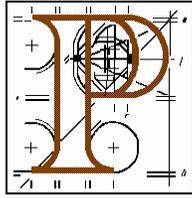


# An Bord Pleanála



## Inspector's Report

**Appeal Reference:** PL06F.236423

**Development:** Erection of two 850 kw wind turbines of 100m in height at the Tesco Distribution Centre, north of Hearse Road, south of Turvey, west of Newbridge Demesne, Donabate, Co. Dublin.

### Planning Application

Planning Authority: Fingal County Council.  
Planning Authority Reg. Ref.: F09A/0310  
Applicants: Tesco Ireland Ltd.  
Type of Application: Permission  
Planning Authority Decision: Grant permission

### Planning Appeal

Appellants: (i) Donabate Portrane Community Council  
(ii) John & Maeve Riordan  
Type of Appeal: Third Party  
Observer(s): None  
Date of Site Inspection: 25<sup>th</sup> May 2010

**Inspector:** Donal Donnelly

**Appendices:** Photographs and maps

## **1. SITE LOCATION AND DESCRIPTION**

- 1.1 The appeal site is located in north-eastern Co. Dublin approximately 2km west of Donabate and 3.5km north-east of Swords. The Donabate/ Portrairie Peninsula lies immediately to the east of the site; this peninsula is surrounded by the Rogerstown Estuary to the north, the Irish Sea to east and the Broadmeadow Estuary to the south.
- 1.2 The area where the site is located is characterised by arable agricultural land with occasional development; there is a business park to the north of the site and warehousing along the R132 (old N1), together with sporadic road fronting development elsewhere. The R126 to the south of the site is the main road through the Donabate/ Portrairie Peninsula and there is a local road to the north accessing Donabate through Turvey. Another local road to the east of the site forms the western boundary to Newbridge Demesne, which extends to some 150 ha and includes public parkland, a playground and model farm surrounding the main Georgian house. Lanistown North (protected structure) is located approximately 80m to the north of the site.
- 1.3 The site comprises the surface car parking area and access road serving the Tesco Distribution Centre. The access road commences at the R132 to the west of the site and continues around 350m to the east before turning south and onto the car park containing 618 no. spaces. The car park is surrounded by fencing, with other structures including lighting posts and a 58.65m temporary meteorological mast situated at the southern end. The appeal site is roughly 'L' shaped and with a stated area of 14.8 hectares.
- 1.4 The Distribution Centre is a large structure occupying a footprint of around 68,745 sq.m. and with a height of approximately 27.775m. This building sits on an east-west axis to the east of the car park.

## **2. PROPOSED DEVELOPMENT**

- 2.1 The proposal is for the erection of 2 no. 100m high 850kW wind turbines within the car park to the front of the distribution centre.
- 2.2 One turbine will be located to the north of the car park and the other to the south and at a distance of c. 160m apart. A total of 20 no. car parking spaces will be removed for the construction of the turbine foundations.
- 2.3 The turbines themselves will be 100m in height with the tower being 74m and each of the three rotor blades 26m in diameter. The width of the tower at its base will be 3.4m and the blades will be as wide as 2m. It is proposed that the turbines will have a white matt finish. The substation is to be incorporated within existing buildings on site.
- 2.4 The base of the proposed northern turbine is approximately 12m O.D and the southern turbine will be around 16.5m O.D. In general, these levels are reflective of the low lying nature of the Donabate Portrane Peninsula.

