



An
Bord
Pleanála

Inspector's Report ABP306500-20

Development	12 wind turbines with a tip height of 169m and all associated works.
Location	Ballynamullagh, Coolree, Drehid, Dunferth, Killyon, Kilmurray and Mulgeeth, County Kildare.
Planning Authority	Kildare County Council
Planning Authority Reg. Ref.	181534
Applicant(s)	Kildare North Windfarm Limited.
Type of Application	Planning Permission
Planning Authority Decision	Refuse Permission
Type of Appeal	First & Third-Party v Refusal
Appellant(s)	<ol style="list-style-type: none">1. North Kildare Windfarm Limited2. Kildare Environmental Awareness Group3. Rita Lenehan & Others.
Observer(s)	Minister for Defence.
Date of Site Inspection	16 th July 2020.
Inspector	Hugh Mannion

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1.0 Site Location and Description

- 1.1. The application site is about 107ha and irregularly shaped and occupies a number of townlands (Ballynamullagh, Coolree, Drehid, Dunfiirth, Killyon, Kilmurray and Mulgeeth) in north County Kildare. The area is generally rural where the land use is predominantly agriculture, but there are several settlements and extensive areas of one-off rural housing. The area is accessed off the M4 to the north at the Enfield junction (junction 9) and from the R402 Johnstown Bridge to Carbury regional route. About 7km from Johnstown Bridge along the R402 is a left turn onto the Derrymahon road/L5025 which is a local road linking the R402 regional route to Timahoe Cross to the south east. There are two accesses into the site from this road the second on the left is the main site access and is currently an agricultural access with a gravelled road leading further into the site where T1 is proposed on pastureland. T2, T3, T4 and T5 are all within agricultural land spaced along the south eastern site boundary which is, generally, along the edge of the Timahoe bog. Further along the Derrymahon road/L5025 is an access on the left to the site of Timahoe bog which was formerly used for peat harvesting and on the right are lands occupied by the Drehid Waste Management facility.
- 1.2. The R402 runs to the west of the application site but the site does not adjoin this road. The site is accessible along a minor road from the R402 near Ravens cross which leads southeast serving a number of houses. Just south of this road and on land in agricultural use is T6. Further and close to this minor road in a forested area where T7, T8, T9 are proposed.
- 1.3. The north eastern element of the site is a mix of a commercial forestry and agricultural land where T10 is sited on an area of cleared forest/peat land. The final two turbines (T11 and T12) are in the northeast in a forest/peatland.
- 1.4. To the northeast of the site is the L1004 Johnstown Bridge/Dunfiirth public road. The cable from the on-site substation will cross agricultural lands within the site and then emerge onto the public road. From its emergence onto the public road to the existing ESB substation is 1km. The cabling will pass through the Dunfiirth crossroads and on to the substation. Dunfiirth church is a ruin with associated graveyard and collection of grave markers and on the RPS.

2.0 Proposed Development

2.1. The proposed development comprises the construction of;

- 1) 12 wind turbines with a tip height of up to 169m, associated foundations and hard standings.
- 2) One electricity substation,
- 3) Two temporary construction compounds,
- 4) All associated underground electricity and communications cabling connecting the turbines to the on-site electricity substation,
- 5) Underground electricity cabling including joint bays on the public road connecting the proposed on-site electricity substation to the existing Dunferth substation within the town land of Dunferth via the L1004 public road,
- 6) Upgrade and extension to an existing recreation amenity trail and installation of signage, picnic table and bicycle stands,
- 7) Upgrade of an existing entrance from the L5025 public road and use of 1 number existing entrance on the L5025 public road,
- 8) Provision of new site access tracks and associated drainage, tree felling, all associated site development works including landscaping,
- 9) A permission lifetime of 10 years is applied for and an operational lifetime of 30 years from the date of commissioning,

At Ballynamullagh, Coolree, Drehid, Dunferth, Killyon, Kilmurray and Mulgeeth, County Kildare.

3.0 Planning Authority Decision

3.1. Decision- Refuse Permission

1. The road network is substandard in terms of condition, carrying capacity, width, surface treatment and alignment to accommodate the traffic likely to arise and the proposed development would, therefore, endanger public safety by reason of traffic hazard.

2. The applicant has not demonstrated that they have adequate consent to carry out the road improvements necessary to accommodate the construction traffic likely to arise from the proposed development.

3.2. Planning Authority Reports

3.2.1. Planning Reports – the initial planner’s report sought additional information as follows;

1.(a) It is not considered that the EIAR has adequately addressed the proposed development cumulatively with regard to the proposed Solar Farm KCC planning reference 18/1514, Strategic Infrastructure Development An Bord Pleanála planning reference 300398/18 and Drenid Waste Management Facility An Bord Pleanála planning reference 300506/17 within and adjoining the wider western bogland landscape and the potential to significantly alter the character of this bogland landscape. In this regard it is not considered that the assessment carried out has sufficiently considered the impact of the proposed development on the following:

- Air and Climate Change
- Noise and Vibration
- Biodiversity
- Lands, Soils and Geology
- Hydrology and Surface Water Quality
- Transportation (worst case scenario of construction traffic at the same time for all projects to be included)
- Landscape and Visual

The Applicant is requested to submit a revised EIAR which has due regard to these aforementioned planning applications in the vicinity of the application site, during each phase of the proposed development.

(b) Furthermore, the Irish Water project ‘Water Supply Project – Eastern and Midlands Region’ includes a 200m wide pipeline corridor which traverses lands to the south-east of the subject site. Although this project is still at

consultation phase, this project should also be included in the cumulative assessment.

- 2.(a) Whilst Chapter 16 of the EIAR sets out the rationale for the location and general layout of the site, you are requested to clarify the reason for the dispersed nature of proposed windfarm.
- (b) It is considered that the weighting associated with Table 14.11 of chapter 14 of the EIAR (Summary of Visual Effects at Viewshed Reference Points) and associated Appendix 14.1(b) is not consistent with Tables 14.1, 14.2 and 14.3 of Chapter 14 of the EIAR, namely the Landscape Value and Sensitivity, Magnitude of Landscape Impacts and Landscape Impact Significance Matrix. For example, the significance of the visual effect rating outlined within Table 14.11 for viewpoints 1 and 2 is imperceptible and the visual magnitude is indicated as negligible, however the majority of the turbines are clearly visible above the existing screening and above the skyline and would result in uncharacteristic elements or features that would lead to changes in landscape character. The Applicant is therefore requested to review Table 14.11 of the EIAR and submit a revised table which is reflective of Tables 14.1, 14.2 and 14.3 of the EIAR.
- (c) Having regard to the nature, location, scale and extent of the proposed development you are requested to submit a digital fly through of the proposed development.
- (d) Table 14.10 within the EIAR is noted as are the individual maps indicating the location of each of the viewpoints however a single map of where the 24 no. viewpoints are located with their cone of view indicated and where the protected views and scenic routes are located and local community views are located is required to ensure there is suitable distribution of viewpoints and quantity of viewpoints. (Please note as a result of the foregoing additional photomontages are recommended).
- (e) It is stated within Chapter 14.8.2 that 13 no. viewpoints are local community views, however only 12 no. appear to be listed, VP7, VP8, VP9, VP10, VP11, VP12, VP14, VP15, VP16, VP17, VP19 and VP20, clarification on this matter is required.
- (f) Figure 14.18 referred to in Chapter 14.4.2 does not appear to be in the EIAR document, this needs to be provided.

- (g) The Applicant is requested to submit a photomontage taken from Scenic Route 8: (Views of Bogland Plains: L3002 from Kilmoney Crossroads to Feighcullen Crossroads at Boston Hill, Bostoncommon, Drinnastown, Kilmoney North).
- 3.(a) Concerns are raised regarding the lack of specification of the turbines and the predicted noise modelling carried out. You are requested to submit a short list of potential turbine types to be used on site and demonstrate by way of documentation that the noise modelling carried out is appropriate for these turbine specifications.
- (b) The Applicant is requested to submit a specification of the proposed transformer and the diesel transformer proposed to be installed.
- (c) The Applicant is requested to justify why the proposed lower fixed limit is 40dB when the daytime envelop is 29.9 dB (Table 6.4).
- (d) The Applicant is requested to carry out baseline noise monitoring at further locations to take into account the prevailing winds at locations to be agreed in writing with the Environment Section of Kildare County Council.
- (e) The Applicant is requested to submit from a suitable qualified noise consultant.
- (i) A detailed Noise Assessment with particular attention to the tonal and vibration component of the proposed Wind Turbines, the proposed transformer and the back-up diesel transformer.
- (ii) A detailed Noise Assessment on the cumulative effect of the wind turbines, the transformer, back-up diesel transformer and the proposed Solar Farm adjacent to this site.
- (iii) A detailed recommendation on mitigation measures to reduce the cumulative noise levels from the proposed development to 35-38 dB(A) for daytime and night-time in order to prevent noise nuisance from the wind turbines and transformers.
4. The Applicant is requested to submit:
- (a) A composite map indicating the location of the application site and the existing, permitted and proposed wind farms within a 25km radius of the application site and clearly indicate the number of existing turbines, permitted turbines and planned turbines.

- (b) A composite map indicating the location of the application site and the existing, permitted and proposed solar farms within a 25km radius of the application site.
- (c) A composite map indicating the location of the application site and the existing, permitted and proposed solar farms and wind farms within a 25km radius of the application site.
- 5.(a) The Applicant is requested to clarify the level of consultation that was undertaken with the NPWS in relation to the proposed development, after July 2018.
- (b) The Applicant is requested to review the AA screening/NIS report in light of the updated draft European Commission guidance (dated Draft April 2015 and November 2018) and confirm whether the documents are in accordance with this latest available guidance. If not, the applicant is required to amend the NIS and its accompanying AA screening report.
- (c) To eliminate any gaps in the AA Screening/NIS assessment, the full scope of all potential impacts associated with the proposed development is required to be examined, analysed and evaluated in the NIS and AA. The zone of influence of the proposed development, as it relates to identifying the European sites at risk of effects, should also be clearly defined and supported by sufficient data and assessment. Therefore, the applicant is required to submit the following.
- (i) Confirmation of all of the potential impacts of the proposed development on the receiving environment.
 - (ii) Confirmation of how the potential impacts were examined, analysed and evaluated to determine the zone of influence of the proposed development.
 - (iii) Confirmation of how the European sites at risk of impacts from the proposed development were identified; and
 - (iv) A clear list of which specific European site(s) are at risk from the proposed development and why.

The outcome of this process may require the AA screening/NIS report to be updated.

- (d) To ensure the robustness of the AA screening/NIS, the applicant is requested to submit a revised AA screening/NIS with a detailed description of the proposed development and proposed construction works.
- (e) To ensure AA screening/NIS has sufficient scientific data to support the assessment, its findings and conclusions, the applicant is requested to submit the following:
- (i) Confirmation of the presence/absence of otter, river lamprey and Atlantic salmon, and suitable supporting habitat (covering all relevant lifecycle stages, as applicable), in the immediate vicinity of the proposed watercourse crossings and downstream of the proposed development.
 - (ii) Confirmation of whether any otter, river lamprey or Atlantic salmon recorded within the study area are likely to form part of, or support, the qualifying interest populations of the River Boyne and River Blackwater SAC. If that is confirmed or likely to be the case, confirmation of whether the predicted impacts, in consideration of any necessary mitigation measures, would undermine the conservation objectives and adversely affect the integrity of the River Boyne and River Blackwater SAC.
 - (iii) Confirmation of the presence/absence of kingfisher and suitable supporting habitat (covering all relevant lifecycle states as applicable), in the immediate vicinity of the proposed watercourse crossing and downstream of the proposed development.
 - (iv) confirmation of whether any kingfisher recorded within the study area are likely to form part of, or support, the special conservation interest populations of the River Boyne and River Blackwater SPA. If that is confirmed or likely to be the case, confirmation of whether the predicted impacts, in consideration of any necessary mitigation measures, would undermine the conservation objectives and adversely affect the integrity of the River Boyne and River Blackwater SPA.
 - (v) Confirmation of whether any Annex I bird species recorded within the study area are likely to form part of, or support, the special conservation interest populations of any European site(s). If that is confirmed or likely to be the case, confirmation of whether the

predicted impacts, in consideration of any necessary mitigation measures, would undermine the conservation objectives and adversely affect the integrity of any European site(s).

- (vi) Confirmation of whether the marsh fritillary butterfly and/or any habitats suitable to support this species, are present within the zone of influence of the proposed development. If that is confirmed or likely to be the case, confirmation of whether the predicted impacts, in consideration of any necessary mitigation measures, would undermine the conservation objectives and adversely affect the integrity of Ballynafagh Lake SAC.
- (vii) Confirmation in the AA Screening/NIS that no non-native invasive species are presented within the proposed development site.
- (f) To ensure the robustness of the screening for appropriate assessment determination/conclusion, the reasons why the proposed development requires AA is required to be presented in that determination/conclusion.
- (g) The scope and conclusions of the NIS with respect to the implications of the proposed project on the conservation objectives and integrity of European sites, must be in relation to all European sites and not limited to the two sites that are assessed in the NIS submitted with the application. You are requested to submit a revised NIS in this regard.
- (h) The Applicant is requested to submit confirmation of the data sources used to support the baseline description of the qualifying interests of the River Boyne and River Blackwater SAC presented in the AA Screening/NIS. If there are limitations of any data used this should also be acknowledged if they are relied upon for the NIS assessment.
- (i) The Applicant is requested to submit the following:
 - (i) Confirmation of the plans and projects considered in assessing the implications of the proposed development on European sites in combination with other plans and projects.
 - (ii) To provide a complete assessment of whether the proposed project will adversely affect the integrity of any European sites in combination with all relevant plans and projects.
- (j) All updates and changes to the AA Screening/NIS document re to be clearly indicated within the updated document.

- 6.(a) In order to assess the impacts of construction works on breeding and resting places of otters and badger, the location of setts and holts may need to be known up to 150m, or more, from the proposed development boundary. The study area in Figure 7.9 of the EIAR does not extend this far. Clarification is required on the extent of the survey area for mammals and its adequacy in predicting and assessing the impacts of construction works on species protected under the Wildlife Acts and the Birds and Habitats Regulations.
- (b) The Applicant is requested to submit revised bat surveys which are required to be carried out in accordance with current best practice guidance from *Bats and Onshore Wind Turbines: Survey, Assessment and Mitigation* (Prepared jointly by Scottish Natural Heritage, Natural England, Natural Resources Wales, Renewable UK, Scottish Power Renewables, Ecotricity Limited, the University of Exeter and the Bat Conservation Trust (BCT)) this outlines that *surveys should be focused in those parts of the development site where turbines are most likely to be located.*
- (c) The Applicant is requested to clarify why there is an absence of aquatic surveys at the proposed watercourse crossings of the Ballynamullagh Stream and provide an assessment of that limitation with regard to the prediction of impacts on local aquatic fauna populations (see also section 3.3 above under the AA Screening/NIS review), if this is not considered to be sufficient revised aquatic surveys at the 5 no. crossing points will be required to be submitted.
- (d) The Applicant is requested to provide an assessment of the likely significant effects of the proposed development on the Coillte biodiversity areas within the zone of influence of the proposed development.
- (e) The Applicant is requested to provide the detailed habitat and flora species data that was used to identify and classify the habitats within the study area and provide a habitat description in support of the amenity grassland classification.
- (f) The Applicant is requested to submit classification details and description of Active Raised Bog and Degraded Raised Bog and Bog Woodland habitats with regard to whether or not they correspond with Annex I habitat types. In this regard the following is required:

- (i) Clarification as to why the bog pool/cutover bog area does not correspond with any Annex I habitat type e.g. type Degraded raised bogs still capable of natural regeneration.
- (ii) Clarification that there are no recolonising bog habitats within the study area that correspond with the Annex I habitat Depressions on peat substrates of the *Rhynchosporion*, a habitat type which can also be linked with recolonising/regenerating bog habitats.
- (iii) Clarification of the data and criteria used to support the classification (or not) of raised bog habitat within the study area (including consideration of habitat quality in reaching that decision) and, to support the definition of the habitat boundary of raised bog habitat within the study area.
- (iv) Clarification of the data and criteria used to support the classification (or not) of bog woodland habitat within the study area (including consideration of habitat quality in reach that decision) and to support the definition of the habitat boundary of bog woodland habitat within the study area.
- (v) Pending clarification on points (i) – (iv) above, confirmation that there are no Annex I habitats directly affected by the proposed development, or otherwise.
- (vi) If Annex I habitats will be impacted by the proposed development, clarification should be provided regarding the significance (at the relevant geographic scale in accordance with CIEEM 2018 guidance) of any impacts, either direct or indirect or cumulatively with other projects.
- (g) In order to ensure full understanding of the assessment, findings and conclusions of the Biodiversity Chapter of the EIAR, the applicant is requested to clarify the significance of the potential and residual impacts related to the geographical scale at which the impact will occur, in accordance with CIEEM (2018) and NRA (2009) guidelines.
- (h) The EIAR must consider the likely significant effect of the proposed development on all designated sites for nature conservation, this includes NHA's and pNHA's. It is unclear from the EIAR if any potential impact pathways were considered. In this regard the applicant is requested to provide

- a full and detailed assessment of the likely significant effects of the proposed development on pNHA and NHA designated sites for nature conservation.
- (i) The Applicant is requested to provide clarification as to why an artificial badger sett is not required, despite the loss of a main badger sett and the temporary closure of two further main badger setts for the duration of construction, and the reasoning supporting the resulting impact assessment on badgers as a short-term negative one.
 - (j) The Applicant is requested to provide clarification as to the reasoning supporting the assessment of habitat loss impacts on the local red squirrel population as unlikely to have a negative effect.
 - (k) The Applicant is requested to provide a completed and reasoned assessment as to whether or not the predicted impacts associated with the proposed development will affect the favourable conservation status of otter within the study area.
 - (l) The Applicant is requested to provide a completed and reasoned assessment as to whether or not the predicted impacts associated with the proposed development will affect the favourable conservation status of each of the bat species present within the study area, including any additional mitigation measures that may be required.
 - (m) The Applicant is requested to provide clarification as to the quantitative data used to calculate the predicted percentages of population and habitat loss in Tables 7-57 and 7-58 that supports the assessment of overall effect significance.
 - (n) The Applicant is requested to submit a dedicated pre-construction survey for Barbut's cuckoo bee is carried out as part of the mitigation strategy.
 - (o) The Applicant is requested to provide clarification regarding the full scope of the assessment of cumulative effects, in terms of scope, spatial extent and timeframe and whether there will be any significant residual cumulative effects on biodiversity,
 - (p) The Applicant is requested to submit an outline Habitat and Species Management Plan.
 - (q) The Applicant is requested to submit detailed lizards survey and the methodology of same is to be carried out in line with the most up-to-date best practice guidance.

