An Bord Pleanála

Inspector's Report
ABP-300368-17

Development	The construction of a wind farm comprising 8 wind turbines and all associated works. (The proposed wind turbines will have a maximum blade tip height of up to 126.5m). The applicant is seeking a 10-year planning permission and operational period of 25 years.
Location	Aghanagran Middle, Aghanagran Lower, Ballyline West, and Tullahennel South, Ballylongford, Co. Kerry.
Planning Authority	Kerry County Council
Planning Authority Reg. Ref.	17/902
Applicant(s)	Ballylongford Wind Farm Group
Type of Application	Permission
Planning Authority Decision	Refusal

Type of Appeal	First party -v- Decision
Appellant(s)	Ballylongford Wind Farm Group
Observer(s)	John O'Sullivan NMWT@Ballylongford
Date of Site Inspection	27th July & 28th September 2018
Inspector	Hugh D. Morrison

Contents

1.0 Site Location and Description

1.1. The site is located 8.7 km to the north of Listowel and 2.1 km to the south west of Ballylongford. The R552 runs between these two towns and it passes to the east of the site. The two-existing means of access to this site from the east are off this regional road. The L-6012 runs to the west of the site and the existing means of access to it from the west is off this local road.

1.2. The site lies in an area of forestry and bogland. To the south west lies the recently constructed and now operational Tullahennel South Wind Farm, which comprises 10 wind turbines (hub heights of 80m and blade diameters of 90m). In other directions beyond the said area, farmland, which is punctuated by one off-dwelling houses and farm buildings, exists. Within the wider surrounding area there are other wind farms.

1.3. The site comprises an area of 19.88 hectares, of which 4.34 hectares would be developed to provide the proposed wind farm.

2.0 Proposed Development

2.1. The proposal would entail the construction of a wind farm, which would be composed of the following elements:

- Eight wind turbines with an overall ground to blade tip height of up to 126.5m and associated battery units,
- Upgrading of existing and provision of new internal access roads,
- Provision of wind anemometry mast (height up to 80m),
- Provision of one peat disposal area,
- Underground electricity connection cabling via the neighbouring wind farm,
- Two electricity sub-stations with control room and associated equipment,
- A temporary construction compound, and
- All ancillary site and ground works.

2.2. The proposal would also allow for the construction of an alternative underground electricity connection through the following townlands: Aghanagran Lower, Aghanagran Middle, Ballyline West, Ballymacasy, Lislaughtin, Glancullare South,

Gurteenavallig, Meelcon, Rusheen park, Carhoona, Farrnanwana, Doonard Upper, Doonard Lower, Tarbet and Kilpaddoge.

2.3. The applicant is seeking a 10-year planning permission and an operational period of 25 years.

3.0 Planning Authority Decision

3.1. Decision

Permission was refused for the following 5 reasons:

1. The proposal would contravene Objective EP-12 of the CDP.
2. In conjunction with existing and permitted ones, the proposal would lead to an excessive proliferation of wind turbines in the landscape, which is low-lying and flat, and so it would fail to preserve the character of this landscape in accordance with Objective ZL-1 of the CDP.
3. In the absence of adequate geotechnical surveying, testing, and design, the proposal may result in the destabilisation of raised bog with deep peat deposits with a consequent serious risk of pollution to surface waters.
4. In the absence of pre-development archaeological testing, the proposal may interfere with a ringfort, which is listed as recorded monument Ke005 020, and thus it would be injurious to archaeological heritage.
5. Having regard to the location and scale of the proposal and the ground conditions of the site, significant effects of Natura 2000 sites cannot be ruled out and so, in the absence of a NIS, the proposal would be likely to adversely impact upon the integrity of such sites.

3.2. Planning Authority Reports

3.2.1. Planning Reports

See Planning Authority's decision.

3.2.2. Other Technical Reports:

- County Archaeologist: A ringfort, which is listed as recorded monument Ke005 020, exists on the site and so pre-development archaeological testing should be carried out on all proposed areas of ground disturbance.
- HSE Environmental Health: The EIS addresses various subjects of concern from an environmental health perspective: Mitigation measures should be strictly adhered to.
- Roads: No objection, subject to conditions, including ones insisting on grid connection option A and a specific road improvement levy of €400,700 for the improvement/upgrade of local roads L-6015, L-1005, and L-6012.
- An Taisce: Objection is raised on the basis of visual impact, as there are already more than enough intrusive developments along the coast road, and danger of bog slide.
- IAA: Standard observations made.
- Bird Watch Ireland: Critique of the applicant's bird surveys + applicant's response under unsolicited further information.
- DoCHG: Conditions requested with respect to dispersed wetland bird and bat collision mortality, hen harrier foraging, and pre-excavation dried raised bog biodiversity survey.
- Environment Section: Advises that the site lies within the Ballylongford_030 water body (IE_SH_24B030860), which has an "unassigned" status under the WFD. Given the challenging ground conditions and the scale of the proposal, strong reservations are expressed with respect to the potential impact upon this water body and the achievement of WFD objectives.
- Biodiversity Officer: Objects and recommends that a refusal be considered on the following grounds:
    - The submitted EIS fails to reflect the changes required to such documents under Directive 2014/52/EU.
    - Attention is drawn to discrepancies within the EIS with respect to length of existing/proposed tracks and the source of materials for construction

works. (If a borrow pit is proposed as such, then it should be included within the EIS).

- A bat survey was undertaken at a time of the year when bats are inactive.
- Significant depths of peat occur within the site and the geotechnical report indicates that, as a result, further survey work would be required to determine the exact siting of items. Consequently, impacts cannot be fully assessed.
- Clarification of proposed water crossings is needed.
- Grid connection option B: nature of habitats through which this route would pass needs to be addressed.
- Bird surveys were undertaken during the construction phase of the adjoining wind farm site. Such surveys need to be undertaken in winter time, too, and they should inform an NIS.
- An NIS should also address in-combination effects with other wind farms in the area.
- Given the risk of water pollution during the construction phase and the possible adverse implications for the Lower Shannon SAC and given, too, the possible impact upon bird species that are of conservation interest under the River Shannon and River Fergus SPA, a Stage 2 AA should be prepared.

- Planning (Development Plan): Advises that, as of 26th September 2017, the threshold of 80% cited in Objective EP-12 had not been reached, i.e. of the 135 wind turbines permitted for Tralee and Listowel Municipal Districts, 83 had been constructed and 7 were no longer permitted, their permissions having expired.

4.0 Planning History

Adjacent sites to the south west of the current application site have been the subject of the following applications/appeals:

- 09/1175: Construction of 10 wind turbines (hub heights of 80m and blade diameters of 90m) together with all ancillary works: Permitted.

  LV3050: Application for leave to appeal the aforementioned permission was denied on 4th May 2010.

  15/725: Modification of 20-year operational period of wind farm permitted under 09/1175 to 25 years: Refused at appeal PL08.245722 on the basis that, as the application relates only to the said modification and not development, the Board is precluded from further consideration of this appeal.

- 15/524: 10-year permission sought to develop a borrow pit/repository and improve existing access track to adjoining property: Permitted at appeal PL08.246268, subject to conditions which include ones that tie the duration of this permission to that granted to 09/1175 and restrict extraction of material for use in the construction of this wind farm to a 24-month period only.

5.0 Policy Context

5.1. Development Plan

Energy/Power Provision is addressed under Chapter 7 of the Kerry County Development Plan 2015 – 2021 (CDP). The following two Objectives under this heading address renewable energy:

> *EP-11: Implement the Renewable Energy Strategy for County Kerry (KCC 2012).*
>
> *EP-12: Not to implement the development of wind farms in areas designated "open to consideration" in the Tralee and Listowel Municipal Districts until 80% of the turbines with permissions in those areas, on the date of adoption of the Plan[1], have either been erected or the relevant permission has expired or a combination of both and the cumulative affect of all permitted turbines in the vicinity of the proposal has been fully assessed and monitored.*

Map 12.1a of the CDP shows the site as lying within an area zoned "Rural General". Under Section 12.3.1, this zoning is addressed as follows:

[1] The date of adoption was 16th February 2015.

Rural landscapes within this designation generally have a higher capacity to absorb development than the previous rural designations. It is important that development in these areas be integrated into their surroundings in order to minimise the effect on the landscape and to maximise the potential for development.

Under the Renewable Energy Strategy for County Kerry (RES), the site is shown as lying within an area that is "Open-to-Consideration" and associated Objectives NR 7-33 to 37 are of relevance. Under Table 7.4 of the RES, the northern portion of the site is identified as lying within the Ballylongford Creek Landscape Character Area and the southern portion is identified as lying within the Inner River Plain Landscape Character Area. Under the Wind Energy Development Guidelines both these Areas could be classified as a hilly and flat farmland landscape type.

The commentary accompanying the former LCA states "Having introduced wind development into the area, it is considered that this landscape does have the capacity to accommodate further wind development. The area with capacity for wind development begins in Tullahennel and then heads eastwards."

The commentary accompanying the latter LCA states "The development of two existing permissions for wind development will alter the landscape in the area. There is scope for further consideration to be given to wind energy development in the area as the landscape throughout the area is similar in nature. It is being zoned as Open-to-Consideration due to the population level in the area and in order to properly assess the cumulative impact of numerous wind farms in the area."

5.2. Natural Heritage Designations

- Lower River Shannon SAC (site code 002165)
- River Shannon and River Fergus SPA (site code 004077)
- Moanveanlagh Bog SAC (site code 002351)
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (site code 004161)

6.0 The Appeal

6.1. Grounds of Appeal

The applicant begins by reviewing national, regional, and County planning policies that relate to wind energy. It then proceeds to respond to each of the five reasons for refusal as follows:

- CDP Objective EP-12 does not refer to all wind farms in the Tralee and Listowel Municipal Districts, but only to those in areas zoned “open for consideration”, and the wind farms must have been constructed or be no longer the subject of an extant permission on the date the CDP was adopted. The Planning Authority addressed this Objective in the light of all wind farms in these districts that were either constructed or the permissions for which had expired and it concluded that the minimum threshold of 80% has yet to be met. By contrast, the applicant has addressed only the ones in areas zoned “open for consideration” and it concludes that this threshold has not been met.

  Furthermore, CDP Objective EP-12 is questioned on the basis that it does not comply with national and regional planning policies.

- The site lies within landscape that is considered to be “ordinary” and the proposal would represent a continuation in the trend of siting buildings and structures within this landscape that are energy related. Accordingly, it would not look out of place.

  The applicant has submitted Figures 2.1 & 2.2, which denote the predicted visibility of the proposal “in practise” once roadside vegetation and buildings/structures are allowed for.

  Attention is drawn to a 2003 study which concluded that the public do not necessarily take exception to the landscape and visual impacts of wind farms.

  Under the Wind Energy Development Guidelines, the site lies in a landscape that is identified as being “hilly and flat farmland”. Inter-visibility between wind farms in this landscape is normally considered to be acceptable. Furthermore, where wind farms would appear in the same viewshed the desirability of similar siting and design approaches is cited. The current proposal would

adjoin the existing wind farm at Tullahennell South and it would reflect this advice.

The sequential cumulative visual impacts of the proposal upon visual amenity along scenic routes, including the Wild Atlantic Way, which are at some remove from the site, would be low.

The Planning Authority cites CDP Objective ZL-1, "To protect the landscape of the County as a major economic asset and an invaluable amenity which contributes to people's lives." The local community would benefit from the proposal insofar as the landowners would receive an assured annual income, which would assist in making farming economically sustainable, the local authority would receive additional rates, and a Community Gain Fund would be established to contribute to local good causes.

- Attention is drawn to the applicant's Peat Slope Stability Assessment, which was prepared in accordance with the principles of Eurocode 7-1: Geotechnical Design (IS EN 1997-1) Design Approach 3(12). While the EIS does state that "slope stability calculations should not be regarded as definitive", it also states that "where the calculated safety ratio is close to 1.0 (i.e. less than 2.0), this should be taken as an indicator of a slightly higher risk area requiring additional consideration during detailed design." Thus, drawings of both excavated and piled foundations were submitted.