### **3. TECHNICAL REPORTS**

- 3.1 The recommendation to grant permission, as outlined within the final Planning Report, broadly reflects the decision issued by the Planning Authority.
- 3.2 Matters covered under the analysis of the proposed development include relevant policy, development principle, design and materials, noise impact, electromagnetic impact, visual impact, turbine height, shadow flicker, shadow analysis, car parking, impact on Dublin Airport and environmental impacts.
- 3.3 It is stated that the Council will encourage the development of wind energy in accordance with government policy. Proposals will be assessed having regard to Guidelines and it is noted that visually and environmentally sensitive locations should be avoided. Under the zoning objective for the site, wind turbines are not expressly permitted or not permitted.
- 3.4 The Guidelines state that noise is unlikely to be a significant problem where noise sensitive property is more than 500m from the turbines. In this regard, reference is made to the Noise Impact Assessment accompanying the application which concludes that there will be no significant impact. An Electromagnetic Impact Assessment also concludes that the proposal should have little or no effect on electromagnetic conditions.
- 3.5 In terms of visual impact, it is considered that the turbines will be highly visible from a number of viewpoints included within the photomontage study. It is considered by the Heritage Officer that the height of the proposed turbine is key in this type of flat farmland landscape. It is also noted that in the Turbine Height Report submitted with the application, average wind speeds were taken at a height of 60m and there would appear to be little justification for a hub height of 77m. Reference is also made to data supplied for Dublin Airport, the SEI Wind Atlas and the 82.5m turbine granted in Lusk (Reg. Ref: F07A/0929).
- 3.6 Impacts associated with shadow flicker are considered by the applicant to be slight to moderate and the only dwelling where threshold levels would be exceeded is Lanestown House (sic) which is vacant. It is noted by the Conservation Officer that photomontages and shadow cast maps show that the turbines will be visible where tree cover is not so dense and that deciduous trees are shown in leaf. However, it is considered that the turbines are not within or would not disturb the principal views of Newbridge House. The Conservation Officer would, however, support any reduction in height that would reduce the visual impact of the turbines from the demesne.
- 3.7 The Irish Aviation Authority (IAA) have concerns with the height of the proposed turbines and the fact that the site is situated under published Standard Instrument Departure routes and a Visual Flight Rules holding point for the airport. It was requested that the previous application (Reg. Ref F07A/1689) be refused due to concerns that the radar service would be degraded as a result of any potential interference.
- 3.8 With regards to impacts on nearby European Sites, an appropriate assessment was carried out and the Heritage Officer raised no issues in relation to its content. The Appropriate Assessment includes results of a collision risk study for waterbirds and of

most concern are the results pertaining to the Golden Plover where there is a mortality estimate of 16 per year. There is an estimated population at the Malahide SPA of 1,920 and this would represent 0.83% of the total. The high collision risk was put to the presence of a wheat field adjacent to the site which is outside the control of the applicant.

- 3.9 The NPWS considers that the proposal is unlikely to have a significant impact on the integrity of the nearby SPA's but that a clearer picture of bird movements in and around the site should be obtained. It is also recommended that post construction monitoring be carried out to verify avoidance rates within the appropriate assessment and to quantify the cumulative impacts of the turbines.
- 3.10 It is considered that the proposed loss of car parking will have a minimal impact having regard to the total number of available spaces.
- 3.11 Arising from the initial assessment of the application, it was concluded that the proposal is acceptable in principle but that a request for further information was necessary to address the concerns of the IAA; to justify the height of the proposed turbines; and to examine alternative turbine layouts to mitigate the potential impact on bird movements.
- 3.12 The further information is assessed within a subsequent planning report. The IAA advised that an assessment of the potential impact of the proposal on radar facilities at the airport was required in light of draft European Guidelines, 'How to Assess the Potential Impact of Wind Turbines on Surveillance Sensors'. A report submitted on behalf of the applicant confirms that the turbines are predominantly in the line of sight of the radars. The IAA has also confirmed that the applicant's agent has only assessed Primary Surveillance Radars and not the secondary radar system. It is noted by the IAA that the agent's report confirms that it will intermittently allow primary targets to be generated by the Primary Surveillance Radars as clutter, which may dilute the effectiveness of radar system. Clarification of further information was sought to address these concerns.
- 3.13 In response to the concerns regarding height, the applicant has reduced the turbines to 91m and submits that any further reduction would rule out potential suppliers. It is noted by the planner that the height reduction is acceptable.
- 3.14 The applicant submitted that there is no appreciable difference on bird movements by relocating the turbines and this is considered acceptable.
- 3.15 The report assessing the clarification of further information submission confirms that the information submitted is acceptable. The concerns of the IAA have been addressed in relation to radar surveillance. However, the IAA submit that the site is too close to low level routes used by Search & Rescue Helicopters and a refusal is recommended pending alternative routes being found. Following further discussions, it was noted that Search & Rescue helicopters are very flexible in terms of routes they can take. It is considered that this can be resolved by way of condition.

#### **4. PLANNING AUTHORITY'S DECISION**

- 4.1 Fingal County Council issued notification of decision to grant planning permission for the proposed development subject to 15 no. conditions.
- 4.2 Condition 3 seeks agreement for an alternative low level route for search and rescue helicopters and condition 4 relates to post construction monitoring of the site for the various species of birds. Specified noise levels and noise monitoring requirements are outlined under conditions 8 & 9. There are also conditions relating to shadow flicker and electromagnetic interference. The operation and maintenance of the turbines, finishes and construction works are covered under conditions 5, 6 & 7, respectively.