- (r) The Applicant is requested to provide revised assessment of the likely significant residual effects of the proposed development to capture the responses/clarifications to the queries raised in the review document.
7. The Applicant is requested to submit details of the technology used which is proposed to address shadow flicker and submit examples of where it is being used in Ireland or Europe.
- 8.(a) The Applicant is requested to carry out a full assessment of the release of ammonia caused by excavation of peat within Chapter 9 of the EIAR.
- (b) Table 9.11 within Chapter 9 of the EIAR outlines the residual impacts, it is noted that sensitive receptor of the Fear English River is high but the magnitude and significant is indicated as minor before and after mitigation. This appears to indicate that the mitigation proposed will not reduce the magnitude of changes to the ammonia and phosphorus level in the forestry drainage.
- (c) The Applicant is requested to carry out a detailed assessment of the potential for significant effects on health associated with hydrological or hydrogeological effects from private wells within the vicinity of the site.
- (d) The Applicant is requested to demonstrate by way of accurate documentation that there are no existing or permitted wells or boreholes located near the construction sites of the 12 no. wind turbines or near the proposed track and cable route.
- (e) The Applicant is requested to outline the appropriate measures to protect groundwater intended to be carried out.
- 9.(a) The applicant is requested to provide a method statement for the monitoring of potential impacts on Johnstown Bridge during the construction phase of the development and yearly up to two years post construction. This method statement should include details of the following:
- The method of monitoring assessments.
 - At what intervals the applicant shall undertake the monitoring assessments.
 - The qualifications and experience of the person undertaking the monitoring.

- All monitoring assessments and recommendations shall be submitted to the planning authority at agreed intervals as suggested by the monitoring procedure.
- (b) The Applicant is requested to submit details of the measures taken to protect the raised bog during construction.
- 10.(a) The Applicant is requested to provide details as to how the proposed trails will link with each other, be extended and linked with existing or proposed trails in the adjoining landscape.
- (b) The Applicant is requested to submit revised proposal for the access trails to be improved to provide exercise equipment, information boards etc. (see point 11 below).
- (c) It is unclear from the documents submitted what the community gain will consist of. The applicant is requested to submit more details regarding the Green Living Scheme and the potential for an Education Fund.
11. The Applicant is requested to submit an interpretation plan for the proposed development. This plan shall address the following:
- Themes for interpretation i.e. archaeology, landscape, ecology and the workings of and public benefits of a wind farm.
 - Method of interpretation i.e. panels, booklets etc.
 - Expertise used in developing the interpretation.
12. The Applicant is requested to submit revised Air Quality/Dust monitoring during the construction phase and the decommissioning phase of the having regard to the sparse vegetation on site and the proposal to clear 18.43ha of forestry, the potential for dust nuisance exists, particularly during dry weather. The current background levels, the identified sensitive receptors and the existing site characteristics that act as screening should be used as comparison for any future monitoring.
- 13.(a) The Applicant is requested to outline if there are intentions for any future development in the vicinity of the site.
- (b) The Applicant is requested to demonstrate the rationale for the proposed location of the tree replanting in County Offaly.

14. The Applicant is requested to clearly outline all existing and permitted dwellings within 1km radius of the application site to be clearly marked and accounted for on all maps and drawings within the EIAR.
- 15.(a) The Applicant is requested to submit a selection process for the proposed site access and submit potential alternatives.
- (b) Notwithstanding the foregoing and having regard to the level and nature of the proposed trip generation during the construction phase of the proposed development the applicant is requested to submit appropriate mitigation measures for the residential dwelling immediately adjacent to the proposed site entrance during the 18-month construction phase.
- 16.(a) The Applicant is requested to submit details of the proposed selected haul routes for the proposed concrete, sand, gravel and aggregate to and from the application site.
- (b) The Applicant is requested to submit details regarding the sterilisation strip for the MV and HV cables along the roadside.
- 17.(a) The Applicant is requested to submit the following:
- (i) A pre inspection/condition survey on all proposed haul routes to the application site to establish the conditions of the roads.
 - (ii) A drawing showing the necessary slit trench locations and method statements for same to establish the services in the roads.
 - (iii) A detailed drawing shown cable locations and trench reinstatement for proposed cabling.
 - (iv) A drawing showing road closures and road diversion routes for proposed cabling.
 - (v) Letters from all landowners confirming agreement to hedge trimming and pavement works.
 - (vi) A plan detailing how engagement with local residents, businesses and schools will be established and how it is proposed to keep the public, businesses and other relevant bodies informed of potential disruption to traffic flow in the area of the proposed works.
 - (vii) Details of appropriate warning signage along the proposed haul routes and in the vicinity of the proposed site entrance.

- (b) The Applicant is to carry out and submit an independent Road Safety Audit, Stage 1/2 carried out by an independent approved and certified auditor, for the proposed development and surrounding area.
- (c) The Applicant is requested to address, by way of appropriate mitigation, the negative impacts that may arise for the Air Corp as referred to in the correspondence from the Department of Defence on the 30/01/2019 which related to Air Corps taskings in respect of operational flights (including national security tasks), aeromedical services missions and training flights at lower altitudes.
19. The Applicant is requested to demonstrate the proposed development will not impact on any telecommunications structures within a 10km radius of the application site.
- 20.(a) The Applicant is requested to submit documentary evidence which demonstrates that proposed carbon emissions savings and power output outlined within the planning application information is achievable.
- (b) The Applicant is requested to submit by way of appropriate documentation how the proposed development will be able to facilitate a stable and consistent output of energy in times when there is no wind and over the lifetime of the wind farm as the turbines age.
21. All updates and changes to the EIAR document are to be clearly indicated within the updated document.
22. The Applicant is requested to comment on the issues raised within the submissions received.
- 3.3. The applicant responded to these points. The second/final planner's report recommended refusal as set out in the manager's Order.

3.4. Other Technical Reports

- 3.5. The **Irish Aviation Authority** reported no objection subject to an aeronautical obstacle warning system and provision of turbine location coordinates and tip height elevations for the turbines as constructed.
- 3.6. The **Kildare Fire Service** reported no objection.
- 3.7. The HSE Environmental Health Officer (report dated 24th January 2019) recommended that a complaints line be established to monitor reaction of local residents. The CEMP should be adhered to in the proposed development. The EIAR is deficient in reference to potential construction and decommissioning phase dust monitoring, the EIAR is not clear as to if the predicted noise levels are related to the proposed turbine specifications. The commitment to no shadow flicker at nearby residential uses is noted and must be adhered to. The EIAR is deficient in not mapping local wells and therefore may impact on water supplies.
- 3.8. The points were realised in the further information request. The HSE was satisfied with the further information and recommended conditions.
- 3.9. **Meath County Council** commented that the proposed development would not give rise to landscape impacts on the Meath County Council area or protected routes within that country. The proposed development will not give rise impacts to on sites of archaeological interest (Hill of Tara (28kms distant) or Trim Castle (21kms)). The applicants should be required to provide greater detail of the sources of aggregates to be used in the proposed development in counties Dublin, Kildare, Wicklow and Meath and the proposed haul routes.
- 3.10. The **Heritage Officer** reported (8/2/2019) that it was unclear from the EIAR how raised bog within the application site would be protected, no detail was provided as to how the proposed amenity trails within the proposed development would link to wider amenity trails. The community gain measures are not clear. An interpretation plan should be submitted. Detail of the monitoring of Johnstown Bridge should be submitted. An ecological clerk of works should be employed to ensure that the measures set out in the application are adhered to. Archaeological monitoring of the works should be carried out.

- 3.11. After submission of the further information the Heritage Officer recommended a grant subject to conditions.
- 3.12. The **Environment Section** reported that the EIAR does not address the issue of the release of ammonia arising from the excavation of peat. Additional information should be submitted on the specifications of the proposed turbines, transformer and diesel transformer, the proposed daytime noise limit of 40dBA is inconsistent with a measured background level of 29.9dBA, additional noise monitoring should be undertaken at other locations factoring in prevailing winds. Additional assessment of the tonal and vibration components of the turbines, transformer and diesel transformer should be submitted along with the cumulative effects with the adjoining solar farm. The cumulative noise levels should be reduced to 35-38dBA for the turbines and transformers.
- 3.13. Having reviewed the FI the Environment Section recommended a grant of permission subject to conditions.
- 3.14. The **Department of Culture, Heritage and the Gaeltacht** reported that pre-development archaeological testing should be carried out at the site of each turbine and that ongoing archaeological monitoring should be carried during the construction process.
- 3.15. The **Water Services** section reported that no impacts were anticipated on the Fear English River that the site drains into. The bridging of the Fear English River provides for 1:100-year flood event with an additional 20% for climate change. The Flood Risk Assessment is noted, and surface water will be managed properly.
- 3.16. **Water Services** has no further comment subsequent to the FI submission other than that roadside drainage should not be impaired by the proposed development.
- 3.17. **Transport Section** reported that a construction management plan should be submitted and that the solar farm/grid connection on adjoining lands cannot be constructed simultaneously with this development. Pre and post construction road surveys must be submitted. Details of cable locations and trench reinstatement works should be submitted. The agreement of affected landowners to hedge trimming must be submitted. A Road Safety audit should be carried out and incorporated into the design of the proposal. A public information/consultation plan should be submitted. Appropriate warning signage should be detailed.

3.18. The **Transport Department** reviewed the additional information and recommended refusal because of the impacts of the construction phase traffic movements on the L5025/Derrymahon road.

3.19. The **Maynooth Municipal District Office** recommended refusal because of the inadequacy of the L5025/Derrymahon road.

4.0 **Planning History**

4.1. **ABP303249-18** application for permission for 110kV electrical substation with associated electrical plant, electrical equipment, welfare facilities, wastewater holding tank and security fencing. 110kV overhead grid connection cabling, upgrade of existing tracks, new site access roads, all associated site development, and ancillary works at Timahoe East, County Kildare.

4.2. **ABP305953-19** application for permission for a solar farm at Drehid, Mulgeeth, Ballynamullagh, Mucklon, Kilmurray, Killyon and Timahoe East, County Kildare.

4.3. **PA0041/ABP300746-18** Permission granted on appeal for erection of 47 wind turbines with a tip height of up to 169m in 5 no. clusters, access tracks, a substation, a permanent metrological mast, borrow pits and associated works, temporary compounds, temporary alterations to the public road for the delivery of turbines at Ballynakill (10 turbines), Windmill (3 turbines), Drehid-Hortland (21 turbines), Derrybrennan (2 turbines) and Cloncumber (11 turbines), Co. Meath and Co. Kildare with connection via underground medium voltage cables which run predominantly along the public road network to the proposed substation at Drehid and connection via high voltage (220kV) underground cables to one of two existing substations at Woodland, Co. Meath or Maynooth, Co. Kildare, (subsequently altered to connection at Dunfirth). This decision was subsequently quashed by the High Court. The case was reconsidered by the Board under ABP300746-18 and refused for the following.

1. The Board considered that the widely dispersed cluster-based layout adopted in the present proposal would have inevitable adverse effects including a disproportionately large visual envelope, the need for extensive underground cabling in poor quality minor roads and undue proximity to areas of sensitivity from a heritage or residential point of view. The Board considered that in a

situation where such adverse effects were absent the energy output from the proposed development might be realised in a more efficient and less intrusive manner by a more spatially concentrated development. The Board determined that the proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

2. Having regard to the nature, structure and condition of the existing public road network serving the development, which includes substantial sections of substandard legacy roads and to the extensive cable trenching works proposed it is considered that the proposed development could have significant adverse effects on the long term structural integrity of significant elements of the local road network, is thereby likely to give rise to the creation of traffic hazards and to potentially increased maintenance costs to the local authority. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

4.4. PL09.PA0004 Grant permission on appeal for an the extension and intensification of the Drehid Waste Management Facility (developed pursuant to a grant of permission under Kildare County Council Reg. Ref. 04/371 and An Bord Pleanála Ref PL 09.212059) to accommodate an additional 240,000 tonnes per annum of non-hazardous residual municipal waste for disposal for 7 years (over and above the permitted disposal of 120,000 tonnes per annum of non-hazardous municipal waste permitted for a 20 year period) entailing the extension of the landfill footprint by 17.8 hectares (ha); restoration of the site following cessation of waste acceptance; with ancillary facilities including landscaping; additional internal site haul roads (1.3 kilometres (km)); 2 No. additional surface water settlement lagoons (total area 10,528 square metres (sq m); additional security fencing (1.4 km) and all other site development works above and below ground on a total site area of 179 Ha located at Killinagh Upper Carbury, Co Kildare in the townlands of Parsonstown, Loughnacush, Kilkeaskin, Timahoe West, Drummond Coolcarrigan, Killinagh Lower and Killinagh Upper.

5.0 Policy and Context

5.1 International Climate Change Policy.

5.2. The Kyoto Protocol was adopted in 1997 and entered into force as an international agreement under the auspices of the UN to limit, *inter alia*, greenhouse gas emission in the signatory countries in order to tackle climate change. Specifically, greenhouse gases (CO₂, methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and Sulphur hexafluoride (SF₆)) would be reduced by 5% in developed countries and an average reduction within the EU of 8% below 1990 levels before 2012.

5.3 European Policy.

5.4. The EU is a party to the Paris Agreement (2015) which seeks to limit global warming below 2° and make efforts to limit it to 1.5°. The EU's climate and energy framework established union-wide objectives to achieve by 2030,

- At least 40% cuts in greenhouse gas emissions (from 1990 levels).
- At least 32% share for renewable energy.
- At least 32.5% improvement in energy efficiency.

5.5 National Policy

5.6. The **National Planning Framework 2018-2040** sets 10 strategic priorities including building a strong economy supported by enterprise, innovation and skills, enhanced amenity and heritage and transition to a low carbon economy. The NPF states that this transition to a low carbon economy requires,

- A shift from predominantly fossil fuels to renewable energy sources,
- Increasing efficiency and upgrades of appliances, buildings and systems.
- Decisions around development and deployment of new technologies relating to wind, smart grids, electric vehicles, buildings, ocean energy and bioenergy.
- Regulatory frameworks to facilitate this transition.

5.7. The NPF seeks to tackle Ireland's higher than average carbon-intensity per capita and enable a national transition to a competitive, low carbon, climate resilient and

environmentally sustainable economy by 2050, through harnessing the country's prodigious renewable energy potential. Additionally the NPF seeks to support growth and arrest decline in rural areas (NPO15), support rural economic development by supporting the energy industry (NPO 23), reduce our carbon footprint by integrating climate action to limit greenhouse gas to meet national targets (NPO 54) and promote renewable energy as part of the transition to a low carbon economy by 2050 (NPO 55).

5.8. **Regional Policy**

5.9. Kildare is covered by the Eastern and Midland Regional Assembly which has published its Regional Spatial and Economic Strategy 2019-2031 (RSES)¹. The RSES states that it will "support for the development of a safe, secure and reliable supply of electricity and the development of enhanced electricity networks as well as new transmission infrastructure projects that might be brought forward in the lifetime of this plan under EirGrid's (2017) Grid Development Strategy which serve the existing and future needs of the Region and strengthen all-island energy infrastructure and interconnection capacity. With other guiding principles grid connections should be designed to give rise to the least environmental impact (section 10.3). The strategy seeks to;

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

RPO 10.21: Support an Integrated Single Electricity Market (I-SEM) as a key priority for Ireland.

RPO 10.22: Support the reinforcement and strengthening of the electricity transmission and distribution network to facilitate planned growth and transmission/

¹ https://emra.ie/dubh/wp-content/uploads/2020/05/EMRA_RSES_1.4.5web.pdf

distribution of a renewable energy focused generation across the major demand centres to support an island population of 8 million people, including:

- Facilitating interconnection to Europe, particularly the 'Celtic Interconnector' to France and further interconnection to Europe/the UK in the longer term
- Facilitating interconnection to Northern Ireland, particularly the 'North-South Interconnector' and further co-operation with relevant departments in Northern Ireland to enhance interconnection across the island in the longer term
- Facilitating transboundary networks into and through the Region and between all adjacent Regions to ensure the RSES can be delivered in a sustainable and timely manner and that capacity is available at local, regional and national scale to meet future needs
- Facilitate the delivery of the necessary integration of transmission network requirements to allow linkages of renewable energy proposals to the electricity transmission grid in a sustainable and timely manner
- support the safeguarding of strategic energy corridors from encroachment by other developments that could compromise the delivery of energy networks.

5.10. Local Policy

5.11. The **Kildare County Development Plan 2017-2023** is the relevant county development plan for the area.

5.12. Objective ECD 23.

Facilitate and encourage the development of the alternative energy sector and to work with relevant agencies to support the development of alternative forms of energy where such developments are in accordance with the proper planning and sustainable development of the area.

5.13. Policies in relation to electricity supply and infrastructure include.

Objective TN 1 Ensure that planning applications involving the siting of electricity power lines and other overhead cables and their support structures, consider in full, the impacts of such development on the landscape, nature conservation, archaeology, residential and visual amenity.

Objective TN 2 Seek the undergrounding of all electricity, telephone and TV cables wherever possible and specifically in areas of sensitivity, in the interest of visual amenity. Provision should be made for the unobtrusive siting of transformer stations, pumping stations and other necessary service buildings. Pole mounted equipment (such as transformers) will not be permitted.

Objective TN 3 Recognise the development of secure and reliable electricity transmission infrastructure as a key factor for supporting economic development and attracting investment to the area and to support the infrastructural renewal and development of electricity networks in the county.

Objective TN 4 Support the sustainable improvement and expansion of the high voltage electricity transmission power lines and distribution network, subject to human health, landscape, residential amenity, tourism, equine industry and environmental considerations.

Objective TN 5 Require developers to outline in any proposed planning application for high voltage transmission lines:

- (a) the key drivers for the project;
- (b) the manner in which the preferred technological solution has been arrived at, including considerations of alternatives;
- (c) How environmental assessments have informed options relating to undergrounding/partial undergrounding/overgrounding of transmission infrastructure;
- (d) how the preferred route and substation requirements within the county were selected and justification for same, having regard to paragraph (c) above;
- (e) the cumulative impact of the proposal with other planned projects. Where impacts are inevitable mitigation measures shall be clearly outlined.