  Turbines denoted as T1 and T5 in the Tullahennel South Wind Farm were constructed on peat with a depth of over 12m. These turbines are sited some 500m away from the proposed ones denoted T2 and T3 and in the same expanse of bog. They have not resulted in adverse landscape impacts.

  Detailed risk mitigation measures have been identified and itemised by the applicant.

  The layout of the site was amended during the pre-application design process to minimise exposure to deep peat, e.g. sub-station 1 and a new N/S access track were re-sited.

  In accordance with normal practice, detailed design site investigations would proceed once planning permission has been granted. The applicant insists

that the geotechnical information submitted is commensurate with that needed to assess the proposal from a planning perspective. It further states that once mitigation measures are in place any residual risk would be “insignificant”, a prediction that is given additional weight by the experience of the neighbouring Tullahennel South Wind Farm.

(Concern over the possible risk of pollution to surface waters during the construction phase is addressed under the applicant’s response to the fifth reason for refusal).

Nevertheless, without prejudice to the foregoing, if the Board deems it to be necessary, then wind turbines T2 and T3 could be omitted from the proposal.

- The ringfort (KE005-020) is the only recorded archaeology on the site and the nearest wind turbines to it would be sited 200m (T8) to the north and over 100m to the south (T7).

  During the construction phase, groundworks could potentially disturb the aforementioned archaeology and other, as yet unknown, archaeology. Given this risk, the applicant has identified and itemised relevant mitigation measures. Again, following the implementation of such measures, any residual risk would be “insignificant”.

  While the County Archaeologist advises that pre-development testing should be undertaken ahead of any permission, the applicant draws attention to the absence of any archaeological finds during the construction of the neighbouring Tulahennel South Wind Farm and during geotechnical investigations on the current application site.

  Nevertheless, pre-development testing could have been undertaken had the applicant been afforded the opportunity to respond to a further information request. As things stand, an application for a licence to undertake such testing has been made to the DoCHG.

- The applicant insists that its Surface Water Management Plan (SWMP) and Drainage Design are based on best practice principles and so the risk of surface water pollution during the construction phase would be sufficiently mitigated.

PL03.245392 is cited as an example of a wind farm where the surface water management plan and drainage design would be similar to that now proposed and where the Board was satisfied with this approach. (This decision relates to a wind farm proposal for a site in the townlands of Glenmore, Boolnamweel, Boolynakockaun, Furoor, and Kilmihil, Co. Clare).

Thus, under the SWMP, the applicant proposes to separate clean and dirty water into two different systems, i.e. the former would utilise pre-existing drainage arrangements while the latter would be directed through a three-stage process of settlement ponds, a graded gravel filter bed, and discharge to a wide area of vegetation. Once operational, these systems would be maintained and monitored to check on water quality, sediment build-up, and erosion.

Under the SWMP, any residual risk to water quality would not be significant. An Environmental Clerk of Works would be employed for the construction phase and allowances would be made for extreme weather in the timetable for this phase.

- A Stage 1 AA Screening Exercise was undertaken. The following Natura 2000 sites lie within 15 km of the site:
    - Lower River Shannon SAC (site code 002165): While there are hydrological links between the site and this SAC, good construction practice would minimise the risk of pollution and even if such pollution should occur the marine environment at Ballylongford would provide sufficient dilution.
    - River Shannon and River Fergus Estuaries SPA (site code 004077): The site is of low value to water birds as habitat and regular flight paths do not occur over the site.
    - Moanveanlagh Bog SAC (site code 002351): This site is 9 km to the SE and so it would not be affected.
    - Stacks to Mullaghareirk Mountains SPA (site code 004161): This site is 14 km away. Its conservation interest is the hen harrier. Outside the breeding season, this species would forage in the application site. Nevertheless,

the small loss of habitat that would be entailed in the proposal and the abundance of this habitat in the wider locality would mean that such loss would not be significant.

Accordingly, the need to progress to a Stage 2 AA/NIS does not arise.

The applicant has responded to the Planning Authority's critique of its ecological surveys. Thus,

- With respect to terrestrial mammals, it considers that its survey work was adequate. This work would be augmented by a pre-construction confirmatory one to check that there has been no change in the interim.
- With respect to winter birds, surveys have been undertaken over three consecutive winters and a further one was on-going at the time of writing for a fourth winter. Very low numbers of waders and waterfowl were recorded within the vicinity of the site.
- With respect to bats, a summer bat survey has now been undertaken. As the locality of the site is a low lying, windswept, coastal one, it is not particularly attractive to bats. The survey confirmed this prediction, with low numbers of Common and Soprano Pipistrelles being recorded. It would be augmented by a pre-construction confirmatory one to check that there has been no change in the interim.

- The applicant responds by way of supplementary information to some of the other criticisms contained in the case planner's report. Thus, details are provided with respect to the length of new and improved access roads, a peat deposit area, landscape description, and compliance with Article 3(1)(a) – (e) of the 2014 EIA Directive.

6.2. **Planning Authority Response**

None

6.3. Observations

(a) John O'Sullivan

- The Landscape Character Assessment of Kerry (LCA) contained in the CDP has been the subject of criticism and it is presently under review. The dismissal of parts of North Kerry as being unimportant for scenery, tourism, or recreation is questioned as is the tendency of the LCA to accede to more wind farms in landscapes where they already exist.
- Questions are raised as to the number of permitted/installed wind turbines and their output nationwide and as to whether or not the Government's 40% target for renewables has been reached.

  In Kerry alone there are 113 installed wind turbines (c. 230 MW) and another 100 permitted turbines (200 MW).

  Concern is expressed that nationally an oversupply of generating capacity may be occurring in circumstances where the interconnector with the UK is limited to 500 MW.

  In view of the above circumstances, no further wind farms should be permitted until clarity is received from the Government on the foregoing points.

  Further concern is expressed that the proposal would in conjunction with other wind farms in the locality lead to a cumulative impact, which would be harmful to tourism.

(b) NMWT@Ballylongford

Extensive and detailed observations have been submitted. They include specific interactions with the applicant's grounds of appeal, which are summarised below. (For ease of reference the page numbers in the applicant's grounds are cited).

- Page 3: Contrary to the applicant's figure of 4.34 hectares (3.2% of the site area), the appellant's state that this figure should be 10.8 hectares (8% of the site area).
- Page 5, Paragraph 4.1: The proposal is not "needed" insofar as the national 40% target of electricity generation from renewables can be met from existing permitted schemes.

- Page 5, Paragraph 4.2: Objective EP-12 of the CDP would be breached, i.e. the cumulative impact of all permitted wind turbines in the vicinity of the proposal has not been fully assessed and monitored.
- Page 5, Paragraph 4.3: The proliferation of wind turbines either in or visible from Ballylongford runs to 51 and so cumulative impact is a key issue for the local community.
- Page 5, Paragraph 4.4: The EIS fails to adequately address the issue of peat stability in an area known locally as “the runaway bog”. Photographs of poor management of sediment from Phase 1 have been submitted.
- Page 5, Paragraph 4.5: Ample time has elapsed within which pre-development testing could have been undertaken.
- Page 6: Renewable energy extends beyond onshore wind farms. Within Kerry 411 turbines have been permitted and 217 have been constructed or are being constructed, two-thirds of which are in the north of the County. Another 8 are not needed to meet the aforementioned 40% target, especially when they would breach various EU Directives.
- Page 7: The applicant’s claim that the projected output of 8,064 MW h would save 36,440 tonnes of CO_2 is contested, especially as no allowance is made for the CO_2 emitted by back-up generators.
- Page 8: The stated increased demand of 60% in the SW by 2025 is contested on the basis that Eirgrid predicts a countrywide increase of c. 21% by 2026.
- Page 9, Section 5.4.1: The applicant’s selection of alternative sites is critiqued on the basis that none are located within an area of Strategic Site Search under the CDP’s Renewable Energy Strategy (RES) and 2 of the 4 are within 500m of dwelling houses. Furthermore, the site selected is likewise within 500m, albeit of dwelling houses occupied by applicants. This does not represent good practice. More suitable sites than the one selected exist.
- Page 12: First reason for refusal: Concern is expressed that the Board has not always upheld Objective EP-12. Its place within the adopted CDP is emphasised. Attention is also drawn to Objectives EP-1 and EP-11, which refer, variously, to the protection of biodiversity, archaeological and built

heritage, the landscape and residential amenity, and the implementation of the RES. The proposal would fail to protect the former items cited and it would not be needed for the fulfilment of the RES.

- Page 15: Second reason: This reason is supported. In the absence of a clear methodology, the cogency of the applicant's assessment of roadside visibility is challenged. The applicant's and the Planning Authority's assessments of the submitted photomontages differ. Contrary to the advice of the Wind Energy Development Guidelines, visual dominance would result.
- Page 16: The durability of the community gain fund is questioned if the wind farm is subsequently purchased by an investment bank.
- Page 18: Third reason: Attention is drawn to Appendix 14A and the 12 boreholes and 13 rotary cores, which were excavated/drilled on an adjoining site, although a plan showing whereabouts has not been submitted.

  The site itself was the subject of investigation by means of peat probes and shear vane tests only. Consequently, of the 5 turbines that would be sited in peat, 2 (T2 and T3) would not be capable of being constructed conventionally, i.e. they would need piled foundations, and doubt surrounds a further 2 (T1 and T4). Only 1 would be clearly capable of being constructed conventionally. The 3 remaining turbines (T6, T7 and T8) would be sited in till, a poorly drained soil with high clay content, and yet no investigations of these sites were undertaken. The 2 sub-stations would be sited in peat and 1 would need to be the subject of piled foundations.

  In the absence of borehole and rotary core tests of the site itself, the submitted geotechnical information falls short of being at all adequate as a basis upon which to design turbine foundations. Similarly, predictions concerning peat stability cannot be made with any confidence.

  While Appendix 14E refers to 5 trial holes that were dug in the site, no logs of these holes or plan as to their whereabouts have been submitted.

  While Appendix 15A sets out details of turbine foundations, i.e. excavated reinforced concrete and piled reinforced concrete ones, no site-specific designs have been submitted.

While the applicant offers to omit turbines T2 and T3, by the same token it should omit T1 and T4 and, in the absence of site investigations, T6, T7 and T8.

- Page 22: Fourth reason: Notionally, the question of archaeology could be dealt with by means of further information.
- Page 24: Fifth reason: The applicant cites a range of EU Directives, which it contends the proposal would not comply with. Attention is drawn to the advice of the County Biodiversity Officer who stated that this proposal would have an adverse impact on the Lower Shannon SAC and the River Shannon and River Fergus SPA and to the advice of Birdwatch Ireland concerning the sensitivity of the Ballylongford area. The applicant's SWMP is viewed in the light of experience, i.e. the poor management of sediment under Phase 1.
- Page 31: Supplementary information: Drawing upon the experience of Phase 1, peat excavation is likely to be greater than that predicted and the storage of excavated peat on peat would risk surcharging the same.

  Attention is drawn to the Planning Authority's conclusion that the EIS is inadequate with respect to Articles 3(1)(a) to (e) of the 2014 EIA Directive and changes introduced by the May 2017 amendments to this Directive.

6.4. **Further Responses**

None

7.0 Planning Assessment

7.1. I have reviewed the proposal in the light of national planning guidelines, relevant planning history, the submissions of the parties, and my own site visit. Accordingly, I consider that this application/appeal should be the subject of a planning assessment, an EIA, and an AA.

7.2. I will conduct the planning assessment under the following headings:

(i) National targets, and

(ii) Planning policies.

(i) National targets

7.3. Both observers draw attention to the Government's 40% target for the generation of electricity from renewables[2]. They express the view that this target may be capable of being met without the current proposal. They also express concerns over the possible oversupply of generating capacity and the concentration of wind farms in North Kerry, along with the associated implications for tourism.