#### **5. APPEAL GROUNDS**

- 5.1 Two third party appeals were submitted by the Donabate Portrane Community Council and on behalf of residents of Lishmar House, Seafield, Donabate. The grounds of appeal and main points raised in each of the appeals can be summarised as follows:

*Donabate Portrane Community Council*

- Photomontages clearly show that the proposed development will have a significant visual impact on Newbridge Demesne, Broadmeadow Estuary and Rogerstown Estuary.
- There are some key visual perspectives of the proposed development missing, i.e. from Donabate village, train station, golf courses, GAA club and on the coastal walk. Additional perspectives required from Broadmeadow and Rogerstown Estuaries.
- Birdwatch Ireland has raised serious concerns relating to the range of weather conditions not accounted for in survey work; deficiencies in the Collision Risk Model; no assessment of behavioural impacts; incorrect statements, e.g. negligible impacts; cumulative impacts not considered; and non collection of breeding season data for priority species, including the Barn Owl.
- Applicant's expertise is in retail not complex energy systems.
- Second opinions on scientific matters from organisations and consultants not selected or paid by the applicants should have been sought by the Council.
- Proposal will result in further visual depreciation on top of the existing distribution centre.
- Proposal does not adhere to recommendations within the Wind Energy Guidelines relating to public consultation; impact on tourism potential of Newbridge Demesne; location in proximity to roads; location of turbines in relation to one another; protection of bird species and biodiversity; and risk of interference with communication systems.

- Search & rescue helicopter routing should be agreed and detailed within the planning application.
- Noise monitoring programme should be detailed in the planning application and be subject to the normal planning process.
- Appropriate paint should be used to reduce shadow flicker.
- Condition 12 does not give full details on how potential problems relating to electromagnetic interference would be rectified.

*Residents of Lishmar House*

- Proposed development does not comply with Council's own Wind Energy Strategy.
- Landscape Assessment dramatically understates the visual impact of the proposal on surrounding landscape, particularly Newbridge Demesne;
- Landscape assessment should have been carried out in winter months;
- Negative visual impact of distribution centre will be greatly exacerbated with the construction of two 91m turbines.
- Wind Energy Strategy states that GIS based 'Zone of Visual Impact' should be employed to provide a comprehensive view of the proposal – has not been carried out.
- According to Wind Energy Strategy, site is open for consideration for wind energy development – better suited to north of the county which has been identified as being most suitable for wind energy development. Height of 91m required to operate viably – hence location not best suitable.
- Wind Energy Strategy states that letter of approval from Eircom should be included – no such letter included with the application.
- Alternative sources of energy – examination of solar panels and/ or other sources of renewable energy have not been investigated.
- Appropriate Assessment is flawed as no reasonable alternatives have been put forward following assessment of the proposal.
- Height bands used in Bird Assessment Report are too broad - a reduction in height of 30-40m should be assessed in terms of impact on flight paths.
- NPWS assessment is inconclusive by stating that it is unlikely that there will be a significant impact – does not say that there won't be an impact.
- Grant of permission was issued despite the IAA continuing to raise caution with respect to the proposed turbines – Council has prioritised a private wind energy development at the expense of the emergency services.

- Proposal would impact on existing vistas and views within the Newbridge ACA.
- Height and mass of turbines would negatively impact on the significance of the Lanestown House (sic) protected structure.
- Turbines would provide a distraction for passing motorists on the M1, R132 and other local roads in the vicinity – issue of traffic safety has not been properly considered.
- Planning Authority did not consider the Landscape Character Assessment in determining its decision – development will be located in open field and will have an adverse impact on the low lying landscape character of the area. Will also impact on adjoining estuary landscapes – sensitivity of coastal area to development is high.

## 6. RESPONSES

### First Party

- 6.1 A response to third party appeals was submitted by the applicant's planning consultants with input from landscape architects, ornithologists, conservation architect and engineers. The main points raised in response to items raised by appellants can be summarised as follows:
- Photomontages show turbines at a height of 100m; those approved are 9m shorter and should therefore have less of an impact.
  - The fact that the turbines are visible in the landscape does not mean that they will have a negative impact.
  - Viewpoints taken at nearby estuaries and from within Newbridge Demesne were requested by the Local Authority – impacts on estuaries will only be slight and extensive vegetation will provide natural screening from the demesne.
  - Two additional photomontages taken from Rogerstown Estuary confirm that there will be no negative impact.
  - Unrealistic to expect applicants to prepare photomontages from all public areas in the surrounding area.
  - Birdwatch Ireland's comments were responded to by White Young Green in the final Appropriate Assessment that accompanied the planning application.
  - Applicant has commissioned an extensive team of consultants for a relatively small wind farm development – indicates professional approach.
  - Reports submitted with the application include non technical summaries.
  - Consultants provide impartial advice in accordance with the recognised code of ethics – applicant appointed QinetiQ on the recommendation of the IAA.