Objective TN 8 Ensure that the landscape and visual assessment of any proposal focus on the potential of the development to impact upon county landscape designations and important designated sites. Proposed overhead lines shall as far as possible seek to avoid areas of sensitivity (e.g. areas of high amenity, high sensitive landscape designations, scenic views, protected structures etc). Where avoidance is not possible full consideration shall be given to undergrounding the lines.

Objective TN 12 Ensure that proposals for development which would be likely to have a significant effect on nature conservation-sites and/or habitats or species of high conservation value will only be approved if it can be ascertained, by means of an Appropriate Assessment or other ecological assessment, that the integrity of these sites will not be adversely affected except where there are imperative reasons of overriding public interest (IROPI).

Objective TN 13 Seek compliance with any statutory government guidelines issued by the DECLG pursuant to Section 28 of the Planning and Development Act 2000 (as amended). This includes the review by the expert group on "Health Effects of Electromagnetic Fields", Department of Communications, Energy and Natural Resources (2007) and any further reviews.

Objective TN 14 Seek to ensure that there is adequate electrical infrastructure and network capacity to provide a reliable supply to all those working and living in the county, and thereby support national economic growth and social development.

5.14. The site is designated 'high sensitivity' which is class 3 in a 5-point scale of landscape sensitivity in Chapter 14 of the County Development Plan and mapped on map 14.1 of the Plan.

5.15. Objective NH5 in relation to environmental conservation states;

Prevent development that would adversely affect the integrity of any Natura 2000 site located within and immediately adjacent to the county and promote favourable conservation status of habitats and protected species including those listed under the Birds Directive, the Wildlife Acts and the Habitats Directive.

5.16. It is the policy of the Council:

NH 11: To ensure that development does not have a significant adverse impact on rare and threatened species, including those protected under the Wildlife Acts 1976 and 2000, the Birds Directive 1979 the Habitats Directive 1992 and the Flora Protection Order species.

NH 12: To ensure that, where evidence of species that are protected under the Wildlife Acts 1976 and 2000, the Birds Directive 1979 and the Habitats Directive 1992 exist, appropriate avoidance and mitigation measures are incorporated into development proposals as part of any ecological impact assessment. In the event of

a proposed development impacting on a site known to be a breeding or resting site of species listed in the Habitats Regulations a derogation licence, issued by DAHG may be required.

5.17. Section 8.5 of the CDP addresses wind energy².

It is the policy of the Council to:

WE 1 Have regard to the Department of the Environment, Heritage and Local Government's Guidelines for Planning Authorities on Wind Energy Development (or any update of this document) in assessing all planning applications for wind farms.

WE 2 Encourage the development of wind energy in suitable locations in an environmentally sustainable manner and in accordance with Government policy and the Kildare Wind Energy Strategy.

WE 3 Ensure that the assessment of wind energy development proposals will have regard to:

- the sensitivities of the county's landscapes;
- the visual impact on protected views, prospects, scenic routes, historic demesnes as well as local visual impacts;
- the impacts on nature conservation designations, archaeological areas and historic structures, public rights of way and walking routes;
- local environmental impacts, including those on residential properties, such as noise and shadow flicker;
- the visual and environmental impacts of associated development, such as access roads, plant and grid connections;
- the scale, size and layout of the project and any cumulative effects due to other projects;
- the impact of the proposed development on protected bird and mammal species;
- the county's Wind Energy Strategy (when adopted);

²

<http://www.kildare.ie/CountyCouncil/Planning/DevelopmentPlans/KildareCountyDevelopmentPlan2017-2023/Volume1/8.%20EnergyandCommunications.pdf>

- the impact of the grid connection from the proposed wind farm to the ESB network.

WE 4 Encourage small to medium scale wind energy developments within industrial or business parks and support small community-based proposals in urban areas, provided they do not negatively impact on the environmental quality and visual or residential amenities of the area.

WE 5 Adopt a positive approach to small scale wind energy developments for auto-consumption purposes, having regard to the proper planning and sustainable development of the area including residential amenity, heritage, environmental and landscape impacts

5.18. **Objective: Wind Energy**

WEO 1 Prepare a Wind Energy Development Strategy and to publish it as a proposed variation of this plan following the completion of the review of the DECLG's Wind Energy Development Guidelines.

5.19. **Natural Heritage Designations**

5.20. There are three proposed Natural Heritage Areas (pNHAs) that are within European sites; Ballynafagh Lake pNHA, (001387), Ballynafagh Bog pNHA (000391), and The Long Derries Edenderry pNHA (000925) and are considered under the Appropriate Assessment heading below.

5.21. Two NHAs and 4 pNHAs are located within 10kms of the application site but not within the application see. These are;

- Carbury Bog NHA (001388),
- Hodgestown Bog NHA (001393)
- Ballina Bog pNHA (000390)
- Donadea Wood pNHA (001391)
- Royal Canal pNHA (002103)
- Grand Canal pNHA (002104).

5.22. Because none of the sites are within the application site there are no direct impacts. There are no hydrological connections between the application site and these designated sites and therefore there are no indirect impacts. No decommissioning phase or cumulative impacts are predicted for these designated areas.

6.0 The Appeal

6.1. The applicant's grounds of appeal.

- The applicant consulted the planning authority on the most suitable haul routes prior to submission of the planning application. The L5025/Derrymahon Road was confirmed to be the most suitable. This road has already been agreed as suitable for construction traffic for the Timahoe Solar Farm (ABP305953-19). A turbine delivery route was submitted (appendix 12.2 of the EIAR).
- In other cases (for example Hortland Solar Farm planning reference 19/676) a local road was deemed acceptable and in the Board's decision in the Cloncreen Windfarm ABPPA0047 a condition required submission of a transport management plan addressing the issue of site access. A similar condition would be appropriate in this case. Other analogous cases are ABP301619-18 and PL23.239594
- No third-party consents are required for road works as these are confined to the public road corridor in the control of Kildare County Council.
- The application has demonstrated that the delivery route from the R402 to the site entrance is capable of accommodating traffic arising from the proposed development. Any traffic impacts are temporary and confined to the construction period.
- The proposed development complies with national and local policy in relation to renewable energy.
- The site was originally part of a larger development (Maighne Wind farm PL09.300746) where the Board noted in its order that carrying capacity of the local road network was not grounds for refusal of permission.

- The planning authority sought further information in relation to the site access selection process, delivery route selection process, a condition survey of the haul route with details of services along the road, details of cabling, details of road closures/diversion routes, letters from landowners where hedge trimming would be necessary, details of consultations with residents/businesses and schools in the area in relation to traffic management, proposals for appropriate warning signage, submission of a road safety audit. All these issues were answered with the submission of further information.

6.2. Third Party Grounds of Appeal.

- The proposed development will negatively impact on houses in the area through noise, vibration, dust, traffic and general disturbance.
- The proposed industrial development is an inappropriate form of development in a sensitive landscape. The photomontages submitted with the application are inaccurate.
- The proposed development will negatively impact on protected plants, animals, and bird species inside and outside the application site and outside designated habitats. The EIAR is inadequate. The experts employed in the preparation of the EIAR were not competent to do so.
- The applicant has not adequately addressed the impact of haulage routes from all the quarries listed as potential sources of aggregate in the EIAR.
- The EIAR is unclear if the turbine type chosen for the application site has been properly assessed for its impact. The turbines must comply with the EU Machinery Directive 2006/42/EC.
- Section 13.7 of the County Development Plan requires protection for plant, animal and bird species that occur outside European or NHAs/pNHAs.
- There is evidence (from German sources) that turbines have significant impacts on bird mortality.
- Insufficient attention has been paid to the operational phase impacts on badgers and otters.

- The application is not correct in stating that there are no red squirrels within the development footprint.
- The proposed development will give rise to major disturbance to roosting areas, feeding grounds and flight paths for bats.
- Vibration, low frequency noise and infrasound will harm bee populations.
- The impact on the Fear English River has not been properly assessed and this river flows into a SAC.
- The proposed development will give rise to contamination in ground and surface water systems and negatively impact on wells in the area.
- The application is unclear as to how waste generated by the proposed development will be treated.
- The proposed development will give rise to flooding in the area.
- The road network is inadequate to accommodate the proposed development.
- The community gain is insufficient to off-set the disadvantages of the proposed development.
- The Wind Energy Guidelines are out of date and not fit for purpose.
- There may not be enough wind to justify the proposed development.
- There is excessive wind energy production in Ireland when wind is high which leads to fossil fuel stations operating below the optimum thereby increasing emissions. Likewise, two waste to energy plants in the state are required to limit output when too much wind generated electricity enters the grid.

6.3. Applicant Response

- The Derrymahon Road/L5025 is the preferred construction route because of its fair to good condition and the shortest route from the site access to the R402.
- The planned construction phase is 18 months. The peak for construction traffic will be 3 months when a maximum of 270 two-way trips will be required. This is a much smaller scale than the Kilsaran Concrete case 19/1097

referenced in the grounds of appeal. The planning authority's refusal in the Timahoe Solar Farm (ABP305953-19) was unrelated to carrying capacity of the local road network.

- The access is from the Derrymahon road/L5025 beside an occupied house which will be protected by an acoustic barrier the details of which were submitted as appendix 15.1 and 15.2 of the response to the request for further information.
- The significance of impacts identified in the EIAR has had regard to the advice set out in the Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Draft August 2017), the NRA Guidelines for the Assessment of Ecological Impacts of National Roads Schemes 2009) and CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland.

6.4. Planning Authority Response

- The applicant has not demonstrated that he has sufficient legal interest to construct the passing bays on the Derrymahon road/L5025 which would be required to construct the proposed development.
- The applicant has not confirmed the consent of third parties whose rights may be impacted by the proposed development has been obtained.
- The passing bays and visibility between these need to be shown on a drawing,
- Construction details of the passing bays should be illustrated on drawings.

6.5. Observations

6.6. The Department of Defence made an objection as follows;

- The proposed development is located within 20 nautical miles of Casement Aerodrome at Baldonnel.
- The site is beneath restricted airspace which serves to protect military aircraft.

- A significant number of turbines are close to the M4 which is identified as a critical route for access to regional areas of the state especially in poor weather conditions.

6.7. Further Responses

6.8. The Dept of Defence's submission was circulated to comment. The applicant's comments may be summarised as,

- The location of the proposed development complies with the Kildare County Development Plan policies in relation to the safety of Casement Aerodrome.
- The IAA did not object in principle to the proposed development but sought a warning light scheme and location coordinates for the turbines as-built.
- The planning authority raised the issue by way of the request for additional information. Applicant replied that the proposed development would not have any impact on Casement Aerodrome in terms of operational flights, aeromedical services or the use of the M4 as a critical route.
- The planning authority concluded that the site is outside the consultation area for Weston and Casement Aerodromes and the turbines are below the restricted areas B2 and C of restricted area EIR-16 and will not impact in aviation safety.
- The County Development Plan objectives relevant to the application are CAQ1 which requires significant development within 6kms of the casement Aerodrome be notified to the Dept of Defence and CA1 seeks to safeguard the safety of the aerodrome. The applications site is outside the separation distances referenced in the County Development Plan.

6.9. The observers (Kildare Environmental Group and Lorraine Quinn) make the points.

- the applicant fails to distinguish between the needs of civil aviation and military aviation. The latter often occurs close to the ground. Weather conditions, especially low cloud, are often inimical to flights.
- The Government's renewable energy policies have not been subject to SEA.

- The necessity of low flying skills was recently evidenced by fires in the area when the Air Corp helped control bog and forest fires.

7.0 Assessment

7.1. This assessment has three aspects: an environmental impact assessment, an appropriate assessment and a planning assessment. In each assessment, where necessary, I refer to the issues raised by parties in submissions to the Board. There is an inevitable overlap between the assessments, for example, with matters raised falling within both the planning assessment and the environmental impact assessment.

8.0 Environmental Impact Assessment

8.1. The EIAR is broken down into 17 sections.

1. Introduction
2. Description of the proposed development
3. Policy Background
4. Scoping, Consultation and Key Issues
5. Air quality and climate
6. Noise and vibration
7. Biodiversity
8. Land, soils and geology
9. Hydrology and Surface Water
10. Population and human health
11. Shadow Flicker
12. Traffic and Transportation
13. Archaeology, Architecture, and Cultural heritage
14. Landscape and visual
15. Telecommunications and Aviation

16. Alternatives

17. Interactions of the foregoing.

8.2. Chapter 1 Introduction

8.3. The proposed development will comprise up to 12 wind turbines with a tip height of 169m. The development will be connected to an existing substation at Dunferth via underground cabling. The detailed description is as follows.

- Erection of up to 12 no. wind turbines with an overall tip height of up to 169m.
- Construction of foundations and hardstanding areas in respect of each turbine.
- Construction/upgrade of 1 no. site entrance from public road and use of 1 no. existing entrance.
- Construction of approximately 7.8km of new site access tracks and associated drainage.
- Upgrade of approximately 2.5km of existing access tracks and, where required, upgrade of associated drainage.
- Establishment of 2 no. temporary construction site compounds and associated parking areas.
- Construction of drainage and sediment control systems.
- Construction of 1 no. electricity substation including:
 - 2 no. control buildings containing worker welfare facilities.
 - Electrical infrastructure.
 - Parking.
 - Fencing.
 - Wastewater holding tank.
 - And all associated infrastructure, services and site works including landscaping.
- 5 no. Stream Crossings.
- Installation of underground electricity cables between the proposed turbines and proposed on site substation.

- Installation of underground electricity cabling between the proposed on-site substation and the existing substation at Dunfiirth (totalling approx 1.8km, of which approximately 1km will be laid within the public road corridor).
- Installation of joint bays along the cable route.
- Installation of underground communication cables.
- Temporary alterations to the public road at identified locations to accommodate the delivery of turbines.
- Associated site works including berms and landscaping.
- Tree felling.
- Peat excavation.
- A 10-year permission and a 30-year operational life from the date of commissioning of the entire wind farm.

All at Ballynamullagh, Coolree, Drehid, Dunfiirth, Killyon, Kilmurray and Mulgeeth, County Kildare.

- 8.4. The proposed development is necessitated by the requirement to meet the national commitments to combat climate change and the move away from the use of fossil fuels for energy. Furthermore, Ireland is excessively dependent on imported energy and government policy is to reduce this dependence on imported energy through, *inter alia*, the encouragement of a move to wind derived energy supplies.
- 8.5. This EIAR is submitted as part of the planning application having regard to article 3 of the 2014 EIA Directive. Article 3 provides that an environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on;
- population and human health
 - biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
 - land, soil, water, air and climate
 - material assets, cultural heritage and the landscape
 - the interaction between the factors referred to in points (a) to (d).

- 8.6. This EIAR provides the information required by the Directive in 17 chapters along with a Non-technical Summary, appendices and a landscape and visual impact assessment accompanied by photomontages. Cumulative impacts with other identified projects are set out in each chapter.
- 8.7. I consider that the introduction adequately summarises the legislative background and provides a rationale for the preparation of an EIAR. Table 1.1 sets out the qualifications and expertise of the persons who prepared/contributed to the EIAR. In relation to Article 3(2) of the Directive I am satisfied, having regard to the individual aspects on the application assessed in each chapter and the mitigation measures proposed that the proposed development is not susceptible to major accidents. major a
- 8.8. Details of the consultations carried out by the applicant as part of the preparation of the application and EIAR are set out in Chapter 4 and are considered adequate. I am satisfied that the participation of the public has been effective, and the application has been made accessible to the public by electronic and hard copy means with adequate timelines afforded for submissions.
- 8.9. Having reviewed the EIAR I am satisfied that the report, as amended by the further information submitted to the planning authority on the 21st October 2019 complies with article 94 of the Planning and Development Regulations 2001, as amended, and includes the information specified in Schedule 6. The report includes a non-technical summary. I consider that the report adequately identifies, describes and assesses the likely significant effects on the environment.
- 8.10. **Chapter 2 Development Description.**
- 8.11. The applicant has proposed a community benefits package which includes a payment of €1,140 per house within 1km of the windfarm. During the public consultation process engaged in as part of the preparation of the EIAR the local community suggested a 'greener living initiative' which could include works to make local homes more energy efficient, financial assistance to those which would like to use electric cars, the provision of a hot desk office in a local town or village which would be equipped with broadband, the contribution by the applicant to a north Kildare Education Fund, access to investment opportunities in a Renewable Energy Support Scheme, provision of an amenity trail linking to local walking routes.

- 8.12. The site layout is illustrated on Figure 2.2 of the EIAR. The proposed turbines have a tip height of 169m and are three blades bolted to a central hub connected to a gear box in the nacelle. The nacelle is sound insulated within a polyester hood. The turbine towers will be fixed in foundations about 22m wide and 3m deep although this may vary depending on the turbine manufacturer. There will be a transformer within each tower that will convert the electricity from the blades into a more useable form for transmission to the on-site substation.
- 8.13. The turbine delivery route is illustrated on Figure 2.3. Four 'node points' along the route were identified which would need modification to accommodate the movement of the turbine components. These four node points are identified as the Enfield junction of the R402 with the M4, the Johnstown Bridge roundabout on the R402, the junction of the R402 and the Derrymahon road/L5025 and an S bend on the Derrymahon road/R5025. The internal access track is illustrated on figure 2.4. There are 5 water course crossings within the site. No in-stream works are proposed, and a methodology is set out at 2.6.6 aimed at preventing contaminants entering the surface water environment. Piped culverts will be used for minor water courses within the site. Temporary sanitary facilities, canteen facilities, employee parking areas and bunded fuel storage areas are planned as described in 2.6.6.1. Two temporary construction compounds are planned, one close to the site entrance of the Derrymahon road/L5025 and one at the north-eastern end of the site.
- 8.14. The turbines will be connected via an underground cable to an existing substation at Dunferth to the northeast of the site. The cable (see route mapped on figure 2.6) will cross from the application through agricultural land to the local road (L1004) north of the site and east along this road to the existing substation. The road is about 5m wide with additional verges. Ducting will be installed to carry the connection cable. The traffic management along this route will be agreed in detail with the roads authority. The pavement will be reinstated to an equal or improved standard post construction.
- 8.15. An on-site electrical substation will be constructed, and its location is illustrated on figure 2.7. There will be a compound which will be surrounded by a 2.65m fence. A control building will be located within the compound which will include office space and staff welfare facilities for two staff members. Wastewater will be held in a sealed

storage tank and wastewater will be removed off-site for treatment to an authorised treatment plant by an authorised waste collector.