7.4. As I understand the 40% target, it is an ambitious one and so I know of no examples of wind farm proposals that have not proceeded on the basis that their generating capacity would not be needed to contribute towards meeting this target. Likewise, the risk of too much overall generating capacity as a result of renewables would presumably not arise in practise, as should such circumstances pertain, non-renewable sources of generating capacity would not need to be relied upon to the same extent.

7.5. The observers' concern over the concentration of wind farms in North Kerry is one that I will consider below under landscape and visual amenity in my EIA.

7.6. Observer (b) questions the applicant's claims with respect to annual savings in CO_2 emissions, on the basis that they do not allow for the CO_2 that is expended by back-up non-renewable generating capacity. I accept that in this respect the applicant has cited a gross figure rather than a net one. What appears incontestable to me is that renewables lead to less CO_2 emissions than non-renewables and so, in the quest to reduce CO_2, they are preferable. I will revisit this subject under the heading of "Climate" in my EIA.

7.7. I, therefore, conclude that the proposal would contribute towards meeting the Government's 40% target for the generation of electricity from renewables and it would likewise contribute to a reduction in CO_2 emissions.

[2] The Department of Communications, Climate Change & Environment website accessed on 13/08/18 advises that "The EU has set binding targets for Member States to reduce greenhouse gas emissions by 20% by 2020. In addition, under the EU Renewable Energy Directive (2009/28/EC) Ireland is committed to produce from renewable sources at least 16% of all energy consumed by 2020. Ireland has committed to meet this national target through 40% renewable electricity, 12% renewable heat and 10% renewable transport."

(ii) Planning policies

7.8. Under Objective EP-11, the current CDP undertakes to continue to implement the Renewable Energy Strategy for County Kerry (RESCK), which was adopted in 2012. Under Map 7.6 of the RESCK, wind deployment zones are shown, i.e. Strategic Site Search Areas, Open-to-Consideration, and Unsuitable. The application site lies within an Open-to-Consideration wind deployment zone. Objectives NR 7-33 to 37 are applicable, across the County, to wind farm proposals within this zone. Additionally, Objective EP-12 of the CDP is applicable to such proposals within the Tralee and Listowel Municipal Districts. This Objective is set out below for ease of reference:

> *Not to implement the development of wind farms in areas designated "open to consideration" in the Tralee and Listowel Municipal Districts until 80% of the turbines with permissions in those areas, on the date of adoption of the Plan[3], have either been erected or the relevant permission has expired or a combination of both and the cumulative affect of all permitted turbines in the vicinity of the proposal has been fully assessed and monitored.*

7.9. The Planning Authority takes the view that the current proposal would fail to comply with this Objective and so the first reason for its draft refusal encapsulates this concern. An examination of the planning file indicates that this view was taken based on advice set out in a memo dated 6th November 2017, which stated that on the date of the CDP's adoption, 25 permissions had been granted for a total of 135 wind turbines. Since adoption, 2 of these permissions (for 7 wind turbines) have expired and, on 26th September 2017, 83 wind turbines were counted as being in situ. Thus, a total of 90 wind turbines had either expired or were in situ, a figure that represents only 66% of the number granted. The threshold of 80% cited in Objective EP-12 has, thus, not been reached.

7.10. The applicant contests the Planning Authority's aforementioned presentation. It draws attention to the limited ambit of Objective EP-12, insofar as areas Open-to-Consideration only are in view, whereas the Planning Authority appears to have included in its presentation the entirety of the Tralee and Listowel Municipal Districts. Under Figures 1.1 & 1.2 in the submitted grounds of appeal, these areas are

[3] The date of adoption was 16th February 2015.

denoted, along with permissions granted within them. A Table on Page 13 of the said grounds sets out details of the 2 permissions that had been granted when the current CDP was adopted. Of the 18 wind turbines thereby permitted, 16 are in situ, a figure that represents 89% of the total, which is excess of the relevant 80% threshold.

7.11. The Planning Authority has not responded to the applicant's grounds of appeal and so I do not have the benefit of its assessment of the applicant's rebuttal of the underlying basis for the first reason for refusal. *Prima facie* this rebuttal appears to me to be in order.

7.12. Observer (b) emphasises the importance of upholding Objective EP-12, as it forms part of the adopted CDP. The applicant expresses the concern that this Objective may not comply with relevant national and regional planning policies. I consider that the reasonableness of this Objective may be open to question. Thus, in its essence, it is in danger of requiring either a SEA type exercise that would accompany a review of the CDP/LAP or a re-run of cumulative assessments that would normally form part of the assessment of individual applications for wind farms and the basis for the selection of the threshold cited is unclear.

7.13. I note that the wording of the Planning Authority's first reason for refusal refers to the contravention of Objective EP-12, as distinct from the material contravention, and so the need to consider the provisions of Section 37(2)(b) of the Planning and Development Act, 2000 – 2018, does not arise.

7.14. I conclude that, from the evidence before me, it is not clear that the proposal would contravene Objective EP-12 of the CDP and so, in these circumstances, I am minded to set aside the Planning Authority's first reason for refusal.

8.0 Environmental Impact Assessment (EIA)

8.1. The proposal is for a wind farm composed of 8 wind turbines, each of which would have an electricity generating capacity of 3.2 MW and so the overall electricity generating capacity would be 25.6 MW. Under Item 3 (i) of Part 2 of Schedule 5 to Article 93 of the Planning and Development Regulations, 2001 – 2018, wind farms, which have more than 5 turbines or which have an electricity generating capacity of more than 5 MW, are required to be the subject of a mandatory EIA. The current proposal is thus required to be the subject of EIA.

8.2. The current application was submitted to the Planning Authority on 12th September 2017. Thus, this application was submitted after 16th May 2017, the date for the transposition of Directive 2014/52/EU amending the 2011 EIA Directive. The Directive, however, has not been transposed, to date, into Irish legislation. In accordance with the advice on administrative provisions in advance of transposition, contained in Circular Letter PL1/2017, it is proposed to apply the requirements of Directive 2014/52/EU.

8.3. The applicant has submitted an EIS, which states in its introduction that the terms EIS and EIAR can be used interchangeably and that the 2014 EIA Directive was considered in its preparation.

8.4. Observer (b) draws attention to the conclusion of the EIA carried out by the case planner that the submitted EIS/EIAR does not identify and describe adequately all of the direct and indirect effects of the proposal on the environment in accordance with Items 1(a) – (e) of Article 3 to the 2014 EIA Directive. The accompanying commentary on the robustness of the EIS/EIAR identifies several omissions, which the applicant has sought to address as appendices to its grounds of appeal. Furthermore, insofar as the said Items bring forward new subject headings, the applicant has submitted, as Appendix 12 to its grounds of appeal, a report that illustrates how the EIS/EIAR complies with these Items.

8.5. In the light of the foregoing, I am satisfied that the information contained in the EIS/EIAR complies with Article 94 of the Planning and Development Regulations, 2001 – 2018, and the provisions of Article 5 of the 2014 EIA Directive.

8.6. I will undertake an EIA in accordance with the subject headings set out in Items 1(a) – (e) of Article 3 to the 2014 EIA Directive. In doing so I will draw upon the advice set out in relevant EPA Guidelines,[4] the applicant's EIS/EIAR, as originally submitted and amended/expanded by its grounds of appeal, and the submissions of the Planning Authority, prescribed bodies, and the observers. I will begin however by assessing the alternatives section of the EIS/EIAR.

[4] Guidelines on the Information to be contained in EISs published in March 2002 and Guidelines on the Information to be contained in EIARs published as a revised draft in August 2017.

Alternatives

8.7. The applicant's EIS/EIAR considers 4 alternative locations, in addition to the one selected, i.e. site A at Tullahennel North, site B at Larha/Astee, site C at Knockanore Mountain, and site D at Guhard North. Descriptions of these sites are presented in Section 5.3 of the EIS/EIAR. The rationale for the selection of the application site is stated as being that it is suitable on grounds of its size and local topography. Other factors favouring this site relate to its wind deployment zoning, the absence of nature conservation designations, generally favourable ground conditions, and several advantages arising from its position beside the now constructed and operational Tullahennel South Wind Farm.

8.8. The 4 alternative locations are mapped on Figure 5-3. A comparison of this mapping with the CDP's wind deployment zones indicates that sites B and C lie in areas that are deemed to be "Unsuitable" for wind farms and sites A and D, like the application site, lie in areas that are "Open-for-Consideration". Site A is described as being the subject of significant turf cutting and its proximity to the Lower Shannon SAC and the River Shannon and River Fergus SPA are referred to. Site D is within 500m of a number of dwelling houses. As the application site is the subject of turf cutting, too, and the greater proximity to Natura 2000 sites appears marginal, the de-selection of site A suggests that the location of the application site beside the Tullahennel South Wind Farm was key to its selection.

8.9. Observer (b) draws attention to the omission of any alternative locations within the wind deployment zone known as "Strategic Site Search Area". I note that lands further to the east of the application site lie within this zone. I note, too, that 2 of the 4 alternative locations lie within areas deemed to be "Unsuitable" and so effectively only 2 realistic alternative locations were included in the applicant's presentation.

8.10. The applicant's EIS/EIAR considers alternative layouts. Factors that had a bearing on the submitted layout were: the willingness of land owners to enter land lease option arrangements, the need to avoid areas where there would be a risk of peat instability, the need to adhere to the advice of the Wind Energy Development Guidelines with respect to flat peatland areas, the need to ensure operating efficiency, and the need to incorporate Water Quality Control Measures.

8.11. The applicant's EIS/EIAR considers alternative designs. Appendix 5 in Volume 2 to the EIS/EIAR sets out the evolution of the layout of the current proposal, which also included the following evolution in the design of wind turbine envisaged:

- Stage (i): 10 x 3.5 MW turbines with hub heights of 80m and rotor diameters of 90m,
- Stage (ii): 8 x 2.75 MW turbines with hub heights of 80m and rotor diameters of 103m, and
- Stage (iii): 8 x 3.2 MW turbines with hub heights of 75m and rotor diameters of 103m.

8.12. I conclude that the cogency of the applicant's discussion is constrained by the omission of any alternative locations within a "Strategic Site Search Area".

(a) Population and Human Health

8.13. During the construction phase of the proposal, direct employment would be provided for c. 40 workers over a 12 to 18-month period. Some of these workers may relocate to the surrounding area for this period. (Indirect employment would also be boosted amongst construction professionals and material suppliers). During the operational phase, direct employment would be provided for 3 workers.

8.14. During the construction phase of the proposal, the human health of on-site workers would be affected by the potential for accidents and the human health of on-site workers and local residents would be affected by the environmental impact of noise. The former potential would be mitigated by adherence to all relevant health and safety regulations and the latter impact would be mitigated by the adoption of good construction management practices. The applicant's Noise Impact Assessment (NIA) draws upon a baseline survey of 4 representative dwelling houses, which are sited in locations surrounding the application site,[5] and predicted noise levels during varying wind speeds at all the surrounding dwelling houses without and with a financial interest in the current proposal. Under BS 5228-1:2009, these noise levels would be comfortably within the threshold of 65dBA cited therein and so no significant noise impact would arise.

[5] Refer to Table 7.6: Baseline Noise Survey and Figure 7.2: Noise Analysis – Sound Contour Plan combined Ballylongford and Tullahennel South Wind Farms.

8.15. During the operational phase, the human health of local residents would be affected by noise and shadow flicker.

8.16. In relation to noise, the applicant's NIA predicts the cumulative noise levels during varying wind speeds at all the surrounding dwelling houses without and with a financial interest in the current proposal. Under the more rigorous noise standards cited under the DoHPLG's "Proposed Revisions to Wind Energy Guidelines 2006: Targeted Review in relation to Noise, Proximity and shadow Flicker – 11th December 2013," these noise levels would either be below or they would coincide with the relevant thresholds for LA90 of 40dB for dwelling houses without a financial interest in the current proposal and LA90 of 45dB for dwelling houses with a financial interest. The rationale of the Guidelines is that, given that the noise attenuation afforded by most dwelling houses is 10dBA or more, the said outdoor noise levels would secure the desirable night time noise level of 30dBA or less for dwelling houses without a financial interest in the current proposal. No significant noise impact would, thereby, arise.