- Public consultation not considered necessary as the proposal is only for 2 turbines and the nearest residence is approximately 500m away.
- Studies have found that the presence of wind farms in scenic areas did not affect the perception of the area.
- Even bare deciduous trees will help screen the turbines from Newbridge Demesne in winter.
- Guidelines states that turbines should be located at least the same distance as their height from a public road – nearest roads substantially further than 91m.
- NPWS agree with findings of appropriate assessment – no regular movement of Brent Geese between the three estuaries occurs over the Tesco site.
- Process to identify alternative emergency route could take up to 3 months – IAA do not envisage any issues arising.
- Noise impact assessment undertaken in 2007 concluded that there will be no significant impact day or night – technology has reduced the noise generated by wind turbines since the study was completed.
- Applicant agrees with appellant in relation to special paint to reduce shadow flicker and intends to incorporate the required paint to further reduce any impact.
- Applicant has appointed consultants to deal with any issues, should they arise, of electromagnetic interference following construction of the turbines.
- Distance and orientation of appellant's property at Seafield will ensure that there is minimal impact on their amenities.
- It was concluded by applicant that the proposed development would not be visible from areas further to the east given that there was no significant visibility from Newbridge House.
- Report assessing the impact of the proposed turbines on Lanestown House (sic) concludes that the erection of the turbines will have no greater negative impact on the landscape setting of Lanestown House (sic) than that which has already occurred.
- Appellants grossly overstate the height of the turbines (+106.4 O.D. and not +175.4m tip height). Tip height of turbine at Country Crest Foods is 145m O.D.
- Images of distribution centre do not appear to represent the view from Broadmeadow Estuary – images should be disregarded as completely inaccurate.
- Engineer's report appended to response demonstrates that there will be enough wind speed for the operation of the turbines at the proposed height based on the results from the test mast.
- Letter attached to submission confirms that Eircom has no objection to the proposed development.

- Applicants have looked at installing PV solar panels but this is considered to be uneconomical, with pay back periods of 15 years. Solar panels have been installed on the roof to meet hot water requirements.
- Appropriate assessment report illustrates that flightlines for birds are spread over the entire car park – no advantage in relocating turbines within site. Turbines must be located within the site as they will only power the distribution centre.
- There is little movement of waterbirds over the appeal site – results of Collision Risk Models show that there is no significant impact on local, national or international waterbird populations.
- Proposal will be an interesting feature on the landscape and will serve as a landmark. Wind turbines are synonymous with the history of the area.

Second Party

- 6.2 The Planning Authority has stated in its response to third party appeals that it considers that the proposed turbines are consistent with national policies and policies for alternative energy projects, as well as the relevant policies and objectives of the Development Plan.
- 6.3 The proposal is acceptable to the Planning Authority on visual grounds; the structures will be an off-white colour and there are no protected views or prospects in the immediate area.
- 6.4 The Planning Authority notes the NPWS's comments that the proposed development is unlikely to have a significant impact on the integrity of nearby SPA's. Noise, traffic, electromagnetic interference and other impacts are considered acceptable.
- 6.5 Overall, the proposal is considered acceptable having regard to the above, and to the site location and pattern of development in the area.

Third Party

- 6.6 A response to the applicant's submission was lodged on behalf of the residents of Lishmar House. The main points raised in this submission are summarised hereunder:
- Photographs submitted with appeal submission illustrate the context of houses in the Seafield area against the backdrop of the existing Tesco distribution centre.
  - Photomontages do not capture the blades in motion which would cause a negative visual impact.
  - Proposal will have a negative impact on appellant's residence, on residences in the surrounding area and on the established landscape character of the area.
  - Proposed turbines are of a far greater scale and size than historical wind turbines associated with the area.
  - Proposed development will be visible from a number of locations within Newbridge Demense – will have an overall negative impact on the ACA.

- There is less established screening between the appellant's residence and the distribution centre.
  - Appellant miscalculated the height of the turbine tip above sea level – agrees with applicant's figures (106.4m and 102.3m O.D.)
  - Turbines will impact upon European sites – appropriate assessment or bird report does not fully consider the cumulative impacts.
  - Alternative sources of energy have not been given full consideration.
  - Average daily traffic volumes along M1 is 52,000 vehicles per day – raises significant safety issue for motorists, particularly at Lissenhall junction.
- 6.7 The Planning Authority had no further comment to make on the first party appeal response.

## **7. PLANNING HISTORY**

*Fingal County Council Reg. Ref: F04A/1747*

- 7.1 Tesco Ireland Ltd. was granted permission in October 2005 for a 77,566 sq.m. dry goods distribution centre, 761 no. employee car parking spaces, new roundabout and access road from the R132 and all other ancillary and development associated works.