- 8.16. About 18.5ha of commercial coniferous forestry will be felled to accommodate turbine numbers T7, T8, T9, T10, T11 and T12. A felling licence will be necessary and the felling operations will be managed to reduce the potential for surface water runoff in accordance with the Forestry and Water Quality Guidelines³ and Forest Harvesting and Environmental Guidelines⁴.
- 8.17. Decommissioning will be carried out in accordance with Construction Environment Management Plan set out in Appendix 2.2 in volume 3.
- 8.18. I have considered this chapter of the EIAR. I am satisfied that proposed development is adequately described in accordance with the requirements of Schedule 6 of the regulations.
- 8.19. **Chapter 3 Policy**
- 8.20. This chapter sets out in detail the international, European, national, regional and local policy underpinning the proposed development.
- 8.21. The 1992 United Nations Framework Convention on Climate Change (UNFCCC), “Rio Conference” sought to limit growth of greenhouse gases to 1990 levels by 2000. The 1997 Kyoto Protocol imposed obligations on developed countries to limit greenhouse gas emissions by an average 5% reduction below 1990 levels but Ireland, as part of the EU committed to an 8% reduction.
- 8.22. The EU Directive on the Promotion of the Use of Energy from Renewable Resources (2009) provides a target for Ireland of 16% renewable energy consumption for 2020. The EU 2020 Strategy for Growth targets a reduction of 20% in greenhouse gas emissions up to 2030, with 20% of energy coming from renewable resources and a 20% increase in efficiency.
- 8.23. The National Planning Framework (NPF) (section 9.2) supports a transition to a low carbon economy by ensuring,

³ https://www.agriculture.gov.ie/media/migration/forestry/publications/water_quality.pdf

⁴ <https://www.agriculture.gov.ie/media/migration/forestry/publications/harvesting.pdf>

- Shift from predominantly fossil fuels to predominantly renewable energy sources, increasing efficiency and upgrades to appliances, buildings and systems
- Decisions around development and deployment of new technologies relating to areas such as wind, smartgrids, electric vehicles, buildings, ocean energy and bio energy.
- Legal and regulatory frameworks to meet demands and challenges in transitioning to a low carbon society.

8.24. National policy objective 54 seeks to reduce our carbon footprint by integrating climate action into the planning system in support of national targets for climate policy mitigation and adaptation objectives, as well as targets for greenhouse gas emissions reductions. National policy objective 55 seeks to promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.

8.25. The Draft Eastern and Midland Regional and Spatial Economic Strategy (2018)⁵ seeks to strengthen the electricity transmission network to facilitate the planned growth and transmission of renewable energy for an all island population of 8 million. Additionally (section 7.8) the strategy supports a regional shift from fossil fuels, including natural gas, to more diverse range of low and zero carbon resources.

8.26. The Kildare County Development Plan 2017-2023⁶ commits the planning authority (section 8.1) to make every effort to increase energy efficiency and unlock renewable energy potential. Objective WE1 commits the planning authority to have regard to the DOEHLG's Guidelines for Planning Authorities on Wind Energy Development (or any update of this document) in assessing all planning applications for wind farms. Objective WE 2 states that the planning authority will encourage the development of wind energy in suitable locations in an environmentally sustainable manner and in

⁵ https://emra.ie/dubh/wp-content/uploads/2020/05/EMRA_RSES_1.4.5web.pdf

⁶ <http://www.kildare.ie/CountyCouncil/Planning/DevelopmentPlans/KildareCountyDevelopmentPlan2017-2023/Volume1/8.%20EnergyandCommunications.pdf>

accordance with Government policy and the Kildare Wind Energy Strategy⁷. Objective WE3 sets out the criteria for assessing wind energy application as,

- the sensitivities of the county's landscapes,
- the visual impact on protected views, prospects, scenic routes, historic demesnes as well as local visual impacts,
- the impacts on nature conservation designations, archaeological areas and historic structures, public rights of way and walking routes,
- local environmental impacts, including those on residential properties, such as noise and shadow flicker,
- the visual and environmental impacts of associated development, such as access roads, plant and grid connections,
- the scale, size and layout of the project and any cumulative effects due to other projects,
- the impact of the proposed development on protected bird and mammal species,
- the county's Wind Energy Strategy (when adopted),
- the impact of the grid connection from the proposed wind farm to the ESB network.

8.27. Chapter 14 of the County Development Plan incorporates a landscape character assessment. The proposed development is within two landscape character areas Western Boglands and North-western lowlands. The Plan (table 14.3 reproduced in the EIAR) assesses Western Boglands as having a medium compatibility with windfarm projects and North-western lowlands as having a high compatibility with windfarm projects.

8.28. I have considered this chapter of the EIAR. I am satisfied that the policy background is supportive of the proposed development subject to the considerations set out in Objective WE3 of the County Development Plan, the Wind Energy Guidelines and elsewhere as discussed below.

⁷ This has not been published as of July 2020.

8.29. Chapter 4 Scoping, Consultation and Key Issues

8.30. The purpose of the scoping exercise was to establish the main issues which should be addressed in the EIAR. Table 4.1 and table 4.2 lists the planning authority, government departments, NGOs and stakeholders and bodies involved in telecommunications and aviation who were consulted in the preparation of the EIAR. A community liaison officer (CLO) was appointed as the main point of contact with the local community. Letters and brochures were made available to nearby households, this communication and feedback allowed for alterations to the design of the proposed development (including the omission of 2 originally proposed turbines) and increasing the separation distances between the turbines and houses. The key points to emerge from the consultations were minimising shadow flicker, increased separation distances between houses and turbines, mitigating noise by increased separation distances and the inclusion of an amenity trail. A community benefit scheme was developed which emphasised contributions by the developer to a local educational fund, development of an amenity walk, support for locals interested in buying electric vehicles and support for childcare facilities. A contribution will be made by the developer to households within 1km of the turbines of €1,140.

8.31. I have considered the submissions on file and this chapter of the EIAR. I am satisfied that scoping exercise and consultations carried out by the applicant accord with the Code of Practice for Wind Energy Development in Ireland Guidelines for Community 2016 by the Department of Communications, Climate Action and the Environment which provides a reasonable basis for such consultations.

8.32. Chapter 5 Air Quality and Climate

8.33. The EPA is the competent authority in relation to air quality in Ireland under the relevant EU air quality legislation. The EPA has reported air quality in County Kildare is good. Climate in Ireland is determined largely by the gulf stream which ensures that there are not extremes of temperature.

8.34. The principal source of construction phase emissions to the air are dust from earthworks, tree felling, trench excavation along cable routes, construction of access tracks, temporary storage of excavated material, movements of construction vehicles, loading/unloading of aggregates and movement of materials around the

site. Detailed mitigation measures are set out in the CEMP submitted in appendix 2.2 and these may be summarised as,

- Early construction of internal access roads and finishing them in graded aggregate
- Water will be sprayed on access roads and excavation works in dry/windy weather,
- Aggregate/construction loads that might give rise to fugitive dust will be covered,
- Wheel wash facilities will be provided at site exit points to minimise dirt leaving the site,
- Exposed areas of earth will be revegetated as soon as possible,
- Deliveries will be confined to defined/agreed routes,
- A dust control plan will be prepared prior to construction works starting,
- vehicles will be properly maintained and switched off when stationary to minimise exhaust emissions.

8.35. There will be no operational phase emissions to the air.

8.36. In relation to the construction phase carbon emissions and thereby impact on climate it is estimated that the construction of the windfarm will release about 111,488 tonnes of CO₂ but that this will be offset by 2.7 years of operation.

8.37. In terms of cumulative impact, the wind farm will contribute with other renewable energy developments to displacement of fossil fuel-based energy thereby giving rise to a slight positive impact on climate. There is potential for cumulative negative impact arising for air quality if other projects in the wider area including amendments to the Drehid landfill development and solar farms were constructed simultaneously but the implementation of the mitigation measures set out in this chapter will ensure no significant cumulative impacts on air quality.

8.38. I have considered the submissions on file and this chapter of the EIAR. I am satisfied that potential effects on air quality and climate would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that

the proposed development would not have any unacceptable direct, indirect or cumulative effects on air quality and climate.

8.39. Noise and vibration

8.40. Figure 6.1 in this chapter illustrates the windfarm layout, the noise/vibration study area and the dwelling houses in the vicinity of the site. Figure 6.2 maps the five noise monitoring locations around the edges of the application site. These monitoring stations were used to estimate the existing background noise levels in the area as set out in table 6.4 amended as appropriate for a number of windspeeds in metres per second. It is calculated that the background noise levels are low within the study area and that the predicted noise levels would impact one receptor (receptor 74 immediately to the west of proposed turbine number 4) but that the householder has an interest in the application.

8.41. The noise sources during construction phase are identified as construction related traffic, including turbine delivery, preparation of access roads, hardstandings and drainage works, turbine foundation works, turbine erection works, substation construction, grid connection works and berm construction. The construction phase mitigation measures may be summarised as,

- Construction traffic will be limited to standard working hours and will not include Sundays. Construction works will be limited to between 7am and 7pm in accordance with the details set out in the Construction Environment Management Plan.
- The local authority and residents will be consulted on additional measures to limit noise.
- Construction machinery will be properly maintained and fitted with noise suppressant fittings. Machinery will be shut off when not in use.
- There will be periods of higher noise impact related to internal track construction and the grid connection – above 65dB LAeq, 1h but this will not exceed 3 days duration.

8.42. The wind turbines operational phase noise impacts are summarised in table 6.16 and all identified receptors (except for number 74) will experience noise levels within

the Wind Energy Planning Guidelines (2006). There will be no significant noise impact from operation of the substation.

8.43. There are no predicted cumulative impacts arising from the proposed development because there are no wind farms within 10kms of the application site.

8.44. Vibration will typically arise from rock breaking and passing heavy good vehicles. The closest dwelling from the grid connection works is 90m and there is a planning application for a house (at time of EIAR writing) at 45m distance. At these distances vibration from the predicted sources will be imperceptible.

8.45. I have considered the submissions on file and this chapter of the EIAR. I am satisfied that potential effects of noise and vibration would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative noise or vibration effects.

8.46. **Biodiversity and Habitats.**

8.47. Chapter 7 addresses biodiversity.

8.48. The nationally proposed Natural Heritage Areas that are within European sites are,

- Ballynafagh Bog pNHA
- Ballynafagh Lake pNHA
- The Long Derries Edenderry pNHA

And are considered under the Natura 2000 assessment.

8.49. The NHAs/proposed NHAs within 10kms of the application site and not within a European site are,

- Hodgestown Bog NHA
- Carbury Bog NHA
- Ballina Bog pNHA
- Molerick Bog NHA

- Donadea Wood pNHA
- Royal Canal pNHA
- Grand Canal pNHA.

8.50. The application site is not within any of the nationally designated sites and on that basis, there are no predicted direct impacts on these sites. There is no hydrological connection between the application site and these nationally designated sites and on that basis indirect impacts are discounted. This matter is further addressed in the planning assessment below under the heading Ecological Impacts.

8.51. The application site is about 107ha in extent. The loss of habitat covers 33,44ha or about 33% of the site and comprises the areas given over to the footprint of the turbines, roads, temporary compounds, substation and stilling pond. Of the areas to be lost 96% are classed as habitats of low ecological value. Table 7-51 records the habitats within the site and indicates the areas which will be lost to the development works. No raised bogs will be lost as the development has been designed around this habitat. An area, 0.44ha of bog woodland/scrub of local importance will be removed as will 0.6ha of mixed broadleaf woodland.

8.52. Potential impacts on biodiversity have been addressed by avoidance and design through,

- site clearance /hard standing areas have been minimised.
- larger turbines are proposed to avoid a multiplicity of smaller ones.
- site design/layout chosen to avoid designated sites.
- undergrounding all cables reduces risk of bird injury. Grid connection cable will be on agricultural land and public road.
- all watercourses are protected (buffer zones, bridging in place of in-stream works).

8.53. Mammals (excluding bats) identified as using/occupying the study area are badgers, red squirrel, Irish hares, wood mouse, pine martin, otters. Not observed but probably present species include pygmy shrew, Irish stoat, red deer, and hedgehogs. Construction phase mitigation measures for mammals may be summarised as,

- Additional surveys for badgers will be undertaken prior to commencement of works to confirm that the information available is current at that time. Disturbance to badger setts will be minimised in accordance with the NRA Guidelines for the Treatment of Badgers Prior to the Construction of National Road Schemes (NRA 2008)⁸,
- Additional surveys for otters will be undertaken prior to commencement of works to confirm that the information available is current at that time. Disturbance to otters will be minimised in accordance with the NRA Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes (NRA 2008)⁹. One otter holt was identified close to proposed turbines 6 and 7 and this will remain undisturbed.

8.54. Bats were identified on site and it is recognised that the proposed development gives rise potential impact on these mammals. Construction phase mitigation measures will include,

- Five bat boxes will be provided within the site.
- Works will take place in daylight to avoid disturbance to nocturnal activities.
- No works are planned on bridges which are a favourite bat roost location.
- Commuting routes will be reconnected with semi-mature planting.
- Trees will be retained where practical and protected during construction works,
- Lighting will be minimised and/or designed to minimise impact on bats.
- An ecologist will be employed to identify additional areas of importance (for example bat roosts) and further mitigation measures be adopted. Removal of mature broadleaf trees will only occur after individual inspection and where roosts are identified a separate NPWS licence will be obtained.

8.55. The EIAR (7.6.2.1) sets out mitigation measures during the operational phase of the development where the primary mitigation is by design such that a vegetation free

⁸ <https://www.tii.ie/tii-library/environment/construction-guidelines/Guidelines-for-the-Treatment-of-Badgers-prior-to-the-Construction-of-a-National-Road-Scheme.pdf>

⁹ <https://www.tii.ie/tii-library/environment/construction-guidelines/Guidelines-for-the-Treatment-of-Otters-prior-to-the-Construction-of-National-Road-Schemes.pdf>

buffer zone is maintained around turbines and turbines are located at an appropriate distance from trees/groups of trees that provide roosts for bats.

8.56. Aquatic ecology is addressed in the context of the proposed development, farming activities in the surrounding area, peat extraction and five solar farms which have been permitted or proposed within 15kms. Run off from works to the water environment is the major identified risk. The outline CEMP submitted with the application includes a surface water management plan which sets out the main water pollution mitigation measures as,

- The CEMP will be distributed to all sub-contractors working on site.
- Works to facilitate access tracks will be designed to minimise silt run off, silt fences will be constructed on both sides of the access tracks and swales will be placed around turbine bases and hardstandings to prevent silt getting into surface water system.
- 50m buffer zones will be maintained between construction areas and water courses and access tracks will be constructed on bridges.
- Soil heaps will be covered and surrounded with silt fences to prevent sediment release.
- No in-stream works will take place in the salmonid closed season (October /March) which is also the lamprey spawning season.
- Excavated areas where standing water collects will be pumped out into settlement ponds to avoid silt entering water courses.
- Wheel washing facilities will drain to silt traps, concrete wash water will be confined to secured areas.
- Sanitary waste will be removed from site and disposed of under licence.
- Fuel or lubricants will be stored in bunded areas with a capacity of 110% of the quantity stored. Refuelling will take place in designated areas where spill equipment will be kept to deal with accidental spillages.

- Measures to prevent the spread of invasive species will be undertaken in accordance with the NRA document the Management of Noxious Weeds and Non-Native Invasive Plant Species¹⁰.

8.57. Table 7-53 lists the bird species recorded on-site and table 7-54 summarised the significance of impact without mitigation. Construction phase mitigation measures to protect birds using the site will include,

- Limiting vegetation clearance to outside the breeding period of March to August inclusive.
- Works will not be undertaken in the breeding season in areas identified, prior to construction, as breeding sites.
- Construction works will be confined to hours of daylight to avoid disturbance to roosting birds.
- Construction staff will be trained in avoiding disturbance to birds.
- Nest baskets suitable for merlin will be erected at suitable locations. 500m work exclusion zones will be imposed if whooper swan activity is identified on site.
- All works will be monitored by an ecologist.

8.58. Cumulative impacts are identified as arising from land take required to accommodate the proposed development, afforestation within the application site, other windfarms in the area (detailed in Table 7-60), and solar farms. There are no predicted cumulative impacts on terrestrial mammals (excluding bats). Bats will be affected by tree felling during the construction phase but no long-term cumulative impact with other developments is identified. There is a long-term imperceptible impact arising from cumulative collision risk with other windfarms in the wider area.

8.59. I have considered the submissions on file and this chapter of the EIAR. I am satisfied that potential effects on biodiversity would be avoided, managed and

¹⁰ <https://www.tii.ie/technical-services/environment/construction/Management-of-Noxious-Weeds-and-Non-Native-Invasive-Plant-Species-on-National-Road-Schemes.pdf>

mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on biodiversity.

8.60. Land, soils and geology

8.61. Chapter 8 deals with land, soils and geology. The main soils on site are identified as limestone derived till and cut over raised peat. The aquifer is generally poor and ground water vulnerability is assessed a low in areas of peat going to higher on the agricultural land within the application site.

8.62. A peat stability report has been prepared and included as appendix 8.1 of the EIAR. In summary the report finds that very low risk to peat stability within the site.

8.63. Potential construction phase impacts arise from,

- Construction of foundations and hardstanding areas.
- Construction of access tracks, cable trenches.
- Site drainage works,
- Minor alterations to public road to facilitate delivery,
- Construction of substation and site compounds,
- Soil/rock excavation/reuse and storage,
- Drainage,
- Tree felling,
- Machinery movement,
- Storage use of fuels/lubricants,
- The removal of sanitary waste arising during the construction phase.

8.64. Mitigation measures may be summarised as.

- Mitigation has been designed into the development by locating turbines/substation/hardstanding as close as possible to existing tracks. Otherwise the volumes of soil/rock to be excavated have been limited by minimising the length of trench and new access track construction.