8.17. In relation to shadow flicker, the Wind Energy Development Guidelines (WED) recommend that "shadow flicker at neighbouring offices and dwellings within 500m should not exceed 30 hours per year or 30 minutes per day. Under the DoHPLG's "Proposed Revisions to Wind Energy Guidelines 2006: Targeted Review in relation to Noise, Proximity and shadow Flicker – 11th December 2013," the elimination of shadow flicker at dwellings within a distance of 10 x the rotor diameter of the relevant wind turbine is required.

8.18. The applicant has undertaken a modelling exercise to establish the extent of shadow flicker that would cumulatively arise from the proposal and the Tullahennel South Wind Farm[6]. This exercise identifies all the dwelling houses within 1.2 km of the wind turbines on the combined sites and it predicts that only the dwelling house denoted as ID40 would exceed the aforementioned thresholds of the WED Guidelines. This dwelling house is derelict and in the ownership of one of the landowners who would benefit financially from the current proposal.

[6] Refer to Figure 8.1 entitled "Shadow Flicker Zone of Influence" in Appendix 8E of Volume 2 to the applicant's EIS/EIAR.

8.19. The applicant acknowledges the requirement of the Targeted Review of the WED Guidelines and it undertakes to utilise technology to ensure that individual wind turbines are switched off when they are at risk of causing shadow flicker to nearby dwellings. In line with the advice contained in this Review the installation and use of such technology could be conditioned.

8.20. I recognise the potential harm to human health that can arise from the phenomenon of shadow flicker, e.g. it can induce epileptic episodes. I consider that the impact arising, once mitigated as proposed, would be capable of being neutralised and so no significant impact would arise.

8.21. In conclusion, I have considered all of the written submissions made in relation to population and human health, in addition to those specifically identified in this section of my EIA. I am satisfied that any significant adverse effects have been appropriately addressed in terms of the application and that they would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

(b) Biodiversity

8.22. Item 1 (b) of Article 3 of the 2014 EIA Directive refers to biodiversity with particular attention to species and habitats protected under Directive 92/43/EEC, the Habitats Directive, and Directive 2009/147/EC, the Birds Directive.

8.23. The study area[7] does not lie within or beside any Natura 2000 sites. In Chapter 9 of Volume 1 of the applicant's EIS/EIAR, this site's habitats and vegetation are discussed. Figure 3 and Table 7 of the said Chapter categorise the 5 habitats in evidence, of which 2 are evaluated as being of local importance and higher value, i.e. cutover bog and raised bog. Field surveys indicate that no rare or protected plant species are present on the site and such species that have been identified within a 10 km grid of this site would not normally grow in its habitats.

8.24. In Chapter 9 of Volume 1 of the applicant's EIS/EIAR, birds are discussed. Table 10 identifies target species identified for avifauna surveys, which were undertaken in 2015 – 2017. Other bird species present on the overall site were recorded, too.

[7] The study area (cf. drawing no. 16/124/1102) is a reference to the application site and surrounding lands within which this site is set and which lie within the ownership of the various landowners of the application site.

Table 14 identifies 11 key avifauna receptors, of which 4 bird species are recorded as being key ecological receptors, i.e. hen harrier, kestrel, snipe, and sparrow hawk. The first of these species is also recorded as being of high sensitivity, while the remaining 3 are of medium sensitivity.

8.25. At the appeal stage, the applicant has submitted, as Appendix 9 to Volume 1 of the EIS/EIAR, a Breeding Birds Survey, which was undertaken in 2017. The applicant acknowledges that the Tullahennel South Wind Farm was under construction during this Survey. The view is expressed that the resulting disturbance is likely to have altered the typical use of the site, although it is unlikely that any bird species would have avoided this site altogether. The findings of the Survey are consistent with previous ones. These findings also include a record of other bird species sighted beyond the 11 key avifauna receptors.

8.26. In Chapter 9 of Volume 1 of the applicant's EIS/EIAR, non-volant mammals are discussed. Table 15 identifies such mammals insofar as they are known to be present within a 10 km grid of the application site. Of these 7 mammals, 4 are the subject of conservation protection and, of these 4, only 1 has been the subject of a confirmed sighting, i.e. the Mountain (Irish) Hare.

8.27. The current proposal would lead to a direct habitat loss of 3.1 hectares of the site, of which 0.3 hectares would be of raised bog and 1.3 hectares would be of cutover bog. The vast majority of this loss would be permanent and irreversible. Given that the study area is 132.6 hectares and given, too, the limited loss of the more sensitive bog habitats, the resulting impact would be negative and minor in its magnitude and so not significant.

8.28. The proposal identifies two options for grid connections, i.e. Option A to utilise the existing grid connection that serves the Tullahennel South Wind Farm on adjoining lands to the south west of the application site and Option B to lay a new connection underneath, predominantly, the R551 to Tarbert. Figure 2-6 of the EIS/EIAR shows the short route of the former option, which would pass through an area of cutover bog on the adjoining lands, and Figure 2-7 shows the route of the latter option. Under Appendix 10C of Volume 2 of the EIS/EIAR, the 9 river crossings that would be made under Option B are identified and surveyed. Under Appendix 10B, the submitted "Watercourse Assessment" states that the construction of Option B would

not entail instream works at any of these crossings. However, the habitats that this route would pass through are not identified and, while the applicant expresses the view that they are highly unlikely to support species of conservation interest,[8] the absence of information in this respect prohibits any confirmation of this view. Accordingly, this Option needs to be omitted from the proposal on the basis of insufficient information to facilitate a proper assessment.

8.29. The proposal would lead to the loss of some conifer and bog land habitats, which would have an impact on bird species. With respect to the former, such loss would be akin to tree felling that normally occurs in commercial forests, a phenomenon that bird species habituate to, albeit in this case the impact would be permanent rather than temporary as no replanting would be undertaken. With respect to the latter, some localised displacement of bird species is anticipated. However, as similar habitats are available in the wider area, their continuing presence is foreseen.

8.30. During the construction phase, disturbance to bird species would occur (cf. Table 17 in Chapter 9 of Volume 1 of the EIS/EIAR). Thus, snipe and sparrow hawk would have their breeding habitats disturbed, while kestrel and hen harrier would have foraging habitat disturbed. Given the relatively small areas concerned and the availability of comparable habitats in the surrounding area, the resulting impact would not be significant.[9]

8.31. During the operational phase, the aforementioned habitat loss would persist, and the risk of collision would arise. Table 18 in Chapter 9 of Volume 1 of the EIS/EIAR comments on these impacts with respect to the four bird species cited above. No significant impacts would arise.

8.32. A Bat Impact Assessment is included under Appendix 10 of the applicant's grounds of appeal. This Assessment is of summer survey work undertaken in 2017, as a supplement to the previously submitted one, which was criticised by the Council's Biodiversity Officer on the basis that it was undertaken during the winter. Low numbers of two common bat species were recorded as using the site. Opportunities for roosts on this site are few. The proposal would inevitably lead to disturbance and

[8] Refer to Section 3.3.1.2 of the Stage 1 Screening Exercise for AA in Volume 1 of the applicant's EIS/EIAR.

[9] On Page 18 of Chapter 5, reference is made to the omission of 3 wind turbines at the pre-application stage, due to a hen harrier roost. However, the aforementioned Table 17 is silent on any disturbance of potential roosting habitat for this species.

to a loss of commuting/foraging habitat. However, given the species concerned and the low numbers involved, these impacts would not be significant.

8.33. The applicant's EIS/EIAR expresses the view that impacts arising at the decommissioning stage of the proposal would mirror those arising at the construction stage. Cumulative impacts would occur, due to the fact that the proposal would be sited on lands adjoining the Tullahennel South Wind Farm. Insofar as the habitats and flora and fauna are the same/similar, these impacts would stem from the combined loss of portions of these habitats and the implications for flora and fauna. The applicant expresses the view that these impacts would be negligible and so they would not be of significance.

8.34. Impact abatement by avoidance, reduction, and remedy are discussed in the EIS/EIAR. Standard construction methodologies are cited in these respects, along with the timing of works and the appointment of an Ecological Clerk of Works (ECoW). The residual impact of the proposal would be minor and negative and thus not of significance.

8.35. The applicant addresses Aquatic Ecology separately under Chapter 10 of Volume 1 to the EIS/EIAR. A fish study was undertaken at 6 representative sites in the catchment of the Ballyline River. Slight to moderate pollution levels pertain at these sites and "unremarkable" numbers of fish were recorded. The Waterbody Catchment Map (drawing no. 16/124/4101) shows a single hydrological connection between the north western extremity of the application site and a watercourse, to the north, that runs on a roughly west/east axis into the Ballyline River. There is a further hydrological connection between the south eastern extremity of the site and this River. Provided "best practice" water quality protection measures are undertaken, the proposal would not have a significant impact upon water quality and hence the aquatic ecology of the said catchment.

8.36. In conclusion, I have considered all of the written submissions made in relation to biodiversity, in addition to those specifically identified in this section of my EIA. Once proposed grid connection Option B is omitted from the proposal, I am satisfied that they have been appropriately addressed in terms of the application and the information submitted by the applicant and that no significant adverse effect is likely to arise.

(c) Land, soil, water, air and climate

Land

8.37. The study area comprises a variety of land uses, i.e. forestry, agricultural, and peat lands, which have been/are the subject of turf cutting[10]. The proposal would encroach on each of these land uses. However, its footprint would be small relative to the 132.6 hectare study area and so the said land uses would continue to function. Some disruption could be anticipated, during the construction phase, but essentially there would be no significant impact upon the said land uses, during either this or the operational phase of the proposal.

Soil

8.38. The relevant Teagasc Map shows that the sub-soil over the majority of the site is cutover peat. The applicant has thus undertaken a Peat Stability Assessment of this site (Appendix 14C of Volume 2 to the EIS/EIAR), which is based on field studies that entailed the use of 75 peat probes and 46 hand shear vanes (cf. Figures PSA1 & 3). Several shallow trial pits were also dug[11]. These studies indicate that the depth of peat varies across the site. Thus, in the vicinity of proposed wind turbines T2 and T3 and in the vicinity of the originally envisaged siting of proposed sub-station 1, depths of at least 12m were recorded. Similarly, the peat in these areas of the site was the most decomposed and the moistest.

8.39. The applicant proceeded to undertake a quantitative slope stability analysis, which indicates that the calculated safety ratio for the said two wind turbines would be below the relevant threshold of 1.0, with sub-station 1 only just exceeding this threshold at 1.2. Consequently, piled foundations are recommended for these two wind turbines and the relocation of the sub-station. At the appeal stage, the applicant has submitted, under Appendix 6, details of such foundations, and it has drawn attention to the relocation of the sub-station further north on the site, a location which is depicted in the current proposal.

8.40. The Planning Authority's third draft reason for refusal and Observer (b) express the view that there is insufficient site-specific geotechnical information to enable the

[10] Refer to Figure 1.6 of the Construction and Environmental Management Plan (CEMP) in Appendix 15A of Volume 2 to the EIS/EIAR.
[11] Refer to Appendix 14E of Volume 2 to the EIS/EIAR: The location of the trial pits has not been made explicit on any of the submitted plans of the site.

proposal to be supported with confidence that it would not lead to the destabilisation of the said deep deposits of peat on the site. The applicant, in its grounds of appeal, contends that such information is unnecessary at the planning stage and that it would, in accordance with normal practice, be secured at the post-decision stage as an input to the detailed design work that would occur then. The applicant draws attention to the wind turbines denoted as T1 and T5 in the neighbouring Tullahennel South Wind Farm, which have been successfully sited on comparable deposits of peat. They, thus, provide grounds for confidence. Nevertheless, should the Board have concerns about the said wind turbines, they could be omitted by condition from any grant of permission.