*Fingal County Council Reg. Ref: F06A/0063*

- 7.2 Tesco Ireland Ltd. was granted permission in April 2006 for development consisting of an extension and modifications to permission F04A/1747 to include the building being lengthened from 525.7m to 546.51m and reduced in height from 30.55m OD to 24.98m OD at eves level and all associated site development works.

*Fingal County Council Reg. Ref: F06A/0613 (PL06F.218766)*

- 7.3 The Board upheld the Council's decision to grant permission to Tesco Ireland Ltd. for modifications to the permission granted under F06A/0063 to include the increasing of the width of a service road around the eastern elevation of the permitted dry goods distribution centre from 4.5 metres approximately to 6 metres by reducing the width of an adjoining landscaped/screening bund by 1.5metres, rather than reducing the length of the permitted distribution structure as required under Condition 3 attached to the grant of permission under F06A/0063.

- 7.4 There were other permissions granted at the distribution centre for signage (F06A/1850) and retention of works (F07A/0759).

*Fingal County Council Reg. Ref: F07A/1260*

- 7.5 Dunnes Stores were refused permission for a 66,629 sq.m. distribution centre on a site to the north of the Tesco Distribution Centre.

- 7.6 Reasons for refusal related to proposed discharge of wastewater into the Turvey Stream, which feeds into the Malahide Estuary, and material contravention of Development Plan policies regarding the protection of natural heritage and coastal wetlands.

Fingal County Council Reg. Ref: F07A/1489

- 7.7 An application by Dunnes Stores for the change of use of Lanestown House (Lanistown North) and associated out buildings (a protected structure), to offices, grounds maintenance store, workshop and stores, including the refurbishment and renovation of the buildings, all for use in relation to the proposed development by Dunnes Stores of a dry goods warehouse and distribution centre (Reg. Ref. No. F07A/1260), was declared to be withdrawn in March 2009.

Fingal County Council Reg. Ref: F07A/1603

- 7.8 Tesco Ireland Ltd. was granted permission in June 2008 for the erection of a temporary meteorological monitoring mast on the car park of the distribution site.

Fingal County Council Reg. Ref: F07A/1689

- 7.9 An application by Tesco Ireland Ltd for the erection of 2 no. 850 kW wind turbines of 103m in height was withdrawn in December 2008. The applicant has stated that the reason for the withdrawal of this application was to carry out bird surveys which are now included in the current application.

Fingal County Council Reg. Ref: F98A/0493

- 7.10 P. Butterly was granted permission in April 1999 for the conversion of existing stone farm building (Lanistown North) into a 4 bedroom B&B agri-tourist facility, adjoining farmhouse, Lanistown, Donabate, Co. Dublin

Fingal County Council Reg. Ref: F07A/0929

- 7.11 Country Crest Ltd. was granted permission on 31<sup>st</sup> January 2008 at Ballymaguire, Lusk, Co. Dublin (c. 7km to north of appeal site) for the erection of 1 no. 40m wind monitoring mast (temporary structure), 1 no. 1 MW wind turbine, service road, control house and associated ancillary works and services. The permitted wind turbine has a tower height of 55m, rotor diameter of 55m and an absolute height of 82.5m. Although the proposed development was sub-threshold, an Environmental Impact Statement was submitted with this application.

- 7.12 A total of 12 no. conditions were attached to this decision including condition 2 which states that the permission is for a period of 12 years from the date of commissioning of the turbine.

## 8. DEVELOPMENT PLAN

### Fingal County Development Plan, 2005

- 8.1 The appeal site is within the area covered by the Fingal County Development Plan, 2005-2011. It is stated within Planning Report that the site is zoned for 'Warehousing and Distribution (WD)'; however, from my examination of zoning maps, the area where the wind turbines are proposed is zoned 'RU – to protect and provide for the development of agriculture and rural amenity.' Under the vision, it is stated that '*this zoning objective seeks to protect the agricultural areas of the county by ensuring that all new development is functionally related to agriculture and horticulture and to protecting the role and operational needs of agriculture and horticulture; while also seeking to preserve the rural amenity though ensuring new developments fit into the landscape sensitively and the natural features such as hedgerows and tree lines on ridges are protected.*' The adjoining site to the east is zoned for 'Warehousing and Distribution'.
- 8.2 Wind turbines are not listed among the uses that are 'permitted in principle' or 'not permitted' under either zoning category.
- 8.3 It is stated that the Council will encourage the development of wind energy in accordance with Government policy and where visually and environmentally sensitive locations are avoided. Policy UTP52 states as follows:
- “To permit renewable energy developments where the development and any ancillary facilities or buildings, considered both individually and with regard to their incremental effect, would not create a hazard or nuisance that could not be overcome and would not have an unacceptable impact on any of the following:*
- *residential amenity and human health,*
  - *the character or appearance of the surrounding area,*
  - *the openness and visual amenity of the greenbelt,*
  - *public access to the countryside,*
  - *sites and landscapes designated for their nature conservation or amenity value,*
  - *the biodiversity of the County,*
  - *sites or buildings of architectural, historical, cultural, or archaeological interest, and*
  - *ground and surface water quality and air quality.”*
- 8.4 There are specific objectives to preserve views at Malahide Estuary (c. 4km southeast), Blakes Cross (c. 2.5km north), Beaverstown Road (c. 3.5km north-east) and along the R126 (c. 1km south-east).
- 8.5 Lanistown North to the north of the appeal site is a protected structure described as a 'five-bay two-storey house'. Lanestown Castle and Newbridge House both in the