- A construction method statement is included in the outline CEMP submitted with the application; this will be refined and modified prior to commencement of development to further ensure slope stability within the site.
 - Earth works will not be undertaken in winter and construction operations will be supervised by suitably qualified and experienced personnel.
 - Works for access tracks, grid connection cable trenches, and substation will give rise to direct permanent impacts on exposed soils and rock but water quality impacts will be managed in accordance with the details set out in chapter 9.
 - Turbine foundations will be 22m diameter and 3m deep. Where bedrock is deeper piles may be required.
 - Refuelling stations will be managed to prevent spills of fuel oils, be located at least 100m from on-site water courses and suitably qualified staff will manage this process.
 - Sanitary waste will be removed from the site by licenced waste contractors.
 - The source protection zone at Drehid will be subject to special mitigation measures to prevent groundwater contamination including locating the substation on an impermeable hardstand to prevent infiltration to ground water, bunding of the substation, transformers, oil storage tanks. The area will be enclosed in a sealed drainage system which will drain to a stilling pond 200m from the inner source protection zone which in turn will drain via a petrol interceptor to the final receiving water course 1km from the substation.
- 8.65. Operational phase impacts will be slight and limited to maintenance traffic and small amount of hydrocarbon use which will be handled by the measures installed at construction stage.
- 8.66. Cumulative impacts are considered having regard to permitted windfarms and solar farms within the wider area. Having regard to the mitigation measures set out in the EIAR, to the generally degraded nature of the area having regard to previous peat harvesting activity, the separation distances between this development and neighbouring windfarms/solar farms, the location of the windfarms in a different

groundwater body it is considered that the cumulative impacts on land, soil and geology will be negligible.

8.67. I have considered the submissions on file and this chapter of the EIAR. I am satisfied that potential effects on land, soils and geology would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on land, soils and geology.

8.68. Hydrology and Water Quality

8.69. Chapter 9 deals with Hydrology and Water Quality.

8.70. Figure 9.1 illustrates the study area, marks the turbine location and maps the main water courses within and adjoining the application the site. Figure 9.2 illustrates that the application site is within the Boyne waterbody catchment. Most of the site (3.35km²) drains to the Fear English river to the northwest of the site. All 12 turbines and 7.8kms of access track are located within this area. A small section of the site (0.03kms²) drains to the River Blackwater to the northeast of the site, this area has no turbines and 297m of new access track is proposed within this area.

8.71. The elements of the proposed development identified as potentially giving rise to surface water contamination are;

- New access tracks and hard surfaces,
- Five new water course crossings
- Drainage associated with the substation located within the outer source protection zone for the Johnstown well,
- Drainage associated with the temporary site compound.
- And drainage arising from excavated material (No borrow pits are proposed).

8.72. A direct impact overall is identified as a 0.12% increase in surface water runoff from the site.

8.73. Indirect impacts include sediment release from access/hard substation construction, surface water drawn down at turbine locations during construction works, release of

sediment related to tree felling, blockages in drains within the site, washing out of excavation and material storage areas, additional flows in road side drain.

8.74. Construction phase surface water runoff mitigation measures will include;

- Appointment of a suitably qualified person to manage the construction phase with responsibility for managing surface water runoff,
- Erosion control and retention facilities to slow runoff and allow silts to drop out,
- Standing water (for instance from turbine foundations) will be pumped into the site drainage system to allow solids to drop out before release to wider environment.
- Excavated materials will be properly stored or used as backfill.
- Refuelling will be confined to designated areas 100m from water courses and managed by trained staff.
- Silt fences, silt traps and swales will be providing at key locations to prevent runoff. Cables will be laid alongside access roads and dug in dry weather.
- The CEMP codifies these measures in a site drainage management plan.

8.75. No water quality impacts are predicted in the operational phase of the development.

8.76. Chapter 9 sets out a flood risk assessment. Two historic flood events are identified in the EIAR within 2.5kms of the site and the site was included in the Eastern CFRAM study. Figure 9.7 maps the predicted fluvial and pluvial flood events as they impact the application site. The additional road/track watercourse crossings within the site will be on culverts which are sized for a 1:100-year event and constructed in accordance with Guidelines on the Protection of Fisheries During Construction Works in and adjacent to Waters¹¹. Generally, windfarms are considered flood compatible in the Flood Risk Management Guidelines. Outside the site a single pinch point is identified as the Clonguiffin Bridge. Modelling for this bridge predicts an increase of 0.01m on the upstream face of this bridge arising from

¹¹ <https://www.fisheriesireland.ie/documents/624-guidelines-on-protection-of-fisheries-during-construction-works-in-and-adjacent-to-waters/file.html>

the proposed development but that the bridge has the capacity to accommodate all flows in the 1:100 year and 1:1000 year flood event.

- 8.77. In relation to cumulative impacts the EIAR makes the point that there are no windfarms with 15kms of the application site. That there is a proposal to expand the Drehid landfill site and that there are three solar farms in the wider area. Additionally, there is rural housing and significant housing developments in towns/villages in the wider area. None of these (because of separation distances and/or location in different water catchments) are anticipated to have significant cumulative impacts with the proposed development.
- 8.78. I have considered the submissions on file and this chapter of the EIAR. I am satisfied that potential effects on hydrology and water quality would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on hydrology and water quality.
- 8.79. **Population and human health and material assets**
- 8.80. Chapter 10 addresses population, human health and material assets.
- 8.81. Population within the wider area is concentrated in the towns/villages of Enfield, Kilcock, Clane, Edenderry, Maynooth and Derrinturn. Figure 10.2 maps the proposed development and identifies the sensitive receptors within 1km of the turbines. The identified receptors are 85 houses, 2 mobile homes, 3 planning applications, 1 derelict houses, 1 commercial property and 2 sheds. The construction phase population impacts are identified as the creation of up to 160 jobs. Between 15 and 20 operational phase jobs are expected.
- 8.82. The factors which may impact during the construction phase on human health and safety include construction activity related health and safety issues, traffic safety during transport of heavy loads, lifting of heavy loads using cranes, working at heights, working with electricity supply, substation construction and laying electrical cables. These factors will be managed in accordance with the Health, Safety and Welfare at Work legislation.
- 8.83. Construction phase mitigation measures will include,

- Works carried out in accordance with Health and Safety Management Plan which is part of the Construction Environment Management Plan set out in appendix 2 of the EIAR.
- Safe Pass will be required of all construction staff.
- A competent contractor will carry out the construction works,
- Site access will be controlled during construction and appropriate warning signage will be erected.

8.84. The operational phase impacts are identified as arising from site access and usability of lands, health and safety standards for people, electromagnetic interference including from cables, health impacts of the proposed amenity trail, vulnerability of the project to natural disasters.

8.85. In relation site access and usability of lands it is concluded that no adverse impacts arising from the sharing the application site with ongoing agricultural activity; there are no additional fencing/barriers proposed to impede livestock movements. In relation to health and safety wind energy developments internationally have an excellent record in relation to the absence of negative health impacts. There is no evidence of wind turbine related noise impacts on humans and this finding is supported by the DOEHLG's Wind Energy guidelines. The turbine blades cease to function if there is a risk of ice being swept from the blades. In relation to electromagnetic interference including from cables there are national and international studies of the impact of electromagnetic fields (EMFs) which demonstrate that there are no long term adverse effects on human, animal or plant health from EMFs from powerlines or other electrical sources. EMFs associated with underground cables decrease rapidly with distance. No cables pass under houses and no impact on homes are predicted. The EMF's associated with the grid connection from the windfarm to the Dunferth substation fully comply with the EU Guidelines. In relation to the health impacts of the proposed amenity trail this trail will encourage people to take regular exercise which will result in health benefits. The site is not close to any SEVESCO site and not vulnerable to any natural disasters.

- 8.86. The impacts on material assets will arise in the case of overhead powerlines, telecommunications and underground services which are addressed in chapter 15. There are minimal impacts arising from the operational phase.
- 8.87. Cumulative impacts are summarised in table 10-13 the construction phase impacts with other projects will be managed in accordance with the CEMP. No significant adverse operational phase impacts are identified.
- 8.88. I have considered the submissions on file and this chapter of the EIAR. I am satisfied that potential effects on population and human health and material assets would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on population and human health and material assets.
- 8.89. **Shadow Flicker**
- 8.90. Chapter 11 addresses shadow flicker impacts. The assessment has had regard to the DoEHLG guidance (2006)¹², Irish Wind Energy Association 2012 guidance, EPA 2017 draft guidance on the information to be contained in EIAR¹³ and EPA 2015 Advice Notes on EIA preparation.
- 8.91. Figure 11.1 maps the likely targets of shadow flicker. Ninety-five buildings are identified as susceptible. A number of assumptions are built into the model to generate a conservative assessment tool for example receptors are assumed to have windows on all sides, any screening is factored out daylight hours are assumed to be constant sunshine. These factors and wind direction (which determines the angle at which the blades will turn) predict that of the 95 identified receptors 47 will potentially experience shadow flicker of 2-5 hours per annum, 40 will potentially experience shadow flicker of 6-10 per annum, 6 buildings will potentially experience shadow flicker of 11-15 hours per annum and 2 buildings will potentially experience shadow flicker of 16-20 hours per annum. When the possibility of cloud cover, screening, absence of windows on some facades, the fact that at between 500m and

¹² <https://www.housing.gov.ie/sites/default/files/migrated-files/en/Publications/DevelopmentandHousing/Planning/FileDownload%2C1633%2Cen.pdf>
¹³ <https://www.epa.ie/pubs/advice/ea/EPA%20EIAR%20Guidelines.pdf>

1000m sunlight is not experienced as being 'chopped' by the blades, when wind is not turning the turbine in the direction of receptors these predicted shadow flicker levels will be reduced.

- 8.92. In mitigation of any shadow flicker the applicant will install a shadow flicker control system. In summary the applicant will shut down the turbines when necessary to eliminate shadow flicker and this will require a shutdown of 0.8% of the total annual operational hours.
- 8.93. There are no neighbouring wind turbines within 2kms of the application site, so no cumulative impacts are predicted.
- 8.94. I have considered the submissions on file and this chapter of the EIAR. I am satisfied that potential effects of shadow flicker would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects of shadow flicker.
- 8.95. **Traffic and Transportation**
- 8.96. Chapter 12 addresses traffic and transportation. The EIAR identifies the turbine delivery route as starting at junction 9 on the M4 (Enfield junction), moving onto the R402 to Johnstown Bridge, then to a junction with the L5025 (locally known as the Derrymahon road) and from there to the site entrance. The cable route is from the site, west along the L1002 towards an existing substation and Dunferth. Table 12.2 summarises the predicted trip generation profile of the windfarm construction phase over the anticipated construction period of 18 months (the table includes HGVs, light vehicles and total trips for a combined figure of 45,955 over the entire period).
- 8.97. The predicted impacts are addressed under the headings of cable routes and grid connection, turbine delivery route and windfarm construction works.
- 8.98. Report makes the point that cable laying on the public road will have a temporary negative impact on local traffic movements but that any one section of road will be disturbed at a time as works move in sequence from one location to another. A construction management plan is included in be the application and this will be refined as required. The turbine delivery route for the M4, along the R402 and Derrymahon road will be managed in accordance with the detailed assessment

presented in appendix 12.2. Some accommodation works (for instance) hedge trimming are required, the turbines will be moved at off-peak times likely at night and managed in conjunction with the Gardai. The report concentrates on the construction phase impacts as there will be negligible additional traffic on the local road system during the operational phases. The haul routes for material from local quarries are mapped in figure 12.7. Generally, haul routes have been confined to national primary and secondary routes with the Derrymahon road being the only local level road used.

8.99. Mitigation measures can be summarised as,

- Impacts have been minimised by design and route selection,
- The turbine route has been chosen to minimise accommodation works,
- Materials haul route have been chosen to keep traffic on the better regional and local roads and away from more unsuitable routes,
- The cable route has been minimised by bringing the site as close as possible to the Dunferth substation,
- The sightlines for the site entrance on the Derrymahon road can be achieved to the north (160m) but visibility is limited (155m) to the south. This minor shortcoming can be addressed by appropriate signage.
- The CEMP has been included at appendix 2.2 and will be augmented as necessary having regard to the advice of the Gardai and the planning authority.

8.100. Cumulative impacts are examined in relation to the amended Drehid waste management facility and other solar farms in the area. The report concludes that some of these developments may give rise to minor additional traffic flows on the R402 in the construction phases.

8.101. Matters related to the traffic impacts were raised in the additional information request and reason for refusal. The additional mitigation measures provided for in the application and appeal address the likely significant environmental impacts which are further addressed by way of conditions set out in the draft order at the end of this report

8.102. I have considered the submissions on file and this chapter of the EIAR. I am satisfied that potential effects on traffic and transportation would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on traffic and transportation.

8.103. Archaeology, Architecture, and Cultural Heritage

8.104. Chapter 13 addresses archaeology, architecture, and cultural heritage. Figure 13.1 maps sites of archaeological interest in the study area of the application site. There is a single national monument within 5kms of the application site; a mortuary chapel on the southern slopes of Carbury Hill. No direct effect is predicted for this monument.

8.105. There are two recorded monuments within the application site – a ringfort and souterrain (KD008-011 and KD001-002). Table 13.11 lists the monuments within 1kms of the site, table 13.12 lists monuments within 1-2kms of the site, and tables 13.13 and 13.14 list protected structures and NIAH listed structures. Table 13.16 lists the protected structures and/or structures listed in the NIAH along the turbine delivery route.

8.106. The mitigation measures adopted include;

- archaeological monitoring of specific aspects of the development where ground works are necessary such as turbine foundations, access tracks, cable routes, substation, temporary construction compounds and earthworks,
- Johnstown Bridge (a protected structure) will be monitored during construction traffic movements.
- The grid connection route will be monitored and particular attention paid to Dunfieth Church and graveyard where the cable route passes on the opposite side of the public road.

8.107. No direct impacts are predicted for any of these sites or monuments during construction or operational phases of the development. Photomontages are submitted to demonstrate that the operational phase landscape changes are slight or insignificant.

8.108. There are no other windfarms within the immediate area of the current application and therefore there are no cumulative impacts. The closest windfarms are in County Offaly and are not visible from the cultural heritage assets in the area of this development. The Drehid waste management facility is 6kms distant.

8.109. I have considered the submissions on file and this chapter of the EIAR. I am satisfied that potential effects on archaeology, architecture, and cultural heritage would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on archaeology, architecture, and cultural heritage.

8.110. Landscape and visual

8.111. Chapter 14 deals with landscape and visual impact. The site is within a 'Flat peatland' landscape type as described in the Wind Energy Guidelines 2006. The guidelines advise that these are suitable areas for windfarms. The Kildare County Development Plan 2017-2023 includes a landscape character assessment and the site is within an area designated as 'Western boglands'. The area is designated as being of 'high sensitivity' which is the median sensitivity in a 5-point rating from class 1 'low sensitivity' to class 5 'unique sensitivity'. Figure 14.7 maps the site relative to the County Development Plan landscape character assessment. Figure 14.10 maps a zone of theoretical visibility (ZTV) and figure 14.11 maps all the public roads within the ZTV.

8.112. Table 14.10 lists the viewpoints selected for assessment that should be read in conjunction with the photomontages. Visual impact mitigation measures may be summarised as follows;

- There is a trade-off between density of turbines and height. In the present case taller turbines have been chosen over lower turbines but a denser concentration of turbines.
- The proposal is for a single cluster of turbines over a spatially dispersed development.

- The minimum set back from the nearest house is 640m which is more than the minimum recommended 500m separation distances.

8.113. The assessment considers the landscape impact on the immediate area (within 5kms) of the site and the wider area (5-30kms). The report concludes that there will be a change in the landscape up to 5kms from the application site and that the turbines will comprise a prominent and defining landscape feature in this area. The landscape impact will be low-medium between 2 and 3 kms and low up to 5kms distant. Thereafter the turbines will become a background feature and beyond 10ks the impact will be negligible.

8.114. Cumulative impacts are assessed having regard to the Clonareen and Yellow River windfarms which are 16kms and 17kms distant respectively. The report concludes that the cumulative impact with these windfarms will be low which means the windfarm will be experienced as one on only a few windfarms in the area, which might contribute to windfarms becoming familiar structures in the area where adverse visual effects are unlikely to occur. Other forms of development (solar farms and the Drehid waste management facility) are also considered and the report concludes that there is only a slight cumulative impact with these developments.

8.115. I have considered the submissions on file, and in particular the additional information and photomontages submitted by the applicant to the planning authority on foot of a request for additional information and this chapter of the EIAR. I am satisfied that potential effects on landscape and visual impact be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on landscape and visual impact.

8.116. Telecommunications and Aviation

8.117. Chapter 15 deals with telecommunications and aviation.

8.118. In relation to impacts on telecommunications the EIAR recognises that wind turbines have a capacity to interfere with telecommunication signals. Near the application site there are five telecoms installations. There is "3" mast within 22m of turbine 8 but is scheduled to be dismantled and a "Towercom" mast whose signals will not be interrupted by the turbines. There is a "Netshare" mast in relation to which

reassurances were sought on the location of T10 and with such assurances the owner has no objection, there is an EIR mast 66m from T10 and mitigation is proposed. Finally, there is an ESB telecoms mast which may require mitigation.

8.119. The EIAR sets out mitigation measures as follows;

- Upgrading telecommunications technology to avoid interference.
- Diverting signals to less affected masts.
- Relocation of telecom masts.
- Replacement of signals with fibre optics.
- Utilise the turbine as a signal tower.
- And combination of the above.

8.120. There will be no impact on TV or radio signals.

8.121. Section 15.3 addresses aviation impacts. Aviation impact can arise from two sources: physical obstruction and interference with radar displays. The applicant consulted the Irish Aviation Authority, the Irish Parachute Club, the Dept of Defence and Dublin Airport Authority. Responses were received by the applicant from the IAA and the Dept of Defence.

8.122. The IAA sought assurances that mitigation measures (including a lighting scheme and exact location of turbines when constructed) could be implemented.

8.123. The application site is 26kms from Casement Aerodrome and outside the air safety restricted area mapped in the County Development Plan. The planning authority (by way of a further information request) sought comments on the concerns of the Dept of Defence. The applicant responded at section 18 of the response to the request for further information (response received by the planning authority on the 21st October 2019) and I have read that material in conjunction with the original EIAR. The applicant's comments are.

- The proposed turbines are below areas B2 and C of restricted area EIR 16 but that these restrictions start at above 1000ft and above and 1500ft and above respectively and the turbines are not within these vertical areas.

- The application site is outside the restricted area for Casement Aerodrome mapped in the Kildare County Development Plan.
- The turbines are 2.593kms from the M4 motor way which is sufficient to ensure that they will not impact on the utility of the motorway as a flight path for the aerodrome.

8.124. These factors and compliance with the IAA requirements are standard safety precautions and can be complied with.

8.125. This chapter of the EIAR does not consider cumulative impacts. Nevertheless, I have considered the cumulative impacts of the proposed development on telecommunications infrastructure and aviation safety with the grid connection (ABP-303249.18) and solar farm applications (ABP305953.19) on the adjoining lands to the south east, the Drehid waste management facility also accessed from the Derrymahon Road/L5025 (the most recent amendments are under file reference ABP300506-17) and the Cloncreen (19.PA.0047) and Yellow River Windfarms both about 16kms distant. Having regard to the material set out in this application (including the submission from the Dept of Defence and the IAA) I conclude that there are no likely significant cumulative impacts on telecommunications or aviation safety arising from this application with these other developments.