8.41. I consider that, whereas the applicant has gauged the nature and likely scale of the challenge that would arise in the areas of the site composed of deep peat deposits, it is nonetheless important for the purposes of EIA that the findings of an intrusive geotechnical investigation be available prior to the making of a planning decision on the current proposal. Such an investigation is described in the EIS/EIAR[12] as being one that would be carried out in accordance with EN 1997-2 (2007): Eurocode 7: Geotechnical Design – Part 2: Ground Investigation and Testing. I therefore agree with the Planning Authority and Observer (b) that it would be premature, in the absence of such findings and their assessment, to grant permission for proposed wind turbines T2 and T3.

8.42. The presence of deep peat deposits has prompted the applicant to specify the use of floating roads over those areas of the site thus affected. Figure 3.2 of Appendix 16 of Volume 2 to the EIS/EIAR shows the extent of such roads, in conjunction with those of purely conventional construction. The specification of floating roads in these circumstances accords with advice on “Floating Roads on Peat” published by Scottish Natural Heritage and the Forestry Commission Scotland.

Water

8.43. The study area lies within the catchment of the Ballyline River[13]. The site within this area is connected hydrologically to the north west and to the south east with tributaries to this River. During my site visit, I observed that the former connection is

[12] Bullet Point 3 on Page 15 of Chapter 14 of Volume 1 to the EIS/EIAR.
[13] Refer to Waterbody Catchment Map drawing no. 16/124/4101.

fragmented across land drains, wet ditches, and ponds, which have arisen as a result of ground disturbance due to peat extraction. While I did not observe an unbroken hydrological connection, it is possible that under flood conditions one becomes operational for temporary periods. The latter connection is continuous, and it comprises land drains and wet ditches, which accompany the eastern access road to the site from the R552 before diverting through a woodland. This connection then passes under this regional road from where it flows via a stream into the said River.

8.44. Water quality within the Ballyline River is moderate and within the groundwater it is good.

8.45. The EIS/EIAR acknowledges the presence of existing wet ditches and land drains within the study area, which serve the different land uses and their means of access. This existing drainage network would be retained under the proposal as a “clean water” system. Drawing nos. 16/124/1104A & 1110 – 1121 show it with the footprint of the proposal superimposed upon the same. Under the proposal, a dirty water system would be installed, which would involve the provision of swales, silt traps, stilling ponds, and discharge to vegetation. Drawing nos. 16/124/2101 – 2106 show the two networks together.

8.46. Under Chapter 2 of Volume 1 of the EIS/EIAR, a Site Drainage Management Plan (SDMP) is presented. The key feature of this Management Plan is the separation of the existing and proposed drainage networks. Thus, during the construction and operational phases of the proposal, the wind farm would be drained in accordance with SuDS principles with the intention of ensuring that potential pollutants such as silt, sediments, and nutrients do not find their way into the existing drainage network.[14] Figure 9.1 of Chapter 14 of Volume 1 of the EIS/EIAR identifies three sampling points down stream of the study area in either the Ballyline River or tributaries of this River, which would be used in subsequent monitoring exercises.

8.47. I have examined drawing nos. 16/124/2101 – 2106 in conjunction with both the SDMP and the Construction and Environmental Management Plan (CEMP) in Appendix 15A of Volume 2 of the EIS/EIAR, which together provide a commentary on principles and methodologies to be pursued with respect to the drainage of the

[14] Section 15.4.3 of Chapter 15 of Volume 1 to the EIS/EIAR.

proposal. I have identified several omissions or discrepancies, which indicate that the said drawings do not fully reflect these principles and methodologies. Thus,

- The drainage arrangements for the site compound and the peat deposit area have not been shown.
- To the north of proposed wind turbine T1, a stilling pond would be sited next to an existing drainage ditch.
- To the west of T6, a stilling pond would be sited "over" an existing drainage ditch.
- To the south of T5, a stilling pond would be sited close to an existing drainage ditch.

In the light of the foregoing omissions and discrepancies, the exact layout of the proposed "dirty water" drainage network would need to be expanded and refined to ensure that the key separation feature of the SDMP would be capable of being achieved "on the ground". If the Board is minded to grant permission, then this matter could be conditioned.

8.48. Additionally, the site compound and the peat deposit area would be sited in the vicinity of wetland vegetation, which appears to denote the end of the potential hydrological connection between the north west of the site and the Ballyline River system. It would, therefore, be imperative to ensure that there is no link between this compound and this area and the said connection. Good engineering practice would be capable of addressing this issue and, again, it is a matter which could be conditioned.

8.49. Under Section 14.4.4 of Chapter 14 and Section 15.4.4 of Chapter 15 of Volume 1 of the EIS/EIAR, the applicant variously states that de-watering of excavations is not envisaged and that it is envisaged as a consequence of a trial hole survey that it undertook on 19/06/2017. This Survey entailed the digging of five shallow trial holes in the vicinity of the majority of the proposed wind turbines. Those holes in the vicinity of T1 and T3 had a small amount of water in them after a short period and the one in the vicinity of T2 had a large amount of water in it after a very short period. Given these results, the need for de-watering would arise and the proposed "dirty water" drainage network would be utilised in this respect.

8.50. Table 1-2 of the SDMP sets out calculations that lie behind the size of the stilling ponds that would be incorporated in the new drainage network. These calculations relate to rainwater run-off from the completed impervious surfaces comprised in service tracks and hardstanding areas for the proposed wind turbines. The new drainage network would be installed in conjunction with the construction of these tracks and areas and in advance of excavations for the wind turbine foundations.

8.51. Under the heading of "Drainage of Turbine Bases and Hard Standings" in the Outline Site Drainage Management Plan[15], the applicant expresses the view that "As there was no appreciable evidence of inflow observed in the trial pits, it is anticipated that pumped flows from turbine foundations will be very low." I consider that this view is cogent only if proposed wind turbine T2 is omitted from the proposal.[16]

8.52. Given that de-watering exercises would add to the volume of water in the new drainage network, I consider that the applicant should identify the protocols that would be observed in carrying out these exercises in a manner that would ensure that it is not overwhelmed. Precedent for such protocols exists insofar as one of the proposed mitigation measures for the construction phase would entail the suspension of felling/works during periods of heavy rainfall,[17] a measure that would be of particular importance with respect to grid connection Option B, as it would pass through Ballylongford, which is subject to an identified flood risk.

8.53. I consider that the proper management of "dirty water" during the construction phase is key to ensuring that surface water run-off does not lead to pollutants entering the Ballyline River system. The application site is linked intermittently and continuously to this system. Accordingly, provided the existing "clean water" drainage network is kept separate from the proposed "dirty water" one, no significant impact would arise upon the water quality of the Ballyline River system.

Air

8.54. The study area lies within an area that is zoned D by the EPA for the purpose of managing air quality. This zone covers rural Ireland and, generally, air quality within it is good.

[15] Section 4.3.3 of the CEMP.
[16] Under Paragraph 8.41, I state that in the absence of geotechnical survey of the site this wind turbine and the one identified as T3 should be omitted.
[17] Section 15.4.3.1 of Chapter 15 of Volume 1 to the EIS/EIAR.

8.55. The EIS/EIAR identifies dust as a potential threat to air quality. Table 13-4 of Chapter 13 of Volume 1 indicates the potential distances over which significant effects could be anticipated once standard mitigation measures are allowed for. These distances would be comfortably exceeded by the separation distances that would exist between the site and the nearest dwelling houses and so no significant impact would arise. Likewise, they would mitigate the effects of exhaust fumes from plant and machinery during the construction period.

8.56. The construction of grid connection Option B would entail instances wherein works would be carried out closer to dwelling houses than those cited in Table 3-4. Thus, dust and exhaust fumes would be more of an issue. However, these works would be undertaken as a rolling programme and so the exposure of any such dwelling houses to dust would be for a short duration only.

Climate

8.57. Climate change results from the emission of greenhouse gases, of which CO_2 is the most significant. The applicant estimates that the proposed wind farm would lead to an annual reduction of 34,325 tonnes[18] of CO_2 emissions into the atmosphere or 821,640 tonnes over the 25-year life of this wind farm. The applicant also estimates that a total of 33,298 tonnes of CO_2 would be emitted as a result of factors such as its manufacture and construction and the consequential drying out of bog land on the site. This figure would represent 3.9% of the total reduction or a payback period of 11.6 months. The net total reduction would be 788,344 tonnes of CO_2.

8.58. Observer (b) draws attention to the need for non-renewable generation capacity to be available for periods when wind energy is unavailable. Such capacity, evidently, needs to be turning over so as to be capable of cutting-in when required. CO_2 emissions generated by it are not allowed for in the above depiction of CO_2 reduction.

8.59. The applicant has not responded to Observer (b)'s comments. I consider that such response would probably require an understanding of the ESB's management of its generating sources and capacities. The complexity of the same may militate against the production of a single reliable figure for use in modifying the reduction already

[18] This figure is one of two cited by the EIS/EIAR, i.e. 33,500 tonnes is cited on Page 19 of Chapter 13 of Volume 1 and 34,235 tonnes is cited, with accompanying calculations, on Page 21.

calculated. Notwithstanding the absence of such a figure, I anticipate that an overall net reduction in CO_2 emissions would emerge from the proposal over its lifetime and so it is to be welcomed from a climate change perspective.

8.60. In conclusion, I have considered all of the written submissions made in relation to land, soil, water, air and climate, in addition to those specifically identified in this section of my EIA. Once proposed wind turbines T2 and T3 are omitted from the proposal, I am satisfied that any significant adverse effects have been appropriately addressed in terms of the application and that they would be avoided, managed and reduced by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

(d) Material assets, cultural heritage and the landscape

Material Assets

8.61. The EIS/EIAR categorises material resources under two headings, i.e. ones of natural origin and ones of human origin. Under the former heading, land, geological, and natural amenities are listed.

- With respect to land, the area of land take for the proposal would be relatively small and the prospect exists that this land would be restored to its pre-existing use/converted to new use once the wind farm is de-commissioned.
- With respect to geology, there are no known sites of interest in the study area and any draw upon materials of construction from off-site quarries would have only minor impacts upon the same.
- With respect to natural amenities, insofar as biodiversity and water would be affected, these subjects are discussed under previous headings of this EIA. Other natural amenities[19] that impinge upon recreation, lie at some remove along the coast or to the west, e.g. Knockanore Mountain, although the 35 km walking/hiking trail, known as “The Shannon Way”, does pass through the study area and parts of the application site itself. This trail runs between Ballybunion and Tarbert and it passes over Knockanore Mountain. The EIA/EIAR omits this trail. The proposal does not address whether the route through the study area would be available during the operational phase of the

[19] See also my discussion of landscape and visual amenity below.

proposal or whether an alternative route would be available during the construction phase.

The amenities of the said trail are already affected by the presence of the Tullahennel South Wind Farm. Thus, the proposed wind farm would simply extend this effect rather than be a novelty. The applicant should, however, identify an alternative route for any construction phase and maintain the existing route during the operational phase. If the Board is minded to grant permission, then this matter could be addressed by condition.

8.62. Under the latter heading, electricity infrastructure, telecommunications, aviation, and roads infrastructure are listed.

- With respect to electricity infrastructure, the proposal would contribute to the generation of electricity and its grid connection would be either directly with the ESB network at Tarbert or indirectly via the existing grid connection established for the Tullahennel South Wind Farm.
- With respect to telecommunications, companies responding to the applicant's consultation exercise raised no issues. RTE indicated that some viewers in the vicinity of the site may experience interference in their reception, but that this could be mitigated by the reorientation of aerials to alternative transmitters.
- With respect to aviation, no issues were raised by the IAA. Standard obstruction lights would need to be fitted to the tops of the proposed wind turbines.
- With respect to roads infrastructure, this subject is dealt with more fully under Chapter 16 of Volume 1 to the EIA/EIAR and so I will interact with this Chapter below.