grounds of Newbridge Demesne are protected structures and national monuments. Newbridge House & The Square are designated as a Architectural Conservation Area.

- 8.6 The appeal site lies in ‘Low Lying Landscape Character Area’.
- 8.7 Malahide Estuary to the south of the site (2.5km) and Rogerstown Estuary to the north-east (2km) are cSACs, SPAs, pNHAs and Ramsar sites. Rogerstown Estuary is also a Statutory Nature Reserve.

## **9. NATIONAL GUIDELINES**

*Wind Farm Development: Guidelines for Planning Authorities, 2006*

- 9.1 The Guidelines are intended to inform developers and the wider public on wind energy development.
- 9.2 Chapter 5 addresses the environmental implications of wind farm developments and in particular the impact on designated sites, habitat and species. It is considered that in cases where developments that are likely to have an adverse impact on SACs, SPAs, etc., permission should only be granted where there are no alternatives or where there is an overriding reason in favour.
- 9.3 Chapter 6 of the Guidelines looks at the aesthetic considerations of wind farms and in particular their siting and design in the landscape. The first section of this chapter looks at the siting, spatial extent and scale, cumulative effect, spacing, layout and height<sup>1</sup> of wind turbines and the second part considers how these principles can be applied to different landscapes.
- 9.4 In landscape described as hilly/ flat farmland, it is noted that sufficient distance should be maintained from farmsteads, houses and centres of population in order to ensure that wind energy developments do not visually dominate them. Turbines should relate in terms of scale to landscape elements and will therefore tend not to be tall. Where a wind energy development is close to and visible from an area of high sensitivity, it should be designed to achieve similar standards as viewed from key viewpoints in that area.
- 9.5 Recommendations regarding possible conditions to be attached to permissions for wind farms are detailed within Chapter 7 of the Guidelines. Appendices to the document include information on Landscape Sensitivity Analysis and Landscape Impact Assessment.

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<sup>1</sup> Height involves both the actual height and/or perceived height relative to topography.

## 10. ASSESSMENT

10.1 In my opinion, the principal issues to be assessed in this appeal are as follows:

- Visual impact including impact on designated sites, protected structures and the ACA;
- Turbine height;
- Impact on radar and search and rescue helicopter services;
- Impact on bird species;
- Proximity to roads; and
- Noise and other impacts.

10.2 With respect to development principle, the proposal is consistent with national and EU policies relating to the development of renewable sources of energy, and with the Development Plan policy to improve the energy efficiency of existing building stock.

10.3 I note that wind turbines are not listed under the 'open for consideration' or 'not permitted' categories for the 'Rural and Agricultural' zoning applicable to the site. However, the Fingal Wind Energy Strategy published in October 2009 identifies the area where the site is located as being 'open for consideration' for wind energy developments in terms of landscape sensitivity. In this regard, the Wind Energy Strategy describes the strip between the M1 and Donabate as *'flat open rural landscape adjacent to Donabate to the east. Newbridge House Demesne is located within this area. The open, lightly wooded nature of this rural area means that the area is considered to be open to consideration for wind energy development.'* I would also highlight that the Strategy states that wind energy developments in areas zoned for Warehousing and Distribution are normally acceptable in principle. However, I have found that the appeal site is not located within 'WD' zoning, as was presented by the applicant.

10.4 It is noted in the Development Plan that the Council will encourage the development of wind energy in accordance with government policy but that visually and environmentally sensitive locations should be avoided. In accordance with Development Plan Policy UTP52, I would be of the view that the proposed development is acceptable provided that it does not have an unacceptable impact on residential amenity, the character or appearance of the surrounding area, or on nearby designated sites or protected structures.

10.5 Reference is made in the planning file to the recently erected Country Crest wind turbine at Ballymaguire, approximately 7km to the north of the appeal site. This turbine is located in an area where wind energy developments are 'accepted in principle' within the Wind Energy Strategy. This site is also in an area zoned RU; however, the purpose of this wind turbine is to power the Country Crest site and therefore is functionally related to agriculture and horticulture, as required under this zoning vision. Notwithstanding, I visited the Country Crest site to examine its visual appearance and other impacts on the surrounding landscape to assist with the assessment of the turbines now proposed at Lanestown.

### Visual impact

- 10.6 It is recognised in the Wind Energy Strategy that the visual impact of any proposed wind energy structure is likely to be the most significant impact on the environment. The Wind Farm Development Guidelines point out that height involves both the actual height and/or the perceived height relative to topography.
- 10.7 The proposed wind turbines are located at the western side of the Donabate Portrane Peninsula and in close proximity to the R132 (c. 500m) and M1 (c.1km). An appellant points out that average daily traffic along the M1 amounts to 52,000 vehicles. The R132 is dual carriageway standard at the location of the appeal site and is also capable of carrying significant traffic volumes. The Donabate Electoral Division recorded a population of 7,600 in the 2006 Census and the surrounding area attracts significant numbers of visitors due to its coastal location and the related leisure pursuits.
- 10.8 I would consider the appeal site to be a prominent location having regard to the volume of people passing or residing close by. In my opinion, the presence of 2 no. 91m wind turbines in a low lying landscape has the potential to be visually dominating and overwhelming in the vicinity, and to be conspicuous within vistas and panoramas from a wider area. Much depends, therefore, on the quality of the Landscape Character Assessment to accurately represent the proposed turbines within photomontages and to cover the important locations where the turbines will be viewed from.
- 10.9 It has been submitted by appellants that the visual assessment underestimates the impact of the turbines and that some key visual perspectives have not been included. I agree with the applicant that it is unrealistic to prepare photomontages from all public areas surrounding the appeal site. However, I consider that the applicant should accurately illustrate the visual impact of the proposal from the most obvious locations nearby (around 1km); upon views of protected structures/ ACA or designated sites; within all preserved views likely to be affected; and from any other prominent sites in the wider area. From my surveys of the Country Crest turbine at Ballymaguire, I found that it could just about be seen, mainly due to the movement of the blades, from a distance of 10km, and was perceptible from 5km. From a distance of 2km, the turbine attracts the eye and from 1km, it begins to dominate the view.
- 10.10 The applicant has prepared a total of 14 photomontages from as far away as Howth (17km south-east) and as close as Lanistown North<sup>2</sup> (80m north). A total of 8 no. photomontages were taken from within Newbridge Demesne. Two additional photomontages were submitted as further information taken from Rogerstown Estuary.
- 10.11 In terms of coverage, I am satisfied that a sufficient number of random locations have been chosen between the 1km to 8km range, particularly from the south. Viewpoints are also recorded from the far sides of both the Rogerstown and Malahide Estuaries and from the nearest protected structure (Lanistown North). However, I consider that

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<sup>2</sup> Protected Structure No. 489 - Lanistown North (not Lanestown House as stated. Lanestown House is to the west of the appeal site and is not a protected structure).

there are a number of significant omissions from the Landscape Character Assessment.

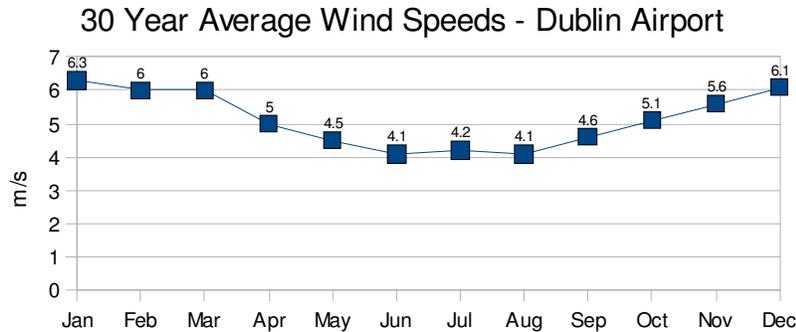
- 10.12 There are specific objectives to preserve views at Malahide Estuary (c. 4km southeast), Blakes Cross (c. 2.5km north), Beaverstown Road (c. 3.5km north-east) and along the R126 (c. 1km south-east). The closest of these views, i.e. along the R126, is likely to be designated for its views in the opposite direction to the appeal site and can therefore be discounted. However, no photomontages have been recorded from the preserved views at Beaverstown Road and at Burrow Strand to the east of Malahide Estuary.
- 10.13 It may be that there is adequate tree cover between the preserved view at Beaverstown Road and the appeal site to screen the proposed turbines. Nevertheless, I consider that this should have been demonstrated by the applicant. I visited the preserved view at Burrow Strand and discovered what appeared to be the monitoring mast on site visible from this location. The proposed turbines will be over 30m higher than the monitoring mast and will be orientated so that both will be visible from this preserved view.
- 10.14 A viewpoint has been recorded from Blakes Cross to the north of the appeal site. I also visited this location and saw that the monitoring mast is also visible. Assuming that only the top half of the mast can be seen, the turbines should appear to be around double the height of the mast from this view point. I would be unsure if the turbines have been properly represented in this photomontage given the height of the monitoring mast and side profile of the turbines from this location. It is also noteworthy, although not directly relevant to this current application, that there is a local objective at the location of this viewpoint stating that *'applications for buildings in this rural cluster will be required to demonstrate that the proposed development will not give rise to visual intrusion.'* A similar local objective exists at Turvey Bridge approximately 800m to the north of the appeal site.
- 10.15 A total of 8 no. photomontages were prepared from various locations within Newbridge Demesne. The demesne is located between 700m and 2.4km from the appeal site. The turbines were clearly visible in only one of the photomontages recorded in the demesne, mainly due to substantial tree cover. It should be noted that the photomontages were recorded in summer months and most of the trees in the demesne are deciduous.
- 10.16 The applicant has also prepared a shadow analysis showing the shadows cast by the proposed turbines in the direction of Newbridge Demesne, which are in addition to the shadows already cast by existing vegetation and structures. To me, this gives some indication of where tree cover will not screen views of the turbines. However, it does not appear that the shadow analysis has been used to identify locations where photomontages have been prepared from, e.g. a photomontage (viewpoint 6) has been prepared from the north-eastern corner of the walled garden when the shadow study shows the north-western corner of the wall garden being overshadowed by the northern turbine only on 21<sup>st</sup> September at 6pm.
- 10.17 A shadow diagram has been prepared to show the shadows cast by the turbines at 7pm on 21<sup>st</sup> June. I consider that shadow diagrams prepared for the weeks leading up to the summer solstice at a time later in this evening, say 9pm, would illustrate the areas

to the front of Newbridge House that would have clear sight of the turbines. The Conservation Officer notes that the proposed turbines would not disturb the principal views of Newbridge House. However, I consider that one of the best views of Newbridge House is achieved from the roadway to its south-east. In this regard, I would be interested to see if the turbines are visible from a location to the south-east of viewpoint 2 along this roadway near the 'T' junction.

- 10.18 The other protected structure and recorded monument within Newbridge Demesne is Lanestown Castle near the main entrance. I consider that a photomontage of this structure should have been produced to confirm that the backdrop of trees screens the turbines, particularly the turbine to the north.
- 10.19 My remaining concern with the visual assessment of the proposed turbine relates to the limited number of photomontages recorded along the R132. This would, in my view, be where the turbines may prove to be the most obvious, given proximity and the levels of passing traffic.
- 10.20 In light of the foregoing, the Board may wish to seek further information from the applicant in the form of a revised visual impact assessment to include a shadow study of Newbridge Demesne and additional photomontages taken from within the demesne and the other locations suggested above.

#### Turbine height

- 10.21 It was initially proposed that the turbines would have a total height of 100m comprising towers of 74m and rotor blades of 26m. The height of the turbines were a concern for the Irish Aviation Authority, the Conservation Officer, the Heritage Officer and the Planning Department. The IAA submitted that aircraft departing Dublin Airport may fly as low as 3,000 feet in the vicinity of the appeal site and the Conservation officer stated that any height reduction would be welcome to reduce the visual impact of the turbines from within the demesne. The Heritage Officer and Planning Authority questioned the justification for a turbine height of 100m; wind speeds of 7.0 m/s are required to generate a viable quantity of electricity and the Turbine Height Report states that this can just about be achieved at a height of 60m. It is also noted by the Planning Authority that the Country Crest turbine is 82.5m with a hub height of 55m and is located in a similar landscape.
- 10.22 The impact of the turbines on radar and search and rescue helicopter services shall be assessed below. In terms of justifying the height of the proposed turbines, the applicant reduced the hub height to 65m and overall height to 91m. It is submitted that any further reduction would automatically rule out potential suppliers and reduce competitive tenders at a later stage if planning permission was granted.
- 10.23 Appendices attached to the Turbine Height Report show sample wind speeds taken from the monitoring mast for the period 2<sup>nