
Removal of all temporary on-site equipment and material	-	40
Total		**6,346**

9.8.10. The traffic impacts during the construction phase is assessed as being moderate but short-term. There will be one main entrance and three subsidiary entrances from the L5508 and the L80122 to facilitate access to the grid connection. The trenching associated with the grid connection will cause some disruption to traffic, including road closures and traffic diversions, but this will be temporary in duration. It is expected that at the height of the construction period, it is expected that c.30 vehicles will visit the site on a daily basis. Overall the traffic impacts are assessed as being ‘slight negative’ and ‘short term’ in duration.

9.8.11. During the operational phase the wind farm will, for most of the time, be unmanned. There will be 1-2 visits per week for maintenance purposes. In the case of a turbine breakdown, larger machinery will be required to access the site. But the impact is assessed as being 'low'.

9.8.12. During the decommissioning phase it is stated that the total volume of traffic will be less than that associated with the construction phase.

9.8.13. In terms of cumulative impacts, no such impacts are anticipated. If the development of the proposed wind farm was to coincide with the Ballivor wind farm then cumulative effects during the construction phase in the absence of mitigation and appropriate traffic management measures, could give rise to direct adverse cumulative impacts on a short-term basis.

9.8.14. A suite of mitigation measures is set out in the EIAR to reduce the impact of the development during the operational phase. The residual effects, with the incorporation of the mitigation measures, is assessed as not being not significant.

Aviation

9.8.15. It is noted that there an aerodrome is located c15km north-east of Athboy. Consultation with the Irish Aviation Authority advising the specification of an aviation warning lights to be mounted on the turbines is detailed in the EIAR. The installation of aviation warning lights is inherent in the wind farm design. The subject site is not located within any restricted or Danger Area of the *Draft Air Corps Wind Farm/ Tall Structures Position Paper.* Therefore, no major impacts are anticipated during the construction or operational, or decommissioning phase.

Telecommunications

9.8.16. Extensive consultation was undertaken with various stakeholders during the EIAR scoping process. As analogue television has been phased out in Ireland, problems with ghosting and signal reflection due to turbine interference with the most part be eliminated. The digital switchover is more likely to overcome any signal interference and there is no likely effect to occur on the TV reception. Likewise, the consultation process undertaken has not identified the likelihood for significant interference to occur with any of the service providers in the wider area. Therefore, significant effects on mobile phone signals are not assessed as lightly. If significant signal interference in any form is identified and is directly attributed to the proposed

development, appropriate remedial measures will be immediately undertaken. A range of technical measures are available to mitigate any instances of interference including signal amplifiers, active deflectors and relay transmitters, repeater stations, booster units, realignment of domestic aerials and installation of higher quality areas and suppression equipment.

Resources and Utility Infrastructure

9.8.17. There are currently no wind farms operating in the county of Westmeath. There are no quarries in the immediate area. The electricity transmission network in County Westmeath predominately comprises of 38kV and 100kV lines. There is also an extensive telecommunications network in the area.

9.8.18. The construction phase is not likely to have any significant effects on utilities and infrastructure. Some minor temporary disruption of electricity supply at a local level could occur. Any aggregates that need to be sourced from local quarries will only be sourced from authorised quarries.

9.8.19. During the operational phase, the connection of the proposed development to the national grid will strengthen renewable energy infrastructure in the wider area. This will have an overall positive effect in terms of carbon reduction and climate change. No Potential cumulative effects have been identified.

9.8.20. I consider that the information provided in the EIAR documentation is sufficient to allow the impacts of the proposed development on material assets to be fully assessed. I am satisfied that the impacts identified on material assets, are not significant and where they could potentially occur, they can be avoided, managed or mitigated by measures forming part of the proposed scheme and by relevant conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on material assets of the area.

9.9. Interactions of the Foregoing

9.9.1. Interactions between the various environmental factors are discussed in Chapter 14 of the EIAR. A matrix is provided in Table 14.1 which outlines potential interactions during the construction and operational phases.

9.9.2. The main potential for interactions which would give rise to negative effects on population and human health arise from effects to landscape, noise and vibration, shadow flicker and material assets

9.9.3. With regard to biodiversity, the main potential interactions which would give rise to negative effects arise from land/soils/geology, water,

9.9.4. The main potential interactions for land, soil and geology which would give rise to negative effects arise from water and archaeology,/architectural/cultural heritage.

9.9.5. With regard to air and climate, the main interactions likely to occur which would give rise to negative effects arise are from material assets (movement of construction vehicles around the site resulting in dust nuisance effects).

9.9.6. Regarding cultural heritage and material assets, the removal of top soil and overburden within the proposed land take including junction improvements will be monitored under licence.

9.9.7. All of the potential impacts on the individual environmental factors have been assessed and I am satisfied that any such impacts can be avoided, managed and mitigated by the measures which form part of the proposed development and any recommended planning conditions attached to any grant of permission. Overall, it is determined that the proposed development will have a positive international, national regional and local impact particularly in relation to population, human health, air quality and climate. The total annual GHG emission saving will amount to c. 47,908 tonnes of CO_2 eq which over the proposed 30-year operational phase, is equivalent to 12% of the total predicted annual GHG emissions from the energy sector in 2020.

9.10. **Reasoned Conclusion on the Significant Effects**

Having regard to the examination of environmental information contained above in the EIAR submitted by the applicant, together with the written submissions on file, I would conclude the following in relation to significant effects:

(a) The most significant effects will be the visual impact arising from the permanent removal of forestry and the erection of 9 wind turbines of 185 meters in height. This will result in a moderate and in some cases a more profound impact on the immediate receiving environment and will be discernible in an area of up to 15 -20km

surrounding the site. However, the surrounding lands, particularly in the receiving environment in the immediate study area (within 5 km) are not considered to be sensitive in visual amenity terms. Furthermore, there are no designated scenic routes in the immediate vicinity of the subject site.

(b) From a sustainable energy perspective, the proposal fully supports government policy to reduce reliance on fossil fuels and provide more sustainable sources of energy. The proposal will result in the reduction of almost 48,000 tonnes of CO_2 during the 30-year lifespan of the wind farm. The proposal therefore will have a moderate positive impact on climate change, and will contribute towards the national targets in respect of climate change.

(c) Impacts in terms of HGV traffic, noise, shadow flicker and water quality the proposed wind farm could either during the construction or operational phase potentially give rise to adverse environmental impacts or impacts on sensitive receptors in the surrounding area. However, with the incorporation of appropriate mitigation measures and the implementation of best practice, the impacts are deemed to be acceptable.

(d) In terms of biodiversity, the majority of the habitats that will be impacted are of local importance and low ecological value. The proposed development occupies a very small proportion of a vast agricultural and forested landscape, with large areas remaining undisturbed. There is potential for some impact on terrestrial mammals in terms foraging and commuting, particularly during the construction phase. Through standard mitigation and monitoring, management and habitat enhancement, there will be no significant impacts on these species arising from the development. The proposed development avoids watercourses and no instream works are proposed. The surveys indicate that habitats present are suboptimal for aquatic species identified as key ecological receptors including salmon, lamprey and white-clawed crayfish. However, the is potential for cumulative impacts particularly downstream of the catchment area. The main impact would occur through sediment laden discharge during both the construction phases. Again mitigation measures set out in the EIAR will off set any potential adverse impact on water quality.

(e) Impact, including cumulative impacts, in terms of potential bird collisions have been assessed and considered in EIAR, and these impacts are assessed to be minimal. EIAR reasonably concludes in my opinion, having regard to the nature of the existing environment, that there will be little or no adverse impacts arising from the proposed wind farm in terms of biodiversity, land soils and geology, and cultural heritage.

(e) A major consideration in scoping the EIAR relates to the issue of cumulative impacts. While no wind farms existing in the vicinity of the development, planning permission has been granted for the Yellow River Wind farm between 17 and 20 km to the southwest of the site. Perhaps more importantly, plans are afoot to develop a larger wind farm near Ballivor, to the east and southeast of the site. The potential cumulative impact of both these wind farms have been robustly and comprehensively assessed where appropriate in the EIAR submitted.

The EIAR has considered that the main significant direct and indirect and cumulative effects of the proposed development on the environment. Following mitigation, no residual significant long-term negative impacts on the environment or sensitive receptors would remain with the exception of the visual impact and the positive impact in terms of promoting and utilising more sustainable forms of renewable energy. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on the environment during the construction or operational phase.

I am satisfied that the information provided is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the project on the environment, taking into account current knowledge and methods of assessment. Overall, I am satisfied that the information contained in the EIAR complies with the provisions of Article 3, 5 and Annex (IV) of EU Directive 2014/52/EU.

10.0 **Appropriate Assessment**

10.1. Article 6(3) of the Habitats Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a

significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site.

10.1.1. The application site is not located within or adjacent to a Natura 2000 site. Notwithstanding this, the application was accompanied by a Natura Impact Statement with included a screening for Appropriate Assessment. The NIS contains a description of the proposed development, the project site and the surrounding area as well as details of the field surveys and the assessment methodology informing the appropriate assessment. It contains a Stage 1 Screening Assessment which concludes that a Stage 2 Appropriate Assessment and an NIS is required. It predicts the potential impacts for this site within the zone of influence and provides a summary of potential effects. The potential in combination effects are identified and assessed in a separate Chapter (Chapter 7). The final chapter sets out a suite of mitigation measures which essentially relate to water quality. It concludes that with the implementation of the mitigation measures, and in light of the best scientific knowledge, there will be no significant effects either individually or with other plans or projects on the integrity or on species of conservation interest associated with Natura 2000 Sites in the vicinity.

10.1.2. Having reviewed the NIS and the supporting documentation, I am satisfied that it provides adequate information in respect of the baseline conditions, clearly identifies the potential impacts, and uses best scientific information and knowledge to assess any potential impacts. It also provides details of mitigation measures to ensure that no adverse impacts arise in respect of Natura 2000 Sites in the vicinity. I am satisfied that the information is sufficient to allow for an independent appropriate assessment of the proposed development.

Stage One - Screening

10.2. As the screening for appropriate assessment indicates, the proposed wind farm or grid connection is not located within or contiguous to any Natura 2000 Sites. Nor it the proposal necessary to the management of any Natura 2000 Site. There are 7

SAC's and 2 SPA's within a 15km radius of the site. In addition, consideration was two additional sites, beyond the 15km radius due to the presence of a hydrological connection.

10.2.1. The sites considered within the Stage 1 Screening and the distances from the wind farm site and the cable route are summarised below.

Site	Site Code	Distance from Development	With the zone of influence	Potential Impact?
River Boyne and Blackwater SAC	002299	1.3km from Deel River, 2.9 from Stoneyford River (7.9 km hydrological connection)	Potential water pollution due to accidental spillage, increase sediment run-off etc during the construction operation or decommissioning phase.	Yes
River Boyne and Blackwater SPA	004232	1.3km from Deel River, 2.9 from Stoneyford River (8.1 km hydrological connection)	Potential water pollution during construction and decommissioning phase. Based on the modelling undertaken the risk of collision for the species associated with the SPA, it is considered that any impact is highly unlikely.	Yes
Lough Derravarragh SPA	004043	14.2 km from the NW	Potential displacement of waterbird species associated with SPA- due to separation distance not likely. But collision risk of waterbird species may pose a potential risk.[3]	Yes
Mount Hevey Bog	002342	8.2 km south	Due to separation distance and the absence of hydrological connection no	No

[3] The Board will note that a more detailed evaluation of the species of conversation interest associated with the Derravarragh SPA rules out any potential impacts in terms of bird collision.

			significant impacts are anticipated.	
Wooddown Bog	002205	11.5 km to the south west	Due to separation distance and the absence of hydrological connection no significant impacts are anticipated.	No
Lough Lene SAC	002121	9.5 km to the north and north west	Due to separation distance and the absence of hydrological connection no significant impacts are anticipated.	No
Lough Bane and Lough Glass SAC	002120	10.8 km to the north and north west	Due to separation distance and the long circuitous hydrological connection which exists via the existing river network, no significant impacts are anticipated.	No
White Lough Ben Lough & Lough Doo SAC	001810	12.4 km to the north and north west	Due to separation distance and the long circuitous hydrological connection which exists via the existing river network, no significant impacts are anticipated.	No
Girley Bog SAC	002203	13.9 km north east	Due to separation distance and the absence of hydrological connection no significant impacts are anticipated. The habitats in question are rain water fed.	No
Boyne Estuary SPA	004080	c.70km to the east	Due to separation distance and the long circuitous hydrological connection c70 km which exists via the existing river network, no significant impacts are anticipated.	No

Boyne Estuary SAC	001957	c.70 km to the east	Due to separation distance and the long circuitous hydrological connection which exists via the existing river network, c70km no significant impacts are anticipated.	No

Screening Determination

Based on my examination of the NIS report and supporting information, the NPWS website, aerial and satellite imagery, the scale of the proposed development and likely effects, separation distance and functional relationship between the proposed works and the European sites, their conservation objectives and taken in conjunction with my assessment of the subject site and the surrounding area, I would conclude that a Stage 2 Appropriate Assessment is required for 3 of the European sites referred to above, Namely:

- The River Boyne and River Blackwater SAC
- River Boyne and River Blackwater SPA
- The Lough Derravaragh SPA.

The remaining sites referred to in the Table above, can be screened out from further assessment because of the scale of the proposed works, the nature of the Conservation Objectives, Qualifying and Special Conservation Interests, the separation distances and the lack of a substantive linkage hydrological or otherwise between the proposed works and the European sites. It is therefore reasonable to conclude that on the basis of the information on the file, which I consider adequate in order to issue a screening determination, the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on these 8 European Sites in view of the sites' conservation objectives and a Stage 2 Appropriate Assessment is not therefore required for these sites.

Stage Two – Appropriate Assessment

The Natura 2000 Sites are described, and the qualifying interests associated with the Natura 200 Sites are set out below:

River Boyne and River Blackwater SAC (002299)

This site comprises the freshwater element of the River Boyne as far as the Boyne Aqueduct, the Blackwater as far as Lough Ramor and the Boyne tributaries including the Deel, Stoneyford and Tremblestown Rivers. These riverine stretches drain a considerable area of Meath and Westmeath, and smaller areas of Cavan and Louth. The underlying geology is Carboniferous Limestone for the most part, with areas of Upper, Lower and Middle well represented. In the vicinity of Kells Silurian Quartzite is present while close to Trim are Carboniferous Shales and Sandstones. There are many large towns adjacent to but not within the site, including Slane, Navan, Kells, Trim, Athboy and Ballivor.

The qualifying interest associated with the SAC are as follows:

- *Alkaline fens [7230]*
- *Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]*
- *Lampetra fluviatilis (River Lamprey) [1099]*
- *Salmo salar (Salmon) [1106]*
- *Lutra lutra (Otter) [1355]*

River Boyne and River Blackwater SPA (004232)

The River Boyne and River Blackwater SPA is a long, linear site that comprises stretches of the River Boyne and several of its tributaries; most of the site is in Co. Meath, but it extends also into counties Cavan, Louth and Westmeath. It includes the following river sections: the River Boyne from the M1 motorway bridge, west of Drogheda, to the junction with the Royal Canal, west of Longwood, Co Meath; the River Blackwater from its junction with the River Boyne in Navan to the junction with Lough Ramor in Co. Cavan; the Tremblestown River/Athboy River from the junction with the River Boyne at Kilnagross Bridge west of Trim to the bridge in Athboy, Co. Meath; the Stoneyford River from its junction with the River Boyne to Stonestown

Bridge in Co. Westmeath; the River Deel from its junction with the River Boyne to Cummer Bridge, Co. Westmeath. The site includes the river channel and marginal vegetation.

The River Boyne and River Blackwater Special Protection Area is of high ornithological importance as it supports a nationally important population of Kingfisher, a species that is listed on Annex I of the E.U. Birds Directive.

The sole species of conservation interest is:

- *Kingfisher (Alcedo athis) [A229]*

Lough Derravarrgh SPA (004043)

Lough Derravaragh is located approximately 12 km north of Mullingar town in Co. Westmeath. It is a medium- to large-sized lake of relatively shallow water (maximum depth 23 m). The lake extends along a south-east/north-west axis for approximately 8 km. The Inny River, a tributary of the River Shannon, is the main inflowing and outflowing river. It is a typical limestone lake with water of high hardness and alkaline pH, and is classified as a mesotrophic system.

Lough Derravaragh is of major ornithological importance as it regularly supports nationally important populations of four species, and at times is used by the internationally important population of Greenland White-fronted Goose which is based in the region. Also of note is that three of the species which occur at the site, Greenland White-fronted Goose, Whooper Swan and Golden Plover, are listed on Annex I of the E.U. Birds Directive. Lough Derravaragh is a Ramsar Convention site.

The bird species of conservation interests are:

- *Whooper Swan (Cygnus cygnus) [A038]*
- *Pochard (Aythya ferina) [A059]*
- *Tufted Duck (Aythya fuligula) [A061]*
- *Coot (Fulica atra) [A125]*
- *Wetland and Waterbirds [A999]*

Potential Impacts on Key Species and Key Habitats

10.2.2. No direct impacts are predicted on any European site as the application site is not directly located within a Natura 2000 site.

10.2.3. Water quality is a key environmental factor underpinning the conservation condition of a number of the qualifying interests. The main risk to water quality will be during the construction phase and the early operation of the project. In the event of release of suspended sediment or a release of other pollutants into watercourses during construction works, there could be significant indirect effect downstream on the River Boyne and Blackwater SAC. In the event of siltation or pollution of watercourses from the site, the aquatic habitats and species could be indirectly damaged by changes to water turbidity and water quality and thereby potentially impacting on the integrity of the site.

10.2.4. The terrestrial and coastal habitats detailed as qualifying interests of the SAC are not considered further as there is no potential for these habitats to be impacted as the development is not contained within the SAC boundary. It is only mobile and aquatic species that could potentially be indirectly impacted by the proposed development.

10.2.5. The potential impacts are summaries in the table below:

River Boyne and Blackwater SAC	Potential Impact	Yes /No
Alkaline fens	The main areas of alkaline fens are located c.10km to the north of the proposed wind farm and no hydrological connection exists between the wind farm and this qualifying interest.	No
Alluvial Forests	Wet woodlands fringes exist along many stretches of the river complex. While the potential for water pollution to impact on the Wet Woodland is low, the potential nevertheless exists	Yes
River Lamprey	The Stonyford tributary waterway within the SAC supports Brook Lamprey and not River Lamprey. River Lamprey are only found in the lower reaches of the Boyne River, however applying the precautionary approach there is a potential for adverse impacts	Yes

Atlantic Salmon	The Boyne is considered important for this species could be impacted by way of pollution episodes	Yes
Otter	This species is ubiquitous throughout the SAC	Yes
River Boyne and Blackwater SPA	Potential Impact	Yes /No
Kingfisher	The SPA encompasses several downstream areas which support Kingfisher foraging and breeding habitats, water pollution could pose a threat to these areas.	Yes
Lough Derravaragh SPA	Potential Impact	Yes/ No
Pochard	Displacement effects by wind farms on Pochard operate over a limited scale (less than 500m) as such the potential on an SPA located over 14km away can be ruled out	No
Tufted Duck	Displacement effects by wind farms on Tufted Duck operate over a limited scale (less than 500m) as such the potential on an SPA located over 14km away can be ruled out	No
Coot	Displacement effects by wind farms on Coot operate over a limited scale (less than 500m) as such the potential on an SPA located over 14km away can be ruled out	No
Whooper Swan	A distance of 14.2 km from a site would generally be considered beyond the zone of influence, considering that the typical foraging range would be 5km. While the NIS rules potential impacts in on a precautionary principle, I consider that, due to the separation distances any potential impacts can be ruled out.	No
Wetland and Waterbirds	Potential impacts in terms of bird collision based on a worse case scenario are considered to be very low based on the modelling undertaken.	No

Assessment of Potential Effects

The only potential impact which could potentially arising is confined to water pollution as the site is hydrologically connected to the River Boyne and River Blackwater SAC

and SPA. A more detailed evaluation of the Derravarragh SPA, having particular regard to the Species of Conservation Interest, and the geographically limited foraging patterns associated with these birds, rules out any potential impacts on this SPA.

It is therefore reasonable to conclude that in the absence of specific mitigation measures, works to be undertaken as part of the proposed development particularly during the construction phase, poses a level of threat to features of interest associated with two of the Natura 2000 sites, namely the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA. These potential impacts as summarised below:

- Excessive sediment runoff to tributaries of the Stonyford River during excavations of the site. This could result from felling operations, construction of instream works or other excavations or earthworks.
- A major spillage or long term leakage of hydrocarbons are other chemicals on site. This could occur if fuels lubricants or other chemicals are not appropriately managed.
- A major spillage of wet cement on site causing runoff to water courses.
- Substandard reinstatement works especially along or adjacent to water courses.
- Post construction felling, if left exposed, could result in increased sediment loads in runoff.
- Poorly designed or constructed wind farm infrastructure may result in increased runoff and sedimentation especially in respect of drainage associated with turbine hard standings and access tracks.
- The transportation of invasive alien species on site, which could be released into water courses and become established downstream in the SAC/SPA which could have adverse implications on downstream riverine ecosystems.

Mitigation Measures

The mitigation measures therefore can be restricted to the issues surrounding water quality. These measures are set out in section 8 of the NIS and include the following:

- The working window for in-stream works will be July to September to avoid vulnerable spawning salmonids /lamprey as defined by the IFI.
- There will be no crossing of rivers and streams by machinery during the construction phase and all machinery will be confined to within the works corridor as defined.
- There will be no direct dewatering to water courses on site during the construction phase.
- All hazardous materials including cement, hydrocarbons and other toxic fluids will be fully contained in appropriate bunding. No concrete batching will take place on site, ready mix concrete will be brought to the site. Line cement wash-out ponds will be used for chute cleaning. There will be no discharge of cement contaminated waters on site.
- No refuelling will be permitted within 50m of the water courses.
- Spill-kits and emergency plan response will be provided.
- All wastewater generated on site will be disposed-of off-site.
- A Sustainable Drainage System (SuDS) will be implemented to mange surface water taking into account flooding pollution and biodiversity.
- Specific measures will be included to ensure adequate management of soil / peat deposition. This will include buffers zones silt fences straw bales etc.
- All disturbed areas will be re-vegetated and re-seeded where appropriate.

All the above works will be will be included in a CEMP and will be overseen by an Ecological Clerk of Works (ECoW) and an Environmental Manager.

- During the post construction phase any temporary drainage will be undertaken associated with the construction phase that is no longer required will be removed.
- During the operational phase on-going up-gradient interceptor drains will be provided where appropriate.
- Swales and settlement ponds will be provided in order to ensure greenfield run-off rates.

- Site water run-off will be monitored during the operation phase to ensure green field rates are adhered to.

In-combination Effects

There are not considered to be any associated /connected development associated with the wind farm and grid connection which could impact on surrounding Natura 2000 sites. Felling required to accommodate the turbines will be carried out under licence and any potential impacts on water quality will be addressed with the mitigation measures outlined above. Compensatory planting with be provided for offsite, and will be the subject of a separate assessment.

In terms of additive impacts from other developments in the wider area, I note that both the NIS and EIAR assess cumulative impact arising from other planned and permitted wind farms in the area. The NIS concludes, based on the relatively low density of operational and consented wind farms within 50km of the proposed development the likely in-combination/cumulative risk or threats posed by the operation of the wind farms in terms of the potential displacement or collision risk can be ruled out in accordance with the modelling undertaken. The cumulative impact of the turbines does not form a significantly elongated or dense barrier to bird flight paths or populations of birds moving through the area.

In terms of cumulative water quality impacts, it is noted that the potential for cumulative impacts on SAC's in the vicinity, specifically from wind farms with 20km radius of the site that feed into the same river and stream sub-catchments that are connected to the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA. However, with the employment of the mitigation measures set out above, the proposal before the Board will not result in any adverse impacts on water quality.

Residual Effects

No significant residual effects are identified following implementation of the recommended mitigation measures.

Appropriate Assessment Conclusions

10.2.6. Having regard to the works proposed, the hydrological distance between the site and the European site and subject to the implementation of best practice construction methodologies and the proposed mitigation measures, I consider that it is reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans and projects would not adversely affect the integrity of the River Boyne and River Blackwater SAC (Site Code 002299) and River Boyne and River Blackwater SPA (004232). or any other European site, in view of the site's Conservation Objectives.

11.0 **Recommendation**

11.1. Having regard to the foregoing I recommend that permission for the above described development be granted for the following reasons and considerations, subject to conditions.

12.0 **Reasons and Considerations**

(a) National policy with regard to the development of alternative and indigenous energy sources and the minimisation of emissions from greenhouse gases

(b) 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,

(c) the policies set out in the Regional Spatial and Economic Strategy of the Eastern and Midland Region, 2019

(d) the policies of the planning authority as set out in the Westmeath County Development Plan 2021-2027 and the Meath Development Plan 2021-2027.

(e) the character of the landscape in the area and the absence of any ecological designation on or in the immediate environs of the wind farm site,

(f) the characteristics of the site and of lands in the general vicinity.

(g) the pattern of the existing and permitted development in the area.

(h) The distance between the turbines and surrounding dwellings and other sensitive receptors from the proposed development.

(i) The environmental impact assessment report submitted.

(j) The Natura Impact Statement submitted.

(k) The submissions and observations made in connection with the planning application.

(l) The report of the Inspector.

Environmental Impact Assessment

The Board completed an environmental impact assessment of the proposed development taking into account

- The nature, scale and extent of the proposed development;
- The environmental impact assessment report and associated documentation submitted in support of the application;
- The submissions from the Planning Authority, the appellants and the observers in the course of the application; and
- The Inspector's report.

The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment.

The Board agreed with the examination, set out in the Inspector's report, of the information contained in the environmental impact assessment report and associated documentation submitted by the applicant and submissions made in the course of the application.

The Board considered, and agreed with the Inspectors reasoned conclusions, that the main significant direct and indirect effects of the proposed development on the environment are as follows:

(a) The most significant effects will be the visual impact arising from the permanent removal of forestry and the erection of 9 wind turbines of 185 meters in height. This will result in a significant and somewhat profound impact on the immediate receiving environment and will be discernible in an area of up to 15 -20km surrounding the site. However, the surrounding lands, particularly in the receiving environment in the immediate study area (within 5 km) are not considered to be sensitive in visual amenity terms. Furthermore, there are no designated scenic routes in the immediate vicinity of the subject site.

(b) From a sustainable energy perspective, the proposal fully supports government policy to reduce reliance on fossil fuels and provide more sustainable sources of energy. The proposal will result in the reduction of almost 48,000 tonnes of CO_2 during the 30-year lifespan of the wind farm. The proposal therefore will have a moderate positive impact on climate change, and will contribute towards the national targets in respect of climate change.

(c) Impacts in terms of HGV traffic, noise, shadow flicker and water quality the proposed wind farm could either during the construction or operational phase potentially give rise to adverse environmental impacts or impacts on sensitive receptors in the surrounding area. However, with the incorporation of appropriate mitigation measures and the implementation of best practice, the impacts are deemed to be acceptable.

(d) In terms of biodiversity, the majority of the habitats that will be impacted are of local importance and low ecological value. The proposed development occupies a very small proportion of a vast agricultural and forested landscape, with large areas remaining undisturbed. There is potential for some impact on terrestrial mammals in terms foraging and commuting, particularly during the construction phase. Through standard mitigation and monitoring, management and habitat enhancement, there will be no significant impacts on these species arising from the development. The proposed development avoids watercourses and no instream works are proposed. The surveys indicate that habitats present are suboptimal for aquatic species identified as key ecological receptors including salmon, lamprey and white-clawed crayfish. However, the is potential for cumulative impacts particularly downstream of

the catchment area. The main impact would occur through sediment laden discharge during both the construction phases.

(e) Impact in terms of potential bird collisions have been assessed and considered in EIAR, and these impacts are assessed to be minimal. EIAR reasonably concludes in my opinion, having regard to the nature of the existing environment, that there will be little or no adverse impacts arising from the proposed wind farm in terms of biodiversity, land soils and geology, and cultural heritage.

(e) A major consideration in scoping the EIAR relates to the issue of cumulative impacts. While no wind farms existing in the vicinity of the development, planning permission has been granted for the Yellow River Wind farm between 17 and 20 km to the southwest of the site. Perhaps more importantly, plans are afoot to develop a larger wind farm near Ballivor, to the east and southeast of the site. The potential cumulative impact of both these wind farms have been robustly and comprehensively assessed where appropriate in the EIAR submitted.

Appropriate Assessment - Stage 1

The Board considered the Screening Report for Appropriate Assessment, the Natura Impact Statement and all the other relevant submissions and carried out both an appropriate assessment screening exercise and an appropriate assessment in relation to the potential effects of the proposed development on designated European Sites. The Board agreed with and adopted the screening assessment and conclusion carried out in the Inspector's report that the only two European sites in respect of which the proposed development has the potential to have a significant effect is River Boyne and River Blackwater SAC (Site Code 002299) and River Boyne and River Blackwater SPA (004232).

Appropriate Assessment – Stage 2

The Board considered the Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions and observations on file, and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development for the two European Sites, namely River Boyne and River Blackwater SAC (Site Code 002299) and River Boyne and River Blackwater SPA (004232), in view of the site's conservation objectives. The Board considered that the information

before it was adequate to allow the carrying out of an appropriate assessment. In completing the appropriate assessment, the Board considered, in particular, the following:

i. the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,

ii. the mitigation measures which are included as part of the current proposal, and

iii. the conservation objectives for the European Site.

In completing the Appropriate Assessment, the Board accepted and adopted the Appropriate Assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Site, having regard to the site's Conservation Objectives.

In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the sites' Conservation Objectives.

Proper Planning and Sustainable Development

It is considered that, subject to compliance with the conditions set out below, the proposed development would be in accordance with the National Planning Framework, the Regional Spatial and Economic Strategy of the Eastern and Midland Region 2019 and the provisions of the Westmeath County Development Plan 2021-2027 and the Meath County Development Plan 2021-2027. It would

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

13.0 **Conditions**

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the planning application, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to the commencement of development and the proposed development shall be carried out and complied in accordance with the agreed particulars.

   Reason: In the interest or clarity.

2. The mitigation measures and monitoring commitments identified in the environmental impact assessment report and in particular those commitments in respect of biodiversity and other plans and particulars submitted with the application shall be implemented in full.

   Reason: In the interest of clarity and the protection of the environment during the construction and operational phases of the proposed development.

3. The mitigation measures contained in the Natura Impact Statement submitted with the planning application shall be implemented in full.

   Reason: In the interest of clarity and the proper planning and sustainable development of the area and to ensure the protection of European sites in the vicinity.

4. The period during which the proposed development hereby permitted may be constructed shall be 10 years from the date of this order.

   Reason: In the interest of clarity.

5. The permission shall be for a period of 30 years from the date of the first

commissioning of the wind farm.

Reason: To enable the planning authority to review the operation of the wind farm in light of the circumstances then prevailing.

6. The turbines shall be 185 metres in height with a hub height of 104 metres and a rotor diameter of 162 metres in accordance with the turbine option assessed in the environmental impact assessment report and the Natura Impact Statement together with the other application documentation.

   Reason: In the interest of clarity and the proper planning and sustainable development of the area.

7. The developer shall ensure that all mitigation and contingency measures set out in the Peat Management Plan in Annex 3.7 of the EIAR is implemented in full and monitored throughout the lifecycle of the construction works and throughout the operational phase.

   Reason: In the interest of the protection of the environment.

8. Prior to any development taking place on site, the developer shall submit for the written agreement of the planning authority, the final detail and specification of the proposed grid connection route.

   Reason: In the interest of clarity and the proper planning and sustainable development of the area.

9. Commissioning and construction works shall be limited to the hours of between 0800 hours and 1800 hours Monday to Saturday and shall not be permitted on Sundays or public holidays.

   Reason: To protect the amenities of nearby residential properties.

10. The operation of the proposed development, by itself or in combination with other permitted wind energy development, shall not result in noise levels when measured externally at nearby noise sensitive locations which exceed:

    (a) Between the hours of 0700 and 2300:

    (i) the greater of 5dB(A) $L_{90,\ 10min}$ above background noise levels or 45 dB(A) $L_{90,\ 10min}$ at standardized 10-meter height above ground level at wind

speeds of 7m/s or greater.

(ii) 40 dB(A) $L_{90,\ 10min}$ a= at all other standardised 10-metre height above ground level wind speed.

(b) 43 dB(A) $L_{90,\ 10min,}$ at all other times.

Prior to the commencement of development, the developer shall submit two and agree in writing with the planning authority and noise compliance monitoring program for the subject development, including any mitigation measures such as the de-rating of particular turbines. All noise measurements shall be carried out in accordance with ISO Recommendation R1996 “Assessment of Noise with Respect to Community Response” as amended by ISO Recommendation R 1996-1. the results of the initial noise compliance monitoring shall be submitted to and agreed in writing with the planning authority within six months of the commissioning of the wind farm.

Reason: in the interests of residential amenity.

11. Appropriate software shall be employed on each of the turbines to ensure that there will be no shadow flicker at any existing nearby dwelling. Turbine shutdown shall be undertaken by the wind energy developer or operator in order to eliminate the potential for shadow flicker.

    Reason: In the interest of residential amenity.

12. The developer shall comply with the following design requirements:

    (a) The wind turbines, including masts and blades shall be finished externally in a light grey colour.
    (b) Cables within the proposed development shall be placed underground.
    (c) The wind turbines shall be geared to ensure that the blades rotate in the same direction.

(d) No advertising material shall be placed on or otherwise affixed to any structure on the site without a prior grant of planning permission.

Reason: In the interest of visual amenity.

13. Details of the materials, colours and textures of all external finishes of the proposed substation building and enclosed fencing shall be submitted to and agreed in writing with the planning authority prior to the commencement of development.

Reason: In the interest of visual amenity.

14. Prior to the commencement of development, details of a pre-construction and post-construction monitoring and reporting programme for birds shall be submitted to and agreed in writing with the planning authority prior to the commencement of development. The survey shall be undertaken by suitably qualified and experience bird specialist and shall include measures to reduce disturbance to ground nesting species. The survey shall be completed annually for a period of five years following the commissioning of the wind farm and copies of the report shall be submitted to the planning authority and to the Department of Housing, Local Government and Heritage (National Parks and Wildlife Service).

Reason: To ensure the appropriate monitoring of impact of the proposed development on the avifauna of the area.

15. Prior to the commencement of development, details of a post construction monitoring and reporting programme for bats shall be submitted to and agreed in writing with the planning authority. The monitoring shall be undertaken by a suitably qualified and experienced bat specialist to identify any measures required to mitigate any identified effects. The survey shall be completed annually for a period of 3 years following the commissioning

of the wind farm and copies of the report shall be submitted to the planning authority.

Reason: To ensure the appropriate monitoring of the use of the site by bat species.

16. Prior to the commencement of development, the community gain proposal shall be submitted to the planning authority for written agreement. In default of agreement, the matter shall be referred to An Bord Pleanála for determination.

    Reason: In the interest or the proper planning and sustainable development of the area.

17. In the event that the proposed development causes interference with telecommunication signals, effective measures shall be introduced to minimise interference with telecommunication signals in the area. Details of these measures, which shall be at the developer's expense, shall be submitted to and agreed in writing with the planning authority prior to the commissioning of the turbines and following consultation with relevant authorities.

    Reason: In the interest of protecting telecommunication signals and residential amenity.

18. Details of aeronautical requirements shall be submitted to and agreed in writing with the planning authority prior to the commencement of development. Prior to the commissioning of the turbines, the developer shall inform the planning authority and the Irish Aviation Authority of the as constructed tip heights and co-ordinates of each of the turbines in WGS-84 format and the wind monitoring masts.

Reason: In the interest of air traffic safety.

19. Water supply and drainage arrangements including the discharge of any surface water shall be agreed in writing with the planning authority prior to the commencement of development.

    Reason: In the interest of public health.

20. The developer shall comply with the requirements of Irish Water with regard to diversion of infrastructure within the site and connections to the public network.

    Reason: In the interest of public health.

21. Prior to any development taking place the developer shall submit the following to Transport Infrastructure Ireland in the case of national roads and the planning authority in relation to other roads:

    (a) Road safety audits relating to junction works proposed on the national road network.
    (b) Road safety audits in respect of works to be carried out on the local road network.
    (c) Details of all signage, crash barriers, poles etc. to be removed on the national and local road network to facilitate the abnormal loads to be delivered on site.

    Reason: In the interest of traffic safety.

22. (a) Prior to the commencement of development, a traffic management plan for the construction phase shall be submitted to and agreed in writing with the planning authority. The traffic plan shall incorporate

the following:

(i) Details of the road network/haulage routes and the vehicle types to be used to transport materials and turbine parts to and from the site and a schedule of control measures for exceptionally wide and heavy delivery loads.

(ii) A condition survey of the roads and bridges along the haul route shall be carried out at the developer's expense by a suitably qualified person both before and after the construction of the proposed development. This survey shall include a schedule of required works to enable haul routes to cater for construction related traffic. The extent and scope of the survey and the schedule of works shall be agreed with the planning authorities and Transport Infrastructure Ireland prior to the commencement of development.

(iii) Detailed arrangements whereby any construction damage which arises shall be made good and completed to the satisfaction of the planning authority.

(iv) Detailed arrangements for the protection of bridges to be crossed.

(v) Detailed arrangements for temporary traffic arrangements/control on roads and protocols to keep residents informed of upcoming traffic related matters, temporary lanes/road closures and delivery of turbines.

(vi) A phasing programme indicating the timescale within which it is intended to use each public route to facilitate the construction of the proposed development. In the event that the proposed development is being developed concurrently with any other wind farm in the area the developer shall consult with and arrange suitable traffic phasing arrangements with the planning authority.

(vii) Within three months of the cessation of the use of each public road and haul route to transport material to and from the site, a road survey and scheme of works detailing works to repair

any damage to these routes shall be submitted to and agreed in writing with the planning authority.

(b) All works arising from the aforementioned arrangements shall be completed at the developer's expense within 12 months of the cessation of each road's use as a haul route for the proposed development.

Reason: To protect the public road network, the amenity of local residents and to clarify the extent of the permission in the interests of traffic safety and orderly development.

23. The developer shall facilitate the archaeological appraisal of the site and shall provide for the preservation, recording and protection of archaeological materials or features which may exist within the site. In this regard, the developer shall:

(a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development, and

(b) employ a suitably-qualified archaeologist prior to the commencement of development. The archaeologist shall assess the site and monitor all site development works.

The assessment shall address the following issues:

(i) the nature and location of archaeological material on the site, and

(ii) the impact of the proposed development on such archaeological material.

A report, containing the results of the assessment, shall be submitted to the planning authority and, arising from this assessment, the developer shall

agree in writing with the planning authority details regarding any further archaeological requirements (including, if necessary, archaeological excavation) prior to commencement of construction works.

In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: In order to conserve the archaeological heritage of the area and to secure the preservation (in-situ or by record) and protection of any archaeological remains that may exist within the site.

24. On full or partial decommissioning of the wind farm, or if the wind farm ceases operation for a period of more than 1 year, the turbines and all decommissioned structures shall be removed, and foundations covered with soil to facilitate revegetation. These reinstatement works shall be completed to the written satisfaction of the planning authority within three months of decommissioning or cessation of operation.

    Reason: To ensure a satisfactory reinstatement of the site upon cessation of the project.

25. Details of the construction and environmental management plan shall be agreed in writing with the planning authority prior to the commencement of development. The CEMP shall include but not be limited to operational controls for dust, noise and vibration, waste management, protection of soils and groundwaters and surface waters, protection of flora and fauna, site housekeeping, emergency response planning, site environmental policy, project roles and responsibilities.

    Reason: In the interest of environmental protection and orderly development.

26. The applicant shall during the construction phase maintain a complaints register to record any complaints regarding but not limited to noise, odour, dust, traffic or any other environmental nuisance. The complaint register shall include details of the complaint and measures taken to address the complaint and prevent repetition of the complaint.

    Reason: In the interest of orderly development

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27. All imported aggregate material onto the site shall be from authorised quarries only.

    Reason: In the interest of orderly development.

28. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or other security to secure the provision and satisfactory completion of roads, footpaths, watermains, drains, open space and other services required in connection with the development, coupled with an agreement empowering the local authority to apply such security or part thereof to the satisfactory completion of any part of the development. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

    Reason: To ensure the satisfactory completion of the development.

29. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

Paul Caprani,
Senior Planning Inspector.

16th May, 2022.