8.63. The applicant identifies the haul route between Foynes and the application site for abnormal loads, which would be used to deliver the components that would make up the proposed wind turbines. The greater portion of this route was used in conjunction with the construction of the Tullahennel South Wind Farm. The route thus identified extends beyond the one previously used, to connect with the proposed western site access point on the L-6012. It would entail the provision of turning facilities at

Moran's Cross Roads, the junction between the L-6015 and the L-6012. The applicant estimates that 96 abnormal loads would be generated by the current proposal and that these would be scheduled to take place at night to minimise disruption to other road users. Furthermore, if grid connection Option B were to proceed, then the timing of the laying of cables through Ballylongford would be set so as not to coincide with these loads.

8.64. The applicant recognises that there may be a risk of cumulative impact upon the road network between Tarbert and Ballylongford in the event that the current proposal is implemented at the same time as the proposed Shannon Liquefied Natural Gas Plant. In these circumstances, the local authority's role would be pivotal in ensuring that any movement of abnormal loads to these two projects did not occur at the same time.

8.65. The applicant estimates that, during the 18-month construction phase, a total of 7280[20] round trips would be made by HGVs to and from the site, 6500 of which would be generated by the need to provide stone fill for construction works. Under Section 14.4.2 of Chapter 14 of Volume 1 to the EIS/EIAR, the applicant refers to local quarries in Astee and Ardfert, from which such stone fill may be drawn.

8.66. The applicant analyses the road network that would be comprised in the haul route and traffic levels upon the same. This route would utilise roads to the north east of the site, whereas Astee and Ardfert lie to the north west and the south west, respectfully. Under Table 16-11, the applicant assumes that all the construction phase traffic would use the haul route and so significant impacts are registered on each of the constituent roads, especially as a result of increased HGV traffic. However, the accompanying commentary in Section 16.3.4 accepts that the said assumption would, in practice, not be borne out in the pattern of routes to and from the site that would be utilised.

8.67. I consider that the aforementioned analysis is, by its own admission, inadequate. During my site visit, I drove along a considerable number of roads in the area surrounding the application site and I observed that they all appear to be functioning well within their capacities. I am mindful, too, that the construction phase would be "fronted-loaded" in traffic terms and so there would be higher numbers of HGV traffic

[20] Refer to Table 16-10.

movements in its early stages. Consequently, the more significant impacts would accompany these stages, which would be over a temporary period.

8.68. In the light of the foregoing paragraph, I consider that the applicant should fully identify the HGV routes to and from the site and it should undertake baseline and post-construction surveys of the condition of the local roads comprised in these routes insofar as such roads are within the vicinity of the application site. A comprehensive Construction Traffic Management Plan should also be prepared, based on the said fuller identification of HGV routes. If the Board is minded to grant permission, all these matters could be conditioned.

Cultural Heritage

8.69. Under the heading of cultural heritage, Chapter 18 of Volume 1 to the EIS/EIAR addresses archaeology.

- Within the study area the only identified archaeology is that of a ringfort (Record of Monuments and Places (RMP) KE005-020), which consists of a sub-circular area enclosed by a well-defined bank and exterior moat. Proposed wind turbines T7 and T8 would be sited at some remove roughly to the south and north of this ringfort.
- Within a 100m buffer of grid connection Option B the only identified archaeology is that of a holy well (RMP: KE003-069), known as “Alick’s Well”. This well lies on the southern side of the L-1010 in Kilpaddoge to the west of Tarbert.

8.70. The applicant summarises the archaeology discovered during the construction of the Tullahennel South Wind Farm, including its grid connection. No archaeology was found on the site of this wind farm. It also summarises the findings of a field survey of the study area, which did not identify from the surface of this area any signs of archaeology. Nevertheless, the possibility exists that, especially within peat deposits, there may be archaeology.

8.71. The current proposal would not lead to any direct impacts upon the aforementioned ringfort, although a 50m buffer zone should be established around this fort for the duration of the construction phase. Construction works may have a direct impact upon any yet to be found sub-surface archaeology. The associated risk in this

respect would be capable of being mitigated by the appointment of a site archaeologist and his/her monitoring of excavation works. The County Archaeologist considers that the further precaution of pre-development archaeological testing of all excavation areas of the site is warranted. Such testing would mitigate the said risk. If the Board is minded to grant permission, it could be conditioned and so the Planning Authority's fourth reason for refusal would be overcome.

8.72. The current proposal would have an indirect impact upon the ringfort insofar as it would affect its setting. However, as this setting is already affected by the presence of coniferous woodland and the Tullahennel South Wind Farm, I do not consider that it would be significant.

8.73. There are no buildings within the study area of identified architectural heritage and, while there are examples of protected structures in the settlements of Tarbert and Ballylongford within the vicinity of grid connection Option B, the laying of proposed cables in the roadway would not affected the same.

8.74. The applicant undertook an Underwater Archaeological Impact Assessment of the 9 river crossings comprised in the route of grid connection Option B. None of the associated bridges are RMPs or protected structures and they are in continuous use by traffic, including HGVs. Accordingly, no significant impacts would arise.

Landscape

8.75. The site lies within an area of river plains to the east of Knockanore Mountain and to the south of Ballylongford and the southern shoreline of the Estuary of the River Shannon. This area is composed of farmland, forestry, and bog lands, each of which is present on the site, too. It is accessed by regional and local roads, along which are farmsteads and one-off dwelling houses. Wind turbines exist to the north west and to the east of the site and the recently completed and now operational Tullahennel South Wind Farm adjoins it to the south west. In the wider area of the Estuary lies the Money Point and Tarbert Power Stations and accompanying pylons. Further wind farms lie on higher ground to the south east around Abbeyfeale.

8.76. Under the Wind Energy Guidelines landscape character types are identified. The type that illustrates the site and its surrounding area is denoted as "Hilly and Flat Farmland". Under the Renewable Energy Strategy for County Kerry, a finer grain categorisation of landscape types is presented. The site is shown as lying within two

Landscape Character Areas (LCAs), i.e. its northern portion lies within Ballylongford Creek and its southern portion lies within the Inner River Plain. The accompanying commentaries on these two LCAs acknowledge that with the introduction of wind turbines into these Areas the landscape has been altered and so there is scope for further wind turbines on comparable sites.

8.77. Under Chapter 12 of Volume 1 of the EIS/EIAR, the applicant undertakes a Landscape and Visual Assessment of the current proposal in conjunction with the adjoining Tullahennel South Wind Farm.

8.78. With respect to the Landscape Assessment, the applicant sets out in Tables 12.1 & 12.2 the scales for landscape value and sensitivity and magnitude of landscape impact that it uses in this Assessment. The judgements made under these scales are then combined, under Table 12.3, which sets out a landscape impact significance matrix. The applicant also makes a distinction between the site and its immediate landscape context, i.e. less than 5 km, and the landscape of the wider area, i.e. 5 – 20 km. I accept this methodology and will follow it in my landscape assessment below.

8.79. The baseline for considering the value and sensitivity of the landscape is that of the state and condition of the landscape as it pertains at present. Thus, within 5 km of the site lies the scenic shoreline of the Shannon Estuary, which is accompanied by structures of historic interest such as Carrigafoyle Castle, and the lower eastern slopes of Knockanore Mountain, a freestanding hill that at 267m is the highest point in north west Kerry. The route of the Wild Atlantic Way follows the R551 on an east/west axis through Ballylongford, with a detour along the local road network to the said Castle and the nearby Carrig Island, and the CDP recognises easterly views and prospects from the local road that runs on a north/south axis over the said lower eastern slopes, which include the application site.

8.80. Between the above cited scenic features, which lie to the north and west of the site, the landscape is a working one, by virtue of the farmland, commercial forestry, and bog lands, which continue to be harvested for peat. With the advent of wind turbines, including the 10 which comprise the Tullahennel South Wind Farm, the sense of a worked landscape has been heightened. The introduction of the proposed 8 wind turbines into this *milieu* would represent a substantial addition to the existing wind

farm, which would enlarge its concentration of wind turbines. I judge that the resulting sensitivity and impact would be medium within 5 km and low within the wider area of 5 – 20 km, where the increased concentration would be diluted by distance and the open character and expansive scale of the landscape. Significance levels of moderate to slight-imperceptible would result.

8.81. With respect to Visual Assessment, the applicant describes visual sensitivity as an amalgam of receptor susceptibility and the value of any particular view. An indication is given of who is more and who is less susceptible, and a list of recognised views and attributes of views is delineated. No table of scales for visual sensitivity is presented, although scales are cited in Table 12.5, entitled "Visual Impact Significance Matrix". Visual impact is likewise discussed. The applicant states that such impact is an amalgam of quantity and quality. Thus, for example, the view is expressed that it may be preferable in terms of legibility and coherence to have a clear and full view of a wind farm rather than a partial one. Likewise, the view is expressed that a well-ordered layout may serve to mitigate the intrusiveness of a wind farm within views. Table 12.4 sets out a scale for the magnitude of visual impacts.

8.82. The applicant has identified a Zone of Theoretical Visibility. It has also illustrated how "on the ground" the visibility of the Tullahennel South Wind Farm and the proposed one can be intermittent when experienced sequentially from the surrounding road network.[21] Cognisance has been taken of acknowledged and representative viewing spots in selecting 18 viewshed reference points.

8.83. While I accept the applicant's methodology as outlined above, I am conscious that the handling of visual sensitivity in the said matrix needs to be monitored carefully. I accept, too, that the selected viewshed reference points are appropriate to the visual assessment of the proposal and that together they are sufficiently comprehensive.

8.84. I have reviewed each of the applicant's analyses of the viewsheds. I note that, where there is a range of visual receptor sensitivity and/or magnitude of visual impact, the visual impact significance recorded fails to reflect the resulting range of significances set out in the matrix. Thus, depending on whether the higher or lower significance is

[21] Refer to Figures 2.1 & 2.2 entitled "Visibility of proposed wind farm from surrounding routes."

cited, an inflated or a deflated level of significance is conveyed. I note, too, that some of the values cited are open to question. I will discuss these below.

- With respect to VP9, if weight is given to the fact that the R551 forms part of the Wild Atlantic Way (WAW) and that there is a public picnic area on the northern side of this regional road, then the visual receptor sensitivity (VRS) should be “medium” only. Likewise, I consider that the proximity and increased extent across the skyline of the proposed wind farm would not be mitigated by the regular layout between this and the existing Tullahennel South Wind Farm to the extent allowed for by the applicant and so the magnitude of visual impact (MVI) should be “medium” only, too. The resulting visual impact significance (VIS) would thus be “moderate”.
- With respect to VP10, I agree with the applicant that the VRS should be “high-medium”. However, as the proposed wind farm would extend the array of wind turbines on the skyline and both thicken these turbines, where it would overlap with the existing one, and bring them closer to Carrigafoyle Castle, when viewed from Carrig Island, the MVI should be “medium”. The resulting VIS should thus be “substantial moderate” and “moderate”.
- With respect to VP11, if weight is given to the fact that the R551 forms part of the Wild Atlantic Way (WAW) along a stretch of this regional road where east-bound traffic would be approaching towards the site, then the VRS should be “medium” only. Turning to the MVI, I note that the applicant judges that “on balance” this would be “medium”. However, I consider that, due to the proximity of the proposed wind farm and the fact that the majority of its turbines would extend eastwards across the skyline to fill out the overall array of turbines within the vista, the MVI should be “high” and so the resulting VIS should be “substantial moderate”.
- With respect to VP13, the range of VISs for the VRSs and MVIs cited should be expanded upwards and downwards, i.e. to include “substantial moderate” and “slight”.
- With respect to VP15, the VRS cited is “medium-low” and yet a comparison with VP14 indicates that it should be “medium” only. Consequently, the VISs should be “moderate” and “slight”.

8.85. Notwithstanding the variations from the applicant's visual assessment outlined above, the revised VISs do not register a significant impact for the purposes of EIA. Likewise, in the light of these revisions, I concur with the applicant's conclusion that the main visual impact would be the closer proximity of wind turbines to Ballylongford and hence their greater prominence than that which pertains at present with the Tullahennel Wind Farm on its own.

8.86. The Planning Authority's second reason for its draft refusal refers to the proposal as leading to an excessive proliferation of wind turbines with adverse implications for the landscape.

8.87. The applicant has addressed this issue of proliferation in its discussion of cumulative impact. Thus, Table 12.10 identifies the 13 existing and permitted wind farms within a 20 km radius of the site. Table 12.11 revisits each of the viewsheds already used in the visual impact assessment above. Under this Table, the number of wind farms potentially in view within each of the viewsheds is recorded and they are categorised as being nearer or further away than the proposed one in conjunction with the adjoining Tullahennel South Wind Farm. The type of cumulative impact is also recorded, i.e. whether a combined, a successive or a sequential view is available.

8.88. The applicant emphasises that the proposal would correspond strongly with the adjoining Tullahennel South Wind Farm and that its layout and design would be such as to suggest a seamless connection between the two. Thus, the immediate cumulative impact arsing would be that of a greater concentration of wind farms in the one combined site, i.e. a virtual doubling in number. This concentration would contrast with other wind farms in the surrounding area, which tend to have either fewer wind turbines or ones that are more dispersed across the landscape. The view is expressed that from a sequential perspective, concentration of wind turbines is to be preferred to their dispersal.

8.89. The applicant draws attention to the pre-existing energy reference points within the wider landscape that arise from the presence of the two power stations on the Shannon and expanses of bog land that are harvested for peat. The applicant also draws attention to the continuation of existing land uses that occurs with the introduction of wind farms. It contends that the proposal would not cause the

surrounding and wider areas of the site to become redefined as a wind farm landscape.

8.90. During my site visit, I travelled throughout north Kerry and I came to the view that, insofar as wind farms are a relative novelty within the surrounding and wider areas of the site, they are the most noticeable and hence memorable feature of these areas. I consider that this is the case at present and that the proposal would thus not so much lead to the crossing of any threshold in this respect but to a heightening of the existing impression of a wind farm landscape, amongst other things.

8.91. The applicant concludes its discussion by stating that cumulative impact would be "low". Under Table 12.9, the description of what accompanies this magnitude of impact is as follows:

- *The proposed wind farm will be one of only a few wind farms in the surrounding area and will be viewed in isolation from most receptors or perceived as an extension to another development.*
- *It might contribute to wind farm development becoming a familiar feature within the surrounding area.*
- *The design characteristics of the proposed wind farm accord with other schemes within the surrounding landscape and adverse visual effects are not likely to occur in relation to these.*

8.92. The same Table describes the "medium" magnitude of impact as follows:

- *The proposed wind farm will contribute to wind energy development being a characteristic element of the surrounding landscape.*
- *It will contribute to a sense of wind farm accumulation and dissemination within the surrounding landscape.*
- *Adverse visual effects might be generated by the proposed turbines in relation to other turbines.*

8.93. A comparison of these two descriptions indicates that the current proposal would share aspects of both descriptions. Thus, with respect to the first three bullet points cited above, it would not be one of only a few wind farms, but it would be "read" as an extension to an existing one, it would, rather than might, contribute to the surrounding and wider wind farm landscape, and yet its layout and design would go a considerable way towards mitigating any visual clash with the adjoining wind farm.

With respect to the second three bullet points, the proposal would contribute to the wind farm character of the landscape, it would lead to accumulation, although the sense of dissemination would be restricted by its siting next to an existing one, and, as explained above, it would not tend to jar with existing wind farms.

8.94. In the light of the foregoing paragraph, I consider that the cumulative impact would be "medium-low" and as such I consider that the Planning Authority's critique under its second reason for refusal is overdrawn. No significant impact would arise.

8.95. In conclusion, I have considered all of the written submissions made in relation to material assets, cultural heritage and the landscape, in addition to those specifically identified in this section of my EIA. I am satisfied that they have been appropriately addressed in terms of the application and the information submitted by the applicant and that no significant adverse effect is likely to arise.

(e) The inter-relationships between the factors referred to in points (a) to (d)

8.96. In Chapter 19 of Volume 1 of the EIS/EIAR, the applicant identifies interaction between factors, although it does not use the updated terminology of the 2014 EIA Directive. I revisit these interactions, which I understand to be two-way inter-relationships, using this terminology below.

- Population and human health with, variously, land, air, material assets, and landscape.
- Biodiversity with, variously, population and human health, soil, water, air, material assets, and landscape.
- Soil with, variously, water, material assets, and cultural heritage.

8.97. No new impacts would arise as a result of the aforementioned inter-relationships, beyond the impacts already discussed elsewhere in my EIA. Consequently, there is nothing to prevent the granting of permission on the grounds of cumulative impact.

Reasoned conclusion on significant effects

8.98. Having regard to the examination of environmental information contained above, and in particular to the EIS/EIAR and supplementary information provided by the developer, and the submissions from the Planning Authority, prescribed bodies, and observers, it is considered that the main significant direct and indirect effects of the proposal on the environment are as follows:

- In the absence of an intrusive geotechnical assessment of the site, I consider that it would be premature to grant permission to proposed wind turbines denoted as T2 and T3, which would be sited on deep peat deposits, as their construction could lead to peat destabilisation with potentially significant effects on water quality within the Ballyline River system.
- During the construction phase, potentially significant effects on water quality within the Ballyline River system could occur as a result of “dirty water” run-off into the existing “clean water” drainage network on the site. However, if the proposed “dirty water” drainage network is designed and laid out to be wholly separate from the existing drainage network, then this effect would be avoided.
- During the construction phase, construction traffic generated would have a significant effect upon traffic levels on local roads within the vicinity of the site. This effect would be mitigated by the temporary period during which the majority of traffic movements would occur and by the control of such movements in accordance with a Construction Traffic Management Plan.

8.99. I am satisfied that the proposal would not have any direct or indirect significant effects on the environment.

9.0 Appropriate Assessment

9.1. The application site does not lie within a Natura 2000 site. Within a 15 km radius of this site, there are four such sites, as follows:

- Lower River Shannon SAC (site code 002165)
- River Shannon and River Fergus SPA (site code 004077)
- Moanveanlagh Bog SAC (site code 002351)
- Stack’s to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (site code 004161)

9.2. The first two of these sites extend over the Estuary of the River Shannon and they include Ballylongford Creek, which comes within 1.4 km of the application site. Hydrological connections from the north western and south eastern extremities of the

site flow into the Ballyline River, which in turn flows into this Creek and so there are source/pathway/receptor routes between the site and these two Natura 2000 sites, albeit the former appears to be intermittent and the latter continuous in its operation[22].

9.3. The third site lies c. 9 km to the south east of the application site and the fourth site lies some 13 km to the east and 15 km to the south. There is no source/ pathway/receptor route between either of these sites and the application site.

9.4. The applicant undertook a Stage 1 Screening Exercise for AA, which is included in Volume 1 of the EIS/EIAR. This Exercise concluded that, as significant effects on Natura 2000 sites were not foreseen, there was no need to progress to Stage 2 NIS/AA.

9.5. The Planning Authority does not agree with the said conclusion and so its fifth reason for refusal gives expression to its concern that, given the location and scale of the proposal and the ground conditions of the site, significant effects cannot be ruled out and so, in the absence of a NIS/AA, the possibility of adverse impact on Natura 2000 sites exists. This concern emanates from the advice of the County Biodiversity Officer, which also refers to the advice of the Environment Section. Essentially, it relates to the risk of a pollution event occurring during the construction phase, which would have adverse implications for Ballylongford Creek. It also relates to the need for a further winter bird survey and to the need for information concerning the habitats that grid connection Option B would pass through.

9.6. In relation to the latter two concerns, I note that the applicant reports that early results from a further winter bird survey are comparable with previous ones.[23] I note, too, that, as the route of grid connection Option B, would pass along the route of the R551, the only interface that it would have with Ballylongford Creek is within the settlement of Ballylongford. Accordingly, the missing habitats information is of relevance to the consideration of biodiversity in my EIA only.

9.7. I will discuss the former concern of the Planning Authority as part of my Stage 1 Screening Exercise for AA below.

[22] Refer to the discussion of this matter in paragraph 8.43.
[23] Refer to Supplementary Information in Appendix 9 to the applicant's grounds of appeal.

9.8. As indicated above, there are two source/pathway/receptor routes between the application site and Ballylongford Creek, which lies within the Lower River Shannon SAC (site code 002165) and the River Shannon and River Fergus SPA (site code 004077). The said SAC is an extensive one, which is the subject of multiple qualifying interests and corresponding conservation objectives. The NPWS Conservation Objectives document includes within it a series of maps which enable the qualifying interests and corresponding conservation objectives for Ballylongford Creek to be delineated. These are set out below.

- 1140: Mudflats and sandflats not covered by seawater at low tide: To maintain their favourable conservation condition.
- 1170: Reefs: To maintain their favourable conservation condition.
- 1330: Atlantic salt meadows: To restore their favourable conservation condition.
- 1410: Mediterranean salt meadows: To restore their favourable conservation condition.
- 1349: Common bottlenose dolphin: To maintain its favourable conservation condition.
- 1355: Otter: To restore its favourable conservation condition.

9.9. Given the existence of the said source/pathway/receptor routes and given, too, the proximity of Ballylongford Creek to the application site, the possibility arises that, during the construction phase of the proposal, pollutants could be conveyed into the Creek that would be detrimental to the aforementioned qualifying interests.

9.10. Under the heading of “Soil” in my EIA, I identified a gap in the applicant’s EIS/EIAR insofar as an intrusive geotechnical investigation of the study area has not been undertaken. This gap is relevant to any assessment of the deep peat deposits under the sites proposed for wind turbines T2 and T3 and it has a direct bearing on concerns over peat stability and the associated risk of pollutants being conveyed into a tributary of the Ballyline River and so on into Ballylongford Creek. If, however, these two wind turbines are omitted from the proposal, then the said risk would recede.

9.11. Under the heading of “Water” in my EIA, I discussed the applicant’s proposal to separate the existing “clean water” drainage network from the proposed “dirty water” one. I discussed, too, its proposal to de-water the foundations of the proposed wind turbines via the proposed drainage network. Subject to protocols, such de-watering appears feasible, except for the wind turbine T2, where a trial pit resulted in a large amount of water quickly accumulating. Thus, there is a further reason for the omission of this turbine.

9.12. The existing drainage network in the study area connects to the Ballyline River and its tributaries to the south east and north west of the application site. This River flows into the Ballylongford Creek. On the basis that this network would be separated from the proposed new “dirty water” drainage network, pollutants from the construction and operational phases of the proposal would not be conveyed from the study area to Ballylongford Creek. Given the level of information comprised in the applicant’s EIS/EIAR, the achievement of such separation would require the omission of proposed wind turbines T2 and T3. Accordingly, in their absence, no significant effects would be likely to occur to the qualifying interests and hence the conservation objectives of the Lower River Shannon SAC.

9.13. The River Shannon and River Fergus SPA identifies 21 bird species and the habitat known as wetlands (A999) as its qualifying interests. All of the bird species winter in the SPA and, in addition, the first one also breeds there. They are as follows:

- A017: Cormorant
- A038: Whopper Swan
- A046: Light-bellied Brent Goose
- A048: Shelduck
- A050: Wigeon
- A052: Teal
- A054: Pintail
- A056: Shoveler
- A062: Scaup
- A137: Ringed Plover

- A140: Golden Plover
- A141: Grey Plover
- A142: Lapwing
- A143: Knot
- A149: Dunlin
- A156: Black-tailed Godwit
- A157: Bar-tailed Godwit
- A160: Curlew
- A162: Redshank
- A164: Greenshank
- A179: Black-headed Gull

9.14. In the case of each of these qualifying interests the conservation objective is to maintain its favourable conservation condition. Likewise, the conservation objective for the wetlands is to maintain their favourable conservation condition as a resource for the regularly-occurring migratory water birds that utilise it.

9.15. The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA has one qualifying interest, i.e. A082 Hen Harrier, and a corresponding conservation objective to maintain or restore its conservation condition.

9.16. The applicant has undertaken a series of bird surveys, which are described in Chapter 9 of Volume 1 to the EIS/EIAR. These surveys have recorded sightings of several of the bird species that are cited above as a qualifying interest flying over the study area, i.e. Cormorant, Curlew, Golden Plover, and Hen Harrier. Additionally, Whopper Swans were recorded flying near to this area, along the route of the Ballyline River, and their presence was also recorded in the wider area[24].

9.17. Due to the low incidence of sightings of the first three of these aforementioned bird species and due to the absence of sightings of Whopper Swans over the study area, all of these bird species are set aside as not prompting further assessment.

[24] Refer to Table 13 of Chapter 9 of Volume 1 to the EIS/EIAR.

9.18. The Hen Harrier was recorded foraging on nine occasions, seven times during the winter of 2016/17 and twice during the breeding season of 2017. On the majority of these occasions the bird was flying at below 20m over bog land within the study area. No recent evidence exists of it breeding within the study area or its surroundings. Nesting typically occurs in forest plantations, which are in the early stages of growth. Examples of such forestry exist in the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA. Nevertheless, the NPWS advises that precautionary survey and monitoring conditions concerning the Hen Harrier be attached to any permission.

9.19. I conclude that the level of foraging recorded over the study area and the existence of comparable bog land in the wider area means that the loss of such habitat, which would occur under the proposal, would not be likely to have a significant effect on the Hen Harrier.

9.20. It is reasonable to conclude that on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposal, as amended by the omission of proposed wind turbines T2 and T3, individually or in combination with other plans or projects would not be likely to have a significant effect on European Site Nos. 002165, 004077, 002351, and 004161 or any other European site, in view of the Sites' Conservation Objectives, and a Stage 2 Appropriate Assessment (and submission of a NIS) is not therefore required.

10.0 Recommendation

10.1. That permission be granted.

11.0 Reasons and Considerations

Having regard to:

- The Wind Energy Development Guidelines 2006,
- The Proposed Revisions to the Wind Energy Development Guidelines 2006,
- The Kerry County Development Plan 2015 – 2021,
- The Renewable Energy Strategy for County Kerry 2012, and

- The planning history of the local area,

it is considered that, subject to the omission of proposed wind turbines T2 and T3 and proposed grid connection Option B and subject, too, to the attachment of conditions, the proposal would accord with the proper planning and sustainable development of the area.

Generally, the proposal would comply with the Renewable Energy Strategy Objectives EP-11 & 12 of the County Development Plan and it would address in its design and layout Items 1(a) – (e) of Article 3 to the 2014 EIA Directive.

Specifically, this proposal would comply with Objective EP-12 of the County Development Plan and it would be compatible with the public health and the residential amenities of the area, in terms of noise, dust, and shadow flicker. While the proposal would lead to a marginal loss of habitat, no significant effects on biodiversity would be likely and any disruption of land uses would be minor. In the absence of proposed wind turbines T2 and T3, the risk of the destabilisation of peat bogs would abate and on the basis of separate existing “clean” and proposed “dirty” water drainage networks, the risk of pollutants entering the Ballyline River system would abate. The route previously used for abnormal loads in conjunction with the development of the Tullahennel South Wind Farm would be reused and extended to the west. Other construction traffic would be likely to use the wider local road network and so, while there is capacity in this network, its condition would need to be attended to. The ringfort in the study area would be safeguarded during the construction phase, which would be preceded by a comprehensive testing of the application site for archaeology. The proposal would have landscape and visual impacts, none of which would be significant for the purposes of EIA.

A Stage 1 Screening Exercise for the purposes of Appropriate Assessment has been undertaken. This Exercise concludes that the proposal, as amended by the omission of proposed wind turbines T2 and T3, individually or in combination with other plans or projects would not be likely to have a significant effect on European Site Nos. 002165, 004077, 002351, and 004161 or any other European site, in view of the Sites’ Conservation Objectives, and a Stage 2 Appropriate Assessment (and submission of a NIS) is not therefore required.

12.0 **Conditions**

1. 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 received by An Bord Pleanála on the 4th day of December, 2017, 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.

   Reason: In the interest of clarity.

2. The proposed development shall be amended as follows:

   (a) Proposed wind turbines denoted as T2 and T3 shall be omitted.

   (b) Grid connection Option B shall be omitted.

   Revised drawings showing compliance with these requirements shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

   Reason: Insufficient information was submitted to facilitate a full appraisal of these aspects of the proposal.

3. The period during which the development hereby permitted may be carried out shall be 10 years from the date of this order.

   Reason: Having regard to the nature of the development, the Board considers it appropriate to specify a period of validity of this permission in excess of five years.

4. This permission shall be for a period of 25 years from the date of commissioning of the wind farm.

   Reason: To enable the planning authority to review its operation in the light of the circumstances then prevailing.

5. Prior to the commencement of development, the developer shall submit a scheme to and agree it with the Planning Authority. This scheme shall identify a diverted route for The Shannon Way for the duration of the construction phase and it shall identify a reinstated route for The Shannon Way for the duration of the operational phase.

   Reason: To ensure continuity in the provision of this regional recreation route.

6. Prior to the commencement of development, the developer shall submit a scheme to and agree it with the Planning Authority. This scheme shall comprise plans of the site, which show the comprehensive provision of the proposed “dirty water” drainage network and its clear and consistent separation from the existing “clean water” drainage network. The siting of silt traps within the proposed “dirty water” drainage network shall be made explicit, too. These plans shall also show how any possible hydrological connection between the area identified for the proposed site compound and peat deposit and the Ballyline River system would be terminated. The scheme shall comprise a timetable for the installation of this network in conjunction with other construction works.

   Reason: In order to avoid pollutants entering the existing “clean water” drainage network.

7. Prior to the commencement of development, the developer shall submit a scheme to and agree it with the Planning Authority. This scheme shall set out protocols for the de-watering of excavations during the construction phase and the use of the proposed “dirty water” drainage network in this respect. It shall be incorporated in a fully detailed pre-commencement of construction version of the Construction and Environmental Management Plan for the site.

   Reason: In order to avoid flooding the proposed “dirty water” drainage network.

8. Prior to the commencement of development, the developer shall submit a scheme to and agree it with the Planning Authority. This scheme shall set

out a programme for water monitoring of the site during the construction phase, which shall include the identification of sampling locations and the frequency of sampling. Results of monitoring shall be submitted to the Planning Authority on a fortnightly basis.

Reason: In order to facilitate the maintenance of water quality.

9. Prior to the commencement of development, the developer shall submit a scheme to and agree it with the Planning Authority. This scheme shall identify the local roads between the site and the regional road network that construction traffic would use to convey stone fill to the site. It shall undertake a baseline survey of the condition of these roads and any accompanying bridges and it shall expand the Construction Traffic Management Plan to encompass the traffic movements that would be generated thereby.

   Within 12 weeks of the substantial completion of the proposal, a further survey of the condition of the said local roads and any accompanying bridges shall be undertaken by the developer and submitted to and agreed with the Planning Authority.

   Reason: In the interests of good traffic management and the proper upkeep of the local road network.

10. Prior to the commencement of development, a fence shall be erected around the buffer zone to the ringfort (RMP: KE005-020) in the study area and, thereafter, this fence shall remain in-situ for the duration of the construction phase.

    Reason: In order to safeguard the ringfort in the interest of conservation.

11. The developer shall facilitate the archaeological appraisal of the site and shall provide for the preservation, recording and protection of archaeological materials or features which may exist within the site. In this regard, the developer shall:

    (a) Notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development, and

(b) Employ a suitably-qualified archaeologist prior to the commencement of development. The archaeologist shall assess the site and monitor all site development works.

The assessment shall address the following issues:

(i) The nature and location of archaeological material on the site, and

(ii) The impact of the proposed development on such archaeological material.

A report, containing the results of the assessment, shall be submitted to the planning authority and, arising from this assessment, the developer shall agree in writing with the planning authority details regarding any further archaeological requirements (including, if necessary, archaeological excavation) prior to commencement of construction works.

In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: In order to conserve the archaeological heritage of the area and to secure the preservation (in-situ or by record) and protection of any archaeological remains that may exist within the site.

12. A bird and bat corpse survey, carried out by a competent ecological surveyor, and according to up-to-date best practice concerning timing, and using trained search dogs, will be conducted under the operational turbines annually. The results will be forwarded annually to the Planning Authority and to the National Parks and Wildlife Service.

    Reason: To assess incidental mortality of species for which the Shannon Estuary SPA was designated, and of strictly protected species listed in Annex IV of the EU Habitats Directive.

13. Prior to any construction works being carried out between mid-March and mid-August, a survey for breeding hen harriers will be carried out by a competent, experienced ornithologist between mid-March and the end of May. The survey will cover the area within a boundary of 500m of the works to be carried out during the above period. It will be the responsibility of the ornithologist, based on his or her experience and/or professional opinion, to

ensure that the survey methodology (location of vantage points and length and timing of observations) is sufficient to ensure that a hen harrier breeding site will not be overlooked. Taking into account the results of this survey, no construction works shall be carried out during the above period within 500m of pre-nesting breeding site and/or nest, except with the written approval of the National Parks and Wildlife Service, but also no deliberate disturbance by surveyors or other persons of a hen harrier on or near a nest containing eggs or un-flown young shall be considered lawful as a consequence of this grant of planning permission.

Reason: To avoid significant disturbance to a protected Annex I bird species.

14. Any excess peat or soil excavated to create the access road and other infrastructure will not be mounded, side-cast or spread over existing heath, bog or rough grass within any potential hen harrier foraging habitat.

Reason: To avoid deterioration of habitat of a protected Annex I bird species.

15. In years 2 and 3 after the commencement of operation of the wind turbines, monitoring of hen harrier use of the site according to the methodology used in the pre-planning survey (or any revisions recommended in the meantime) will be carried out by one or more competent, experienced ornithologists. The results of this survey will be sent to the Planning Authority and the National Parks and Wildlife Service by the end of each year of survey.

Reason: To provide monitoring data on the EIS predictions of effects on a protected Annex I bird species.

16. In the full year prior to excavation of the surface-intact but dried raised bog for the construction of the floating road, a detailed survey of the bryophyte, lichen and characteristic invertebrate fauna of the affected and adjacent bog will be carried out by a competent bryologist, a competent lichenologist and one or more competent invertebrate zoologists, in consultation with the National Parks and Wildlife Service of the Department of Culture, heritage

and the Gaeltacht, and the results will be sent to the Planning Authority and the Department of Culture, heritage and the Gaeltacht.

Reason: To ensure a record of the biodiversity present in the impacted bog.

17. The wind turbines including masts and blades, and the anemometer mast, shall be finished externally in a colour to be agreed in writing with the planning authority prior to commencement of development.

Reason: In the interest of visual amenity.

18. (a) Cables within the site shall be laid underground.

(b) The wind turbines shall be geared to ensure that the blades rotate in the same direction.

(c) Transformers associated with each individual turbine and mast shall be located either within the turbine mast structure or at ground level beside the mast.

Reason: In the interest of visual amenity.

19. (a) Facilities shall be installed to minimise interference with radio or television reception in the area. Details of the facilities to be installed 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.

(b) If shadow flicker demonstrably occurs at any existing dwelling house within the vicinity of the site, then the operator of the wind farm shall undertake the necessary measures to ensure its elimination.

Reason: In the interest of residential amenity.

20. Details of aeronautical requirements shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. Subsequently the developer shall inform the planning authority and the Irish Aviation Authority of the co-ordinates of the 'as constructed' positions of the turbines and the highest point of the turbines (to the top of the blade spin).

Reason: In the interest of air traffic safety.

21. 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 masts and the turbines concerned (including foundations) shall be removed and all decommissioned structures and any access roads shall be removed within three months of decommissioning.

    Reason: To ensure satisfactory reinstatement of the site upon cessation of the project.

22. 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 satisfactory reinstatement of the site upon cessation of the project coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

    Reason: To ensure satisfactory reinstatement of the site.

23. 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, 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.

24. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

Hugh D. Morrison
Planning Inspector

10th October 2018