8.126. Having regard to the foregoing I am satisfied that potential effects on telecommunications and aviation would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on telecommunications and aviation.

8.127. Alternatives

8.128. Chapter 16 addresses site selection and alternatives. The considerations underlying the choice of site may be summarised as.

- The framework of international, national and local policy supports renewable energy development.
- The availability of a point of connection to the national grid.

- The relatively low environmental and ecological sensitivity of the site and surrounding areas,
- The separation distance from European sites.
- An appropriate landscape including County Development Plan landscape designations.
- Availability of appropriate wind speed on the chosen site.
- Population density and achievable set back from houses and other sensitive receptors.

8.129. The specific layout of the turbines was decided having regard to set back from houses and population centres, proximity to water courses and electricity power lines, landscape and visual amenity, impacts on birds, soils/geology, water courses and ground water constraints noise and potential impact on cultural heritage.

8.130. The choice of site and layout is the optimum having regard to these factors. Three grid connection cable routes were assessed, options, A, B and C. Option B is the chosen route because it has the least impact on houses, recorded monuments and requires least works to the public road.

8.131. The EIAR also considered alternatives such as offshore wind, solar energy, bio-energy and concludes that a cluster of 12 turbines has least environmental impact given constraints on the site.

8.132. I have considered this chapter of the EIAR in relation to the choice of site for the windfarm and alternatives to the chosen route for the grid connection. I am satisfied that the choice of site and grid connection route are reasonable and that impacts would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on the environment by virtue of the choice of site or grid connection route.

8.133. Interactions between the factors.

8.134. Chapter 17 considers the interactions between key environmental aspects of the proposed development and these are summarised in table 17-2 of the EIAR. The

chapter concludes that a combination of careful design and layout and mitigation measures where necessary and appropriate as set out in separate chapters are sufficient to avoid or mitigate to an acceptable degree the identified likely significant environmental impacts arising from the proposed development.

8.135. I have considered this chapter of the EIAR. I am satisfied that the interactions between the factors identified earlier in the report are adequately identified and that impacts would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on the environment by virtue of the likely interactions between the factors discussed.

8.136. Reasoned Conclusions.

8.137. Having regard to the examination of environmental information contained above, and to the submissions on file the main significant direct and indirect effects of the proposed development on the environment are as follows:

- Potential impacts on water quality are considered under the relevant headings. The site drains to the Fear English River which is a tributary of the River Blackwater and subsequently the River Boyne. There are a number of identified private and public wells within the wider area. Measures to prevent the release of sediments or hydrocarbons (including avoiding in-stream works, prevention of fuel/lubricant spills, limiting ground disturbance to the minimum required and preventing of silt laden surface water runoff) are set out in the EIAR are specific and practicable. The proposed development, therefore, will not give rise to water pollution in the water courses within the site, in the Fear English River or in the wider Blackwater/Boyne catchment or in the aquifer underlying the application site and it is concluded that significant water quality impacts are not likely to arise.
- The EIAR has reasonably identified construction related noise as having potential impact on residential amenity. Construction phase impacts in the form of short term increases in the traffic (private cars and HGVs) on the local road network are recognised, addressed in the EIRA and, specifically in the

Construction and Environment Management Plan (appendix 2-2 of the EIAR). The noise and vibration mitigation measures, such as the limiting of construction hours in accordance with a submitted CEMP, the use of plant with low potential of noise and / or vibration and consultation with local residents are reasonable and practicable. Noise and vibration levels would be within acceptable emissions limits during normal operation.

- Impacts on biodiversity are likely to arise during construction works due to the removal of trees and soil/subsoil in preparation for the construction of the roads, turbine bases and the grid connection cable. It is noted, however that these areas are generally brownfield areas which have been subject to anthropogenic activity (commercial tree planting, drainage ditches and agriculture) and are of relatively low ecological importance. The impacts arising from the removal of habitat and disturbance would be mitigated by minimising the removal of existing vegetation, avoiding avian breeding seasons and reinstatement of vegetation and following best practice and procedures during the construction phase.
- The site is a relatively flat site which is not prominent in views over a wide area. Landscape and visual impacts will be mitigated by separation distances from receptors especially residential uses and designated scenic views from the local road network. No unacceptable visual impact will arise from the proposed development.
- Impacts on greenhouse gas emissions (in particular CO₂) will be positive because the proposed development facilitates the transition from fossil fuel dependent energy sources to renewable sources and the connection of a renewable energy source to the national grid.

9.0 Appropriate Assessment

- 9.1. The application provides an appropriate assessment screening report and a NIS (appendix 7.1). Figure 5.1 in the report maps the European sites within 15kms of the application site and figure 4.2 maps the hydrological links between the application site and the European sites.

9.2. Appropriate Assessment Screening

9.3. The identified European sites within the zone of influence are;

- Ballynafagh Lake SAC (001387) 7.9kms distant,
- Ballynafagh Bog SAC (000391) 8.6kms distant,
- Mount Hevey Bog SAC (002342) 14.48kms distant,
- Mouds Bog SAC (002331) 14.4kms distant,
- The Long Derries Edenderry SAC (000925) 7.3kms distant,
- River Boyne and River Blackwater SAC (002299) 9.6kms distant,
- River Boyne and River Blackwater SPA (004232) 9.6kms distant.

9.4. Having regard to the published advice from the NPWS¹⁴, the separation distances between the application site and identified European sites and the mapped hydrological connections I conclude that this zone of influence is reasonable.

9.5. The conservation objective for Ballynafagh Lake SAC (001387) is to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. The qualifying interests are Alkaline fens 7230, Desmoulin's Whorl Snail 1016 and the marsh fritillary butterfly 1065.

9.6. The conservation objective for Ballynafagh Bog SAC (000391) is to maintain the habitats and species within Natura 2000 sites at favourable conservation condition which will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. The qualifying interests are Active raised bogs 7110 Degraded raised bogs 7120 still capable of natural regeneration and Depressions on peat substrates of the Rhynchosporion 7150.

9.7. The conservation objective for Mount Hevey Bog SAC (002342) is the maintenance of habitats and species within Natura 2000 sites at favourable conservation condition which will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. The qualifying interests are Active

¹⁴ https://www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf

raised bogs 7110, Degraded raised bogs still capable of natural regeneration 7120 and Depressions on peat substrates of the Rhynchosporion 7150.

- 9.8. The conservation objective for Mouds Bog SAC (002331) is the maintenance of habitats and species within Natura 2000 sites at favourable conservation condition which will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. The qualifying interests are Active raised bogs 7110, degraded raised bogs still capable of natural regeneration 7120 and Depressions on peat substrates of the Rhynchosporion 7150.
- 9.9. The conservation objective for The Long Derries Edenderry SAC (000925) is to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. The qualifying interest is semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (important orchid sites – which is a priority habitat) 6210.
- 9.10. The conservation objective for River Boyne and River Blackwater SAC (002299) is the maintenance of habitats and species within Natura 2000 sites at favourable conservation condition which will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. The qualifying interests are; Alkaline fens 7230, Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae – a priority habitat) 91E0 and River lamprey 1099, salmon 1106 and otters 1355.
- 9.11. The conservation objective for River Boyne and River Blackwater SPA (004232) is the maintenance of habitats and species within Natura 2000 sites at favourable conservation condition which will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. The qualifying interest is the kingfisher bird.
- 9.12. The screening assessment concludes in relation to Ballynafagh Lake SAC (001387), Ballynafagh Bog SAC (000391), Mount Hevey Bog SAC (002342), Mouds Bog SAC (002331) and the The Long Derries Edenderry SAC (000925) that the application is not located in any of these European sites, that therefore there are no direct effects on European sites and that there is no hydrological connection between the application site and these European sites. I conclude that it is reasonable on the

basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on these European sites in view of the sites' Conservation Objectives, and a Stage 2 Appropriate Assessment (and submission of a NIS) is not therefore required in relation to these European sites.

9.13. There is a hydrological connection between the application site and the River Boyne and River Blackwater SAC (002299) and River Boyne and River Blackwater SPA (004232) and the applicant has submitted a NIS addressing the potential for impacts on these sites. I agree that there is a hydrological connection through the Fear English River and associated watercourses between the application site and these European sites and that having regard to the source-pathway-receptor model it cannot be ruled out that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on the River Boyne and River Blackwater SAC (002299) and River Boyne and River Blackwater SPA (004232), in view of the site's Conservation Objectives, and a Stage 2 Appropriate Assessment (and submission of a NIS) is therefore required.

9.14. **Appropriate Assessment – NIS**

9.15. The conservation objectives and the qualifying interests for the River Boyne and River Blackwater SAC (002299) and River Boyne and River Blackwater SPA (004232) are set out above

9.16. The appeals make the point that there are potential impacts on European sites including through pollution in the Fear English River. Table 6.2 in the NIS identifies the potential impacts on the European sites as arising from.

- silt or pollution to water courses within the site and such pollutants making their way to the European sites.
- The introduction of invasive species or other biohazards during the construction phase.
- The disturbing to otter holts/couches during construction works,

9.17. Mitigation measures are proposed as follows;

- Hardstanding areas/site clearance will be minimised to reduce impact on habitats and fauna,
- Larger turbines are proposed to minimise the number of turbines,
- The site has been designed to minimise impact on designated sites,
- All cabling will be undergrounded to minimise collision risk for birds. The cable route is on agricultural grassland and public road verges.
- Adequate buffer zones between works and water courses which prevent impacts on hydrology and five stream crossings are on bridges avoiding in-stream works,
- Works near watercourses will be carried out in accordance with NRA best practice guidelines.
- A water quality monitoring programme will be maintained, including daily and fortnightly visual inspections and ongoing chemical and biological analysis of the water courses on site.

9.18. The qualifying interests (both habitats and species) of the River Boyne and River Blackwater SAC (002299) rely on maintaining water quality therefore I conclude that because there will be no negative impact on water quality it may be concluded that there are no impacts on the quality interests. In relation to the SPA the qualifying interest is the kingfisher which is also dependent on the quality and availability water-based feeding habitats. Since there will be no impact on water quality within the SPA arising from the proposed development, I conclude that there will be no impact on the kingfisher.

9.19. Having regard to the conservation objectives for these sites and their qualifying interests, to the potential effects arising from the proposed development (which have been adequately identified in the NIS submitted with the application), to the source - pathway-receptor-model and the mitigation measures proposed in the application I consider it 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 or projects would not adversely affect the integrity of the River Boyne and River Blackwater SAC

(002299) and River Boyne and River Blackwater SPA (004232) or any other European site, in view of the sites' Conservation Objectives.

10.0 Planning Assessment

10.1. This planning assessment will address;

- the refusal reason
- aviation safety
- wind energy policy
- adequacy of wind resources
- impact on residential amenity
- noise/infrasound
- Waste management
- landscape impacts
- ecological impacts
- water quality impacts
- flooding
- community gain
- wind turbine specifications.

10.2. Reason for refusal.

10.3. The planning authority refused permission because (a) the road network is substandard and (b) the applicant does not have sufficient legal interest to carry out the road improvements works required to accommodate construction phase traffic.

10.4. The application includes a turbine delivery route report (appendix 12.2.) which is based on delivery of 68m long blades and tower sections on rigid trailers up to 42m long. The route comes off the M4 at Enfield, through Johnstown Bridge along the

R402 Johnstown Bridge to Carbury Road. There is then a left turn onto the L5025/Derrymahon Road and the site access is on the L5025.

- 10.5. The application identified 4 pinch points on this route. The first is the roundabout at Johnstown Bridge where shrubs within the roundabout and roadside signs would need to be temporarily removed to accommodate the passage of the blades and tower sections. The second pinch point is the exit off the R402 onto the L5025 where road signage and a light will also be removed. There is then a bend on the L5025 where there are impacts on both sides of the road; on the eastern side the machinery will over sail the roadside boundary and part of the roadside hedge will require trimming and on the western side of the road the bank must be removed and hardcore laid.
- 10.6. The planning authority (see question 17 (v) of the FI request) asked for letters from affected landowners agreeing to the hedge trimming and pavement works anticipated in the delivery route report. The applicant (see page 345 of the FI response) states that the hedge trimming can only be detailed closer to the time of turbine/turbine blade delivery as on-the-ground circumstances may vary. Secondly additional/new transport technology is available whereby turbine blades can be raised to vertical position which would avoid the necessity for roadside works.
- 10.7. The Transport Section reviewed the additional information and recommended refusal on the grounds of inadequate roads infrastructure. I consider this issue is, essentially, an aspect of construction phase management. Applicants for permission are, generally, not in a position to carry out works outside the application site and the present applicant will have to liaise with the road's authority and/or Garda Síochána traffic management to facilitate the construction process. This is not a unique situation and insufficient reason to refuse planning permission. Additionally, the applicant makes the point that alternatives to amendments to the public road layout are available, for instance, raising the turbine components to the vertical from the transport trailers.
- 10.8. The second point in the planning authority's refusal reason is a general point about the suitability of roads infrastructure in the area. The R402 Johnstown Bridge to Carbury is a regional route with two lanes and hard shoulders for most of its length which would be traversed by construction traffic (although the hard shoulder is not present closer to Johnstown Bridge). There is a left exit lane from the R402

approaching the junction of the L5025 and a ghost island separating the two traffic lanes. The application states that there is a street light at this junction which requires removal – there was no such a light in place during my site visit but there are overhead telephone wires which may require consultation with third party telecoms providers in the event that turbine blades are to be raised to vertical. Where works are necessary at the Johnstown Bridge roundabout these can be a matter of agreement between the developer and the planning authority and the reimbursement of the planning authority in accordance with the provisions of section 48 (2)(c) of the Act. I conclude that this road is adequate to accommodate turbine delivery and other construction related traffic.

10.9. The planning authority's engineering advice references specifically the inadequacy of the Derrymahon road/L5025. This is more problematic than the R402 and is without a median line or public footpaths. Nevertheless I consider that it is adequate to accommodate short term construction traffic and that a condition requiring the applicant to make a financial contribution under section 48(2)(c) is an appropriate mechanism to make good any damage to the Derrymahon road/L5025 arising from the construction or turbine delivery phases of proposed development. Where haul routes for aggregates are damaged the proposed bond condition set out in the draft order below will allow the roads authority to apply some or all of the bond monies to remediation of the wider road network.

10.10. Aviation Safety.

10.11. The Minister for Defence made a submission to the planning authority at application stage and to the Board at appeal stage making broadly similar points.

- The proposed development is located within 20 nautical miles of Casement Aerodrome at Baldonnel.
- The site is beneath restricted airspace which serves to protect military aircraft.
- A significant number of turbines are close to the M4 which is identified as a critical route for access to regional areas of the state especially in poor weather conditions.

10.12. The planning authority sought additional information from the applicant (see point 18 of the FI request) in relation to impacts on Air Corps operational flights (including national security tasks), aeronautical services and training flights. The applicant replied that the proposed turbines are below areas B2 and C of restricted Area EIR-16 but that these restricted areas extend vertically from 305m and 457m above mean sea level respectively and that the turbines do not enter vertically into this restricted area. In relation to the windfarm being located within 20 nautical miles of the Air Corp HQ the applicants commented that this is not a recognised distance in any of the air safety guidance documents. There is no guidance on proximity of wind turbines to motor ways but in any case the separation distance between the turbines and the M4 is 2.593kms and the turbines will not impact on the use of the M4 as a navigation route for air corps aircraft.

10.13. The current county development plan was adopted in 2017 and included objectives in relation to aviation management in chapter 6. The county development plan states that there are general restrictions in the vicinity of aerodromes and that the Irish Aviation Authority (IAA) should be asked to evaluate certain applications. The plan recognises that Casement Aerodrome being a military aerodrome does not fall within the control of the IAA but that the standards of the International Civil Aviation Authority are generally applied by the Dept of Defence. Objective GA 4 requires that the planning authority consult with the IAA in relation to applications in the vicinity of aerodromes for development in excess of 45m high. Policy CA1 is to "safeguard the current and future operational, safety and technical requirements of Casement Aerodrome and to facilitate its ongoing development for military and ancillary uses within a sustainable development framework". And objective CAO 1 is to "refer significant / major new development within approximately 6km of Casement Aerodrome or at Killeel, to the Department of Defence".

10.14. The County Development Plan does not refer to the motor way system within the County as a guidance route for air traffic.

10.15. It appears from the IAA guidance and available sources that IAA standards are generally applied by the Dept. of Defence but are not mandatory for that organisation. Nonetheless I consider it reasonable to assume that the planning authority had regard to the views in the Dept. of Defence when adopting the plan. It may be further noted that the IAA commented on the application and reported no

objection subject to a lighting scheme on the turbines and precise coordinates for their as-built locations.

- 10.16. Map V1-6.2 – Aerodrome Context map illustrates the location of Casement and other aerodromes and Map V1-6.5 illustrates approaches to two runways at Casement Aerodrome. The application plots the approximate location of the application site between Derrinturn and Timahoe crossroads on Map V1-6.2 – Aerodrome Context and I agree with the applicants that the site lies well outside any mapped safety zone. The space around aerodromes is divided into an inner horizontal surface, a conical surface and an outer horizontal surface¹⁵. The inner horizontal surface is a horizontal plane (IHP) above an aerodrome and its environs. The conical surface slopes up and out from the IHP and thereafter is the outer horizontal surface (OHS). The OHS is a specified portion of a horizontal plane around an aerodrome beyond the limits of the conical surface and within which obstacle heights should be controlled. The OHS around Casement aerodrome is mapped in chapter 6 of the County Development Plan and the application site is not within this OHS. I conclude therefore that the standard aviation safety standards applied by the IAA are not breached in this case.
- 10.17. The Department of Defence makes a separate point that the turbines are beneath a restricted airspace EIR 16. The applicant makes the point that this are space designation starts at 1000ft/305m above ground and is not interrupted by the proposed turbines.
- 10.18. Having regard to the provisions of the Kildare County Development Plan, the submissions by the Dept of Defence, Irish Aviation Authority, the applicant's response to the further information request made by the planning authority and the applicants response to the submission by the Dept of Defence and subject to compliance with condition 8 in the draft order set out below I conclude that the proposed development will not impact air traffic movements or the operational needs of Casement Aerodrome.

¹⁵ [https://www.iaa.ie/docs/default-source/publications/advisory-memoranda/aeronautical-services-advisory-memoranda-\(asam\)/guidance-material-on-aerodrome-icao-annex-14-surfaces.pdf?sfvrsn=e2ae0df3_6](https://www.iaa.ie/docs/default-source/publications/advisory-memoranda/aeronautical-services-advisory-memoranda-(asam)/guidance-material-on-aerodrome-icao-annex-14-surfaces.pdf?sfvrsn=e2ae0df3_6)

10.19. Wind Energy Policy

- 10.20. The international, national and local policy basis underpinning renewable energy development is set out in Chapter 3 of the EIAR and is summarised at section 5 above. The EU and therefore Ireland is a party to the Kyoto Protocol which aims to reduce the use of fossil fuels in the generation of energy supplies thereby cutting greenhouse gases which are a factor in climate change. The NPF (2018/2040) sets out several objectives which supports a move from fossil fuels to renewable energy supplies and the linking of these sources to the national grid.
- 10.21. Wind Energy Development Guidelines (DoEHLG 2006) sets out advice to planning authorities in relation to the development of policy and development management practice in relation to wind energy development. The Guidelines make the point that the development of renewable energy sources is a European and national priority. Development Plans should be positive in supporting the provision of renewable energy, seek to maximise the potential of wind energy, identify on maps areas where wind energy development is appropriate and recognise the potential for smaller wind energy projects in urban and industrial areas.
- 10.22. The Guidelines offer advice in relation to environmental impacts of wind energy developments on, *inter alia*, habitats, birds, geology, archaeology. The noise impacts should be assessed particularly for residential amenity. Shadow flicker is also addressed. Siting and layout considerations should be transparent in wind energy applications.
- 10.23. The appeal makes the point that the 2006 Guidelines are out of date and not fit for purpose. I have had regard to the 2006 Guidelines and considered the draft amended guidelines (2019) (which to an extent repeat the advice in the earlier guidelines) - I have considered the requirements under separate legislation to carry out an assessment of the likely significant environmental impacts of the proposed development and an appropriate assessment of the effects on European sites and the planning assessment criteria set out in Objective WE3 of the County Development Plan. I conclude that an assessment of the likely significant environmental and planning impacts of the proposed development can be adequately carried out within this overall policy guidance framework.

- 10.24. The Kildare County Development Plan states that it will encourage the development of wind energy developments in suitable locations in an environmentally sustainable manner in accordance with Government policy and the Kildare Wind Energy Strategy. This strategy has not been adopted to date. Nonetheless the Development Plan objective WE3 sets out a set of criteria (landscapes sensitivity, the visual impacts, ecological, archaeological areas and public rights of way and walking routes, impacts on residential properties from noise and shadow flicker, any cumulative effects with projects, impacts on bird and mammal, the county's Wind Energy Strategy (when adopted) and the impact of the grid connection from the proposed wind farm to the ESB network) which will form the basis for an assessment of wind energy developments.
- 10.25. Having regard to this brief policy review and subject to other assessment criteria, including those set out in the objective WE3 in the County Development Plan and the Windfarm Guidelines I conclude that there is a presumption in favour of wind energy developments and connection to the national grid.
- 10.26. **Adequacy of Wind on Application site.**
- 10.27. The appeal makes the point that the wind speeds/strength in the area of the application site are inadequate and make the site unsuitable for wind energy developments. The EIAR (see paragraph (2.5) makes the point that whereas previously coastal areas with higher winds speeds were the optimal location for wind energy projects changes in technology (larger rotors and bigger sweep areas) have opened up areas in the midlands and east of the country as potentially suitable locations for wind energy developments. The EIAR additionally (see section 16.2.5 on alternatives) states that the windspeeds are moderate to good quality in the application site.
- 10.28. Having regard to the foregoing I conclude that adequate wind speeds are available on the application site.
- 10.29. **Residential Amenity Impacts**
- 10.30. The appeal makes the point that the planning authority's reason for refusal did not refer to impacts on the residential amenity of houses on the Derrymahon road/L5025 from noise, dust, vibration, traffic and general disturbance.

10.31. The application predicted that there will be noise impacts during the construction phase of the proposed development but that these can be managed/mediated by measures such as limiting construction hours and avoiding Sunday working. Additionally, construction related machinery can be fitted with noise suppressant fittings and switched off when not in use. Having regard to these mitigation measures and to the conditions set out in the draft order below I consider that the construction phase noise impact on the houses in the area will be acceptable. The assessment accompanying the application makes the point that the operational phase noise impacts will be within the limits set out in the Wind Energy Guidelines (2006), which limits I consider are sufficient to protect residential amenity.

10.32. Having regard to the form of development proposed – relatively shallow foundation for turbines, substation and the grid connection cabling and in the light of the assessment relation to vibration impact set out in the application I conclude that the proposed development will not unreasonably impact on residential amenity by reason of vibration.

10.33. The sources of dust identified in the EIAR are earthworks, tree felling, trench excavation along cable routes, construction of access tracks, temporary storage of excavated material, movements of construction vehicles, loading/unloading of aggregates and movement of materials around the site. The mitigation measures include early construction of the internal road system, spraying exposed surfaces with water to dampen them in dry/windy periods, covering loads to the site, providing wheel wash facilities before vehicles enter the public road and dust suppressant measures set out in the CEMP.

10.34. In relation to traffic impacts I note that the application predicts that the construction phase will extend over 18 months and give rise to about 46,000 individual vehicular trips over that period. Appendix 17.2 of the EIAR includes a road safety audit and conditions set out in the draft order below require the applicant to contribute to the maintenance of the local road network where construction traffic impacts on the safety/maintenance of the network. Whereas the construction period and construction traffic will be noticeable I consider that the traffic management measures set out in the application and the requirements of the conditions set out below will ensure that the impacts are managed in a manner to adequately protect road safety and residential amenity on the road network.

- 10.35. Having regard to the foregoing I conclude that the proposed development will not seriously injure the residential amenity of property in the vicinity of the application site.
- 10.36. **Waste management.**
- 10.37. The appeal makes the point that the application is unclear on the point of waste management within the site. The EIAR (paragraph 8.5.1.2) provides as a construction phase mitigation measure that containerised toilets and staff welfare units will be provided on site during the construction phase and sanitary waste will be removed by a licensed waste contractor. I consider that this is a reasonable measure to prevent contamination of ground/surface water resources.
- 10.38. Additionally, the application predicts between 15 and 20 direct jobs arising from the proposed development but is unclear if some or all of these are expected to arise on site. In this regard it may be noted that no permanent sanitary facilities are proposed in the application. Nonetheless I consider it unlikely that these jobs would be permanently located within the application site and I recommend that this point may be addressed by a condition requiring the applicant to agree waste management arrangements with the planning authority prior to commencement of development.
- 10.39. **Landscape Impacts.**
- 10.40. The appeal states that the proposed development will unacceptably impact on landscape quality.
- 10.41. The site is located in the "western bog lands" in the landscape character assessment carried out by the planning authority and incorporated into the Kildare County Development Plan. This designation is described in the County Development Plan as an area with "reduced capacity to accommodate uses without significant adverse effects on the appearance or character of the landscape having regard to prevalent sensitivity factors." The County Development Plan estimates the compatibility for windfarm development is characterised as 'medium'. The application provided a visual impact assessment in Chapter 14 of the EIAR and an accompanying set of photomontages.
- 10.42. The planning authority at points 2(b), (c), (d), (e), (f) and (g) sought additional information on the visual impacts of the proposed development.

10.43. The EIAR maps a zone of theoretical visibility (see Figure 14.8) and provides a theoretical visual intensity map (see Figure 14.10). Of the material submitted with the application of particular note is the route screening analysis which assesses the visual impact of the proposed turbines from the public roads within 5kms of the application (Figure 14.11) and a similar exercise was carried out for the royal canal (figure 14.14). This is a reasonable proxy for the turbine visibility from nearby houses also because they are generally along the public road network. This assessment was augmented by the photomontages submitted as volume 4 with the original EIAR and by the additional photomontages submitted along with the further information in September 2019.

10.44. I carried out a site inspection which included the application site, the immediately adjoining lands, and the local road network. The application makes the point that visual impacts and visual clutter will be experienced most strongly within 2-3kms of the application site. The application has set out to mitigate these impacts by using fewer, taller turbines rather than a multiplicity of smaller ones which reduces clutter while still generating the equivalent amount of electricity. The layout has been consolidated and the closest house is 640ms from a turbine.

10.45. The Windfarm Guidelines (DoEHLG 2006) refer to windfarm development within flat peat lands and advises that these landscapes are often characterised by longer straight roads, a sense of remoteness and horizontal or flat perspectives.

10.46. The site is within a relatively flat landscape and given the height of the proposed turbines they will be visible from vantage points. Nonetheless I consider that the application, as amended by the further information, fairly assesses the visual and landscape impact of the proposed development. The viewpoints chosen and illustrated in the photomontages are representative of the more sensitive landscapes and views obtainable from these landscapes towards the proposed development. I conclude, having regard to the material submitted with the application and appeal and my site inspection, that the proposed turbines will not seriously injure the visual amenity or landscape character of the area.

10.47. The County Development Plan designates a number of scenic routes within the County that are of special amenity value which it is necessary to preserve. The application identified the scenic routes with potential to be affected by the proposed

development and lists them in table 14.9 in the EIAR. I have cross referenced these selected routes with the scenic routes listed in Table 14.5 of the County Development Plan and I agree that these are the routes which have the potential to be impacted upon by the proposed turbines.

10.48. The relevant viewpoints in the photomontages are;

- views 4 and 6 for scenic route 20 - views of Plains of Kildare and West Central Boglands, views to and from Newtown Hills (including county roads 5027, 1007).
- view 15 for scenic route 28 - views from county roads (L5017 & L5026) of Carbury Castle and Hill and Teelough road junction with the R402 and the upland area at Mylerstown,
- view 23 for route 6 - views of Robertstown countryside and views across the Canal,
- view 24 for route 8 - views of bogland Plains; L3002 from Kilmoney crossroads to Feighcullen crossroads at Boston Hill,
- view 22 for route 38 - views of Allenwood to Lullymore Local Road.

10.49. Additionally, there are two canal views represented in photomontages VP23 and VP21.

10.50. I have reviewed the photomontages and considered the comments on file in the light of the County Development Plan objectives in relation to the protection of scenic views (especially policy SR1 in relation to scenic routes and WV1 and WV2 in relation to development along canal or river banks). I consider that the photomontages are a reasonable reflection of the anticipated visual impacts arising from the windfarm and that, while the wind turbines will be visible from elements of the scenic route network within the country, I conclude this visibility will not be such as to materially contravene the objectives set out in the County Development Plan and I conclude that the visual and landscape impact is acceptable.

10.51. Having regard to the proposed undergrounding of the grid connection cable I conclude that there will be no long-term visual impacts arising from this element of the proposed development.

10.52. Ecological Impacts.

- 10.53. The appeal makes the point that the EIAR's assessment of the ecological impacts arising from the development on animal and plant species within and outside the site is deficient.
- 10.54. In relation to the quality of assessment set out in the planning application and the assessment techniques I have reviewed the original EIAR, the further information submitted by the applicant and the response to the grounds of appeal. It may be noted that the planning authority's Environment section and Heritage Officer who had originally raised queries in relation to the quality of the EIAR raised no further issues after the receipt of further information. I am satisfied that the significance of the predicted impacts and the description of the habitats within the site and evaluation of their relative importance accord with the appropriate guidance set out by the NRA, EPA and DoEHLG and other authoritative sources set out in detail in section 7.2.1 of the EIAR.
- 10.55. In relation to bats the EIAR (section 7.3.5) includes the results of both desk top studies of bat species identified in the area and on-site study of bat activity within the application site. This is augmented by the additional surveys undertaken and presented at section 6 of the response to the additional information request. I consider that this information adequately describes the bat species likely to be impacted by the proposed development. The application also sets out a number of mitigation measures (summarised at 8.55 above of this report) which I consider adequate to avoid or mitigate impacts on bats and I conclude that the proposed development will not have a unacceptable impact on bat populations within the site or in adjoining areas.
- 10.56. In relation to marsh fritillary (a butterfly and qualifying interest of the Ballynafagh Lake SAC) the application provides a detailed description of the habitats on site and their importance for this species (see in particular the item 5(e)(vi) in the response to FI request). The habitats on site were assessed using aerial photography and walk over survey as detailed in the Walkover Marsh Fritillary Survey submitted with the application and it was concluded that there were three potentially suitable habitat sites within the application site but that on closer examination on foot these locations were discounted as unsuitable and no marsh fritillary were identified on site. Having

regard to the material submitted with the application and appeal, including the reports of the panning authority, I conclude that the site is not a significant habitat for the marsh fritillary and that the proposed development will not adversely affect a population of the butterfly within the application site or in the Ballynafagh Lake SAC (001387) which is about 8kms distant from the application site at its closest.

- 10.57. I note that the survey (see appendix 5.4 of the additional information) records that the site has population of moths and butterflies (other than the marsh fritillary) but that none of these species is a protected species. Having regard to this material, to the reports on file including the reports of the planning authority, to the nature of the application site as largely commercial forest, agricultural grassland, roadside verges and other areas previously subject to anthropogenic change I conclude that the proposed development will not impact on moth or butterfly species in a manner to materially contravene an objective of the County Development Plan nor that it would seriously injure the ecology of the area.
- 10.58. The appeal makes the point that there will be a moderate to high impact on bats within the application site.
- 10.59. This issue was raised in the planning authority's request for additional information at point 6. Of note in this context is the Bat Assessment provided as appendix 6 in the further information response. This assessment concludes that the implementation of the mitigation measures set out in the report and will reduce the predicted impact to moderate. Having regard to the varying importance of habitats within the site for roosting and foraging bats (varying between low medium for agricultural grasslands to high in areas of woodland), to the detailed mitigation measures set out in the application and the reports of the planning authority I conclude that the proposed development may be implemented without an unacceptable impact on bat populations within the site or in wider area.
- 10.60. The appeal makes the point that the application has insufficiently assessed the impacts on otters and badgers. Otters are addressed in chapter 7 of the EIAR wherein it is reported that otters are likely to use the Fear English river and an otter slide was observed about 93m from T3 which an otter holt was observed 27m from a proposed access track. The mitigation measures will include applying the advice in the NRA's Guidelines for Otters in National Roads Schemes, monitoring holts for

activity and blocking them in proximity to construction works only when they are empty and holt-blocking will serve to reduce the impact on the species.

10.61. The planning authority sought additional information in relation to otter holts and the applicant submitted a further report (see appendix 5 in the additional information response). This further report did not offer significant new information but confirmed that the Fear English river does provide a feeding habitat for otters.

10.62. Along with the mitigation measures for avoiding direct impact on areas used by these mammals I consider the most significant contribution to their protection is the maintenance of surface water quality within the site so as to allow for their main food sources (fish) to thrive. There is detailed discussion of the aquatic ecology and how project design and mitigation measures will reduce impacts on the aquatic ecology within the site in the report submitted as appendix 5.2 in the Further Information Response (see report received by the planning authority 2nd October 2019). In this regard I consider that the measures set out in the application to protect surface water quality are significant contributors to the health of the stream system, and by extension the otter population, within the site. I conclude therefore that the combination of measures to protect the animals during the construction phase and to prevent water pollution allows for the conclusion that the proposed development will not seriously impact on the otter population within the application site.

10.63. In relation to badgers the planning authority sought further information (FI request point 6) on breeding and resting places of badgers. The further information response enlarges on the material submitted in chapter 7 of the EIAR. Fifteen badger setts were identified within the application site of which 7 are located within 30m of planned construction activity. Setts 3 and 7 will be removed to facilitate development. The setts that will be impacted upon will be managed to avoid destruction of badgers mainly by blocking entrances to ensure that the badgers vacate before works begin.

10.64. The NRA/TII Guidance on the Treatment of Badgers Prior to the Construction of National Road Schemes¹⁶ make the point that unavoidable impacts on badgers, and in particular, the destruction/relocation of setts requires a separate licence under

¹⁶ <https://www.tii.ie/tii-library/environment/construction-guidelines/Guidelines-for-the-Treatment-of-Badgers-prior-to-the-Construction-of-a-National-Road-Scheme.pdf>

Wildlife Acts 1976/2000. The DoEHLG Development Management Guidelines make the point that where matters are subject to separate legislative controls that planning conditions should not be applied seeking to control such matters. I consider that the planning application, including the EIAR and the response to the request for further information, reasonably describes and assesses the impact on the badger population within the site and I conclude that, notwithstanding the destruction of two setts, the proposed development will not unacceptably impact on the badger population within the application site or in the wider area.

- 10.65. Red squirrels were recorded within the 10km square where the application site is located and within the application site itself. The EIAR recognises (section 7.5.2.4) that there are red squirrels in the conifer plantation and that, in the absence of mitigation there are potential impacts for this population. The assessment set out in the EIAR concludes that no residual impacts are predicted after implementation of the mitigation measures set out in the EIAR and in the applicant's response to the further information request. Having regard to this material I consider that the proposed development will not have any unacceptable impact on red squirrel populations within the application site or in the wider area.
- 10.66. The appeal makes the point that the EIAR is inadequate in relation to its assessment of impacts on Woodcock, merlin, meadow pipit, snipe, curlew in terms of bird mortality, breeding habits and physical displacement. The applicant's response to the appeal makes the point that woodcock was not recorded within the site during bird surveys in preparation for the EIAR but that three individuals were observed in areas outside the site.
- 10.67. The applicant's response to the appeal in relation to impacts on birds refers back to the EIAR and the NIS in relation to Merlin. Table 7-53 assesses several birds for their sensitivity to impacts arising from the proposed development. Merlin, meadow pipit and curlew are assessed as "high" sensitivity and snipe are assessed as medium sensitivity. The impacts are predicted to arise from disturbance/displacement, collision, habitat loss/change and barriers to movements. These impacts are documented on the receptors in table 7-54, 7-55, 7-57 and 7-58 and assessed to be very low or imperceptible.

10.68. Having regard to the material set out in the original EIAR, the additional information submitted to the planning authority, to the appeals and the applicant's responses thereto I consider that the application has properly identified the bird species likely to be impacted by the proposed development and properly assessed those impacts. I conclude that the proposed development will not unacceptably impact on bird populations within the site or in the adjoining areas.

10.69. The planning authority at 5(e)(v) of the request for further information in relation to the possible presence of any Annex 1 bird species on site. The applicant confirmed that a study area with a radius of 15kms from the application site was adopted and a full list of Annex 1 bird species is set out in the further information response¹⁷. The Kingfisher was the only Annex 1 bird species that was recorded on site which is also a qualifying interest of a Natura Site within the 15kms study area. The study identified no Kingfisher nesting sites within the application site and concluded that the Fear English river within the site was used as a foraging area. On the basis of the information submitted with the application and appeal, including the NIS, I conclude that the proposed development will not impact on any Annex 1 bird species.

10.70. Water quality impacts (surface and ground water).

10.71. The appeal makes the point that the proposed development will give rise to surface and ground water pollution.

10.72. Surface water within the site is discharged to the Fear English river which is a tributary of the River Boyne and River Blackwater SAC (002299) and River Boyne and River Blackwater SPA (004232) as set out above. There is a network of water courses within the site and five water course crossings are required for the access tracks but these are to be on bridges thereby avoiding instream works. The construction of the wind turbine foundations, access roads, substation, construction compounds and underground cabling all have the potential to release sediments and the construction related machinery has the potential to release hydrocarbons as spilt fuels and lubricants.

10.73. The EIAR, in particular in chapter 9, recognises the potential for water pollution arising from the proposed development. Mitigation measures for the construction and operational phases are detailed in the application and are adequate to prevent the

¹⁷ See page 129 in FI response folder received by the planning authority 21st October 2019.

release of pollutants within the site and subsequently to the wider environment. A CEMP is also submitted (appendix 2-2) which details measures for the construction phase and for health and safety during the construction phase with responsibilities assigned specified personnel.

10.74. I consider that the measures set out in the application are sufficient to prevent the risk of surface water pollution arising from the proposed development.

10.75. Ground water vulnerability to contamination is addressed in chapter 8 of the EIAR and section 8 of the response to the requests for further information which raised the issue at points 8(c), (d) and (e).

10.76. The locally important aquifer underlying the application site is mapped in figure 8.4 in chapter 8 of the EIAR. There are private wells and an inner and outer source protection zone for public supplies is mapped. The threat of contamination of ground water is identified as arising from soil stripping associated with the construction of hardstanding areas, turbine foundations, substation, grid connection cabling and access tracks. The applicant revisited the details of the source protection zones with potential to be impacted by the proposed development (on foot of the FI request) and concluded no additional impacts are predicted in the response to the request for additional information. The Turbine 12 lies in the outer protection zone of a ground water source. Tables 8-1 and 8-2 sets out the distances of potable water sources from turbines and water courses. Groundwater contamination will be avoided by mitigation measures set out as set out in the EIAR. The applicant's response to the request for further information adds that the works will be managed by suitably qualified and experienced engineers and surface water management features will be constructed prior to commencement of development. The CEMP will ensure that fuels and lubricants will be kept 50m from any water courses and storage areas will be bunded and have a capacity of 110% of the material stored. The substation will be treated separately and a stilling pond 200m from the inner protection zone eventually discharging 1kms away to a watercourse.

10.77. The planning authority's Environment Section reviewed the EIAR and additional information and had no further comments to make.

10.78. Having regard to the material submitted with the application and appeal, the moderately productive nature of the underlying aquifer, the nature of the proposed

development (including turbine foundations and underground grid connection cabling) which requires relatively shallow ground works, the distance of potable water sources from development works and watercourses and to the mitigation measures set out in the application I conclude that the proposed development will not give rise to groundwater pollution or be prejudicial to public health.

10.79. Flooding

10.80. The appeal makes the point that the proposed development will give rise to flooding in the area.

10.81. The risk of flooding arising from the proposed development is addressed in chapter 9 of the EIAR and in the applicant's response to the grounds of appeal. The proposed turbine locations, internal access road and grid location are mapped on figure 9.7 in chapter 9 of the EIAR. This drawing uses the CFRAMS study to map the predicted fluvial flooding within the site and outside the site. Much of the site is marked as benefitting lands – that is lands previously subject to drainage works (for forestry or agricultural purposes). The entire site drains to the Fear English River. Some of the access tracks and turbines are within a Flood Zone A but the substation is not. Flood Zone A (as defined in the Flood Risk Management Guidelines)¹⁸ is liable to fluvial flooding at greater than 1:100 and only water compatible development or development which cannot be located elsewhere should be permitted in these zones. I consider that access roads and turbines are a form of water compatible development.

10.82. In relation to flooding outside the site this would arise where additional surface water would enter the site and/or additional surface water would exit the site or exit at an increased rate so as to surcharge the downstream water course system. The proposed development will not give rise to additional surface water entering the site and therefore will not increase the risk of downstream flooding from that source.

10.83. The application makes the point that the hardstandings and access routes within the site have the capacity to give rise to additional surface water run-off which if left unattenuated would give rise to the risk of down-stream flooding. The applicant calculates that this additional runoff would be 836m³. This potential extra runoff is

¹⁸ <https://www.opr.ie/wp-content/uploads/2019/08/2009-Planning-System-Flood-Risk-Mgmt-1.pdf>

mitigated by the provision of 10.3kms of swales within the site for a storage capacity of 1,390m³.

10.84. The planning authority's Water Services Department reviewed flood risk assessment set out in chapter 9 of EIAR and reported no objection in relation to flood risk management.

10.85. Having regard to the material submitted with the application and appeal and the reports of the planning authority I conclude that the proposed development provides additional surface water storage capacity in the form of swales and other water management works sufficient to meet the additional flow created by the impermeable surfaces which are part of the proposed development. Finally I conclude that the proposed development will not give rise to an unreasonable risk of downstream flooding outside the application site.

10.86. **Community Gain**

10.87. The appeal makes the point that the third-party appellants have not accepted a package of community gain.

10.88. The applicant makes the point that a scheme to benefit the community was included in the application and provided for contributions to electricity costs for households within 1km of the application site, a greener living initiative which included provision for works to local houses to increase energy efficiency, a community investment fund and educational support fund. The amenity trail was also included in this scheme.

10.89. Section 34 of the Planning and Development Act provides for the granting of permission subject to conditions. None of the classes of conditions set out in section 34 provides for a condition requiring financial contributions to any entity. Section 48 and 49 provide for financial contributions to planning authorities for works within their administrative areas where benefits accrue to developers.

10.90. I recommend that no condition requiring the provision of community gain be imposed in this case.

10.91. **Wind Turbine Specifications.**

10.92. The appeal makes the point that the specifications of the proposed turbines are unclear.

10.93. The development management system addresses planning and environmental aspects of proposed development. I have set out planning and environmental assessments above and conclude that the material submitted with the application is adequate to inform such assessments and that additional consideration of turbine specification is beyond the remit of the development management system.

11.0 Recommendation

11.1. I recommend that permission be granted.

12.0 Reasons and Considerations

In coming to its decision, the Board had regard to the following:

- (a) national policy with regard to the development of alternative and indigenous energy sources and the minimisation of emissions from greenhouses 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 Eastern and Midland Region Regional and Spatial Economic Strategy 2019- 2031,
- (d) the policies of the planning authority as set out in the Kildare County Development Plan 2017 - 2023,
- (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 the general vicinity,
- (g) the pattern of existing and permitted development and distance to dwellings and other sensitive receptors from the proposed development,
- (h) the Environmental Impact Assessment Report submitted,
- (i) the Natura Impact Statement submitted,

- (j) the appeals and submissions made in connection with the planning application, and
- (k) the report of the Inspector.

12.1. **Environmental Impact Assessment**

12.2. The Board completed an Environmental Impact Assessment of the proposed development. 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 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:

- Potential impacts on water quality are considered under the relevant headings. The site drains to the Fear English River which is a tributary of the River Blackwater and subsequently the River Boyne. There are a number of identified private and public wells within the wider area. Measures to prevent the release of sediments or hydrocarbons (including avoiding in-stream works, prevention of fuel/lubricant spills, limiting ground disturbance to the minimum required and preventing of silt laden surface water runoff) are set out in the EIAR are specific and practicable. The proposed development, therefore, will not give rise to water pollution in the water courses within the site, in the Fear English River or in the wider Blackwater/Boyne catchment or in the aquifer underlying the application site and it is concluded that significant water quality impacts are not likely to arise.
- The EIAR has reasonably identified construction related noise as having potential impact on residential amenity. Construction phase impacts in the form of short term increases in the traffic (private cars and HGVs) on the local road network are recognised, addressed in the EIAR and, specifically in the Construction and Environment Management Plan (appendix 2-2 of the EIAR).

The noise and vibration mitigation measures, such as the limiting of construction hours in accordance with a submitted CEMP, the use of plant with low potential of noise and / or vibration and consultation with local are reasonable and practicable. Noise and vibration levels would be within acceptable emissions limits during normal operation.

- Impacts on biodiversity are likely to arise during construction works due to the removal of shrub/tree and soil/subsoil in preparation for the construction of the roads, turbine bases and the grid connection cable. It is noted, however that these areas are brownfield areas which have been subject to anthropogenic activity (tree planting, drainage ditches and agriculture) are of relatively low ecological importance. The impacts arising from the removal of habitat and disturbance would be mitigated by minimising the removal of existing vegetation and reinstatement of vegetation and following best practice and procedures during the construction phase.
- The site is a relatively flat site which is not prominent in views over a wide area. Landscape and visual impacts will be mitigated by separation distances from receptors especially residential uses and designated scenic views from the local road networks. No unacceptable visual impact will arise from the proposed development.
- Impacts on greenhouse gas emissions (in particular CO₂) will be positive because the proposed development facilitates the transition from fossil fuel dependent energy sources to renewable sources and the connection of a renewable energy source to the national grid.

The Board concluded that, subject to the implementation of the mitigation measures set out in the environmental impact assessment report and, subject to compliance with the conditions set out below, the effects on the environment of the proposed development, by itself and in combination with other development in the vicinity, would be acceptable. In doing so, the Board adopted the report and conclusions of the Inspector.

12.3. Appropriate Assessment Screening

12.4. The Board considered the Screening Report for Appropriate Assessment, and all other relevant submissions and carried out 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 noted that the proposed development is not directly connected with or necessary for the management of a European Site and considered the nature, scale and location of the proposed development, as well as the report of the Inspector.

The Board agreed with the screening report submitted with the application and with the screening exercise carried out by the Inspector. The Board concluded that, having regard to the qualifying interests for which the sites were designated and in the absence of a hydrological connection between the application site and the European Sites that

- Ballynafagh Lake SAC (001387),
- Ballynafagh Bog SAC (000391),
- Mount Hevey Bog SAC (002342),
- Mouds Bog SAC (002331),
- The Long Derries Edenderry SAC (000925),

could be screened out from the further consideration and that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effects on these European Sites or any other European Sites in view of the sites conservation objectives and that a Stage 2 appropriate assessment is therefore not required in relation to these European Sites.

12.5. Appropriate Assessment Stage 2

12.6. The Board considered the Natura Impact Statement and all other relevant submissions and carried out an appropriate assessment of the implications of the proposed development for the River Boyne and River Blackwater SAC (002299), and the River

Boyne and River Blackwater SPA (004232) in view of the sites' conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an Appropriate Assessment.

12.7. In completing the assessment, the Board considered the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects, the mitigation measures which are included as part of the current proposal and the Conservation Objectives for this 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 sites' Conservation Objectives.

12.8. In overall conclusion, the Board was satisfied that the proposed development would not adversely affect the integrity of the the River Boyne and River Blackwater SAC (002299), and the River Boyne and River Blackwater SPA (004232) or any other European Site in view of the sites' Conservation Objectives.

12.9. **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 Eastern and Midland Region Regional and Spatial Economic Strategy 2019- 2031, the provisions of the Kildare County Development Plan 2017 – 2023 and would not have an unacceptable impact on;

- the road network in the area,
- aviation safety,
- the character of the landscape or scenic views in the area,
- the residential amenities of the area,
- the archaeological or natural heritage of the area, and

would be in accordance with the proper planning and sustainable development of the area.

13.0 Conditions

1.	<p>The development shall be carried out and completed in accordance with the plans and particulars lodged with the application as amended by the further plans and particulars submitted on the 25th day of October 2019 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 commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.</p> <p>Reason: In the interest of clarity.</p>
2.	<p>The period during which the proposed development hereby permitted may be carried out shall be 10 years from the date of this order.</p> <p>Reason: Having regard to the nature and extent of the proposed development, the Board considered it appropriate to specify a period of validity of this permission in excess of five years.</p>
3.	<p>This permission shall be for a period of 30 years from the date of the first commissioning of the wind farm.</p> <p>Reason: To enable the planning authority to review its operation in the light of the circumstances then prevailing</p>
4.	<p>(a) Prior to commencement of development, the Construction and Environmental Management Plan provided in Appendix 2-2 of the EIAR shall be revised and updated and agreed with writing with, the planning authority. The revised and updated plan shall provide finalised details of intended construction practice for the development, including hours of working, noise management measures and off-site disposal of construction waste.</p> <p>(b) The developer shall ensure that all construction methods and environmental mitigation measures, including operation monitoring requirements, as set out in the environmental impact assessment report and</p>

	<p>the revised CEMP (Appendix 2-2) and associated documentation, are implemented in full, save as may be required by conditions in this order.</p> <p>Reason: In the interest of the protection of the environment.</p>
5.	<p>The following design requirements shall be complied with:</p> <p>(a) The wind turbines, including masts and blades, and the wind monitoring mast, shall be finished externally in a light grey colour.</p> <p>(b) Cables within the site shall be laid underground.</p> <p>(c) The wind turbines shall be geared to ensure that the blades rotate in the same direction.</p> <p>(d) No advertising material, other than those already applied for as part of this proposed development, shall be placed on or otherwise be affixed to any structure on the site without a prior grant of planning permission.</p> <p>Reason: In the interest of visual amenity</p>
6.	<p>A plan providing for the collection, removal and disposal of foul waste arising from staff facilities shall be submitted to and agreed in writing with the planning authority prior to commencement of development. Thereafter, the waste shall be managed in accordance with the agreed plan.</p> <p>Reason: To provide for the appropriate management of foul waste in the interests of public health and to prevent water pollution.</p>
7.	<p>The following shadow flicker requirements shall be complied with:</p> <p>(a) Cumulative shadow flicker arising from the proposed development shall not exceed 30 minutes in any day or 30 hours in any year at any dwelling.</p> <p>(b) The proposed turbines shall be fitted with appropriate equipment and software to control shadow flicker at dwellings.</p> <p>(c) Prior to commencement of construction, a wind farm shadow flicker monitoring programme shall be prepared by a consultant with experience of similar monitoring work, in accordance with details to be submitted to the planning authority for written agreement. Details of the monitoring programme shall include the proposed monitoring equipment and methodology to be used, and the reporting schedule.</p>

	Reason: In the interest of residential amenity.
8.	<p>In the event that the proposed development causes interference with telecommunications signals, effective measures shall be introduced to minimise interference with telecommunications 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 commissioning of the turbines and following consultation with the relevant authorities.</p> <p>Reason: In the interest of protecting telecommunications signals and of residential amenity.</p>
9.	<p>Details of aeronautical requirements shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. Prior to 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 the turbines and wind monitoring masts.</p> <p>Reason: In the interest of air traffic safety.</p>
10.	<p>On full or partial decommissioning of the wind farm, or if the wind farm ceases operation for a period of more than one year, the wind monitoring mast, the turbines concerned and all decommissioned structures shall be removed, and foundations covered with soil to facilitate re-vegetation, all to be complete to the written satisfaction of the planning authority within three months of decommissioning or cessation of operation.</p> <p>Reason: To ensure satisfactory reinstatement of the site upon full or partial cessation of the project.</p>
11.	<p>The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the site. In this regard, the developer shall –</p> <ul style="list-style-type: none"> (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, (b) Employ a suitably-qualified archaeologist who shall monitor all site investigations and other excavation works, and

	<p>(c) Provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the authority considers appropriate to remove.</p> <p>In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.</p> <p>Reason: In order to conserve the archaeological heritage of the site and to secure the preservation and protection of any remains that may exist within the site.</p>
12.	<p>(a) Noise levels emanating from the proposed development following commissioning, by itself or in combination with other existing or permitted wind energy development in the vicinity, when measured externally at third party noise-sensitive locations, shall not exceed the greater of 43dB(A)L_{90, 10} or 5 dB(A) above background levels.</p> <p>(b) All sounds measurements shall be made in accordance with ISO 1996: Acoustics – Description and Measurement of Environmental Noise.</p> <p>(c) Prior to commencement of development the developer shall arrange for a noise compliance monitoring programme for the operational wind farm.</p> <p>(d) Details of the nature and extent of the monitoring programme shall be submitted to, and agreed in writing with, the planning authority.</p> <p>Reason: To protect the amenities of property in the vicinity of the site.</p>
13.	<p>Prior to commencement of development, a traffic management plan for the construction stage shall be submitted to, and agreed in writing with, the planning authority. The traffic management plan shall incorporate details of the road network to be used by construction traffic, including over-sized loads, and detailed arrangements for the protection of bridges, culverts or other structures to be traversed, as may be required. The plan should also contain details of how the developer intends to engage with and notify the local community in advance of the delivery of oversized loads.</p> <p>Reason: In the interest of traffic safety.</p>
14.	<p>The developer shall pay to the planning authority a financial contribution as a special contribution under section 48(2)(c) of the Planning and</p>

Development Act 2000, as amended, in respect of works to the Johnstown Bridge roundabout, works at the junction of the Derrymahon road/L5025 and the R402 and any road strengthening works on the Derrymahon road/L5025 between its junction with the R402 and the application site entrance, and that are required to facilitate the proposed development and that are undertaken by the local authority. The amount of the contribution 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 for determination. The contribution shall be paid prior to the commencement of the development or in such phased payments as the planning authority may facilitate and shall be updated at the time of payment in accordance with changes in the Wholesale Price Index – Building and Construction (Capital Goods), published by the Central Statistics Office.

Reason: It is considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning authority which are not covered in the Development Contribution Scheme and which will benefit the proposed development.

15. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the reinstatement of public roads which may be damaged by the transport of materials to the site or by works carried out in relation to the laying of the grid connection, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory reinstatement of the public road. 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: In the interest of traffic safety and the proper planning and sustainable development of the area.

16. 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. The contribution shall be paid prior to the commencement of development or in such phased payments as the planning authorities 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 authorities and the developer or, in default of such agreement, the matter shall be referred to the Board to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000 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.



Hugh Mannion
Senior Planning Inspector

13th August 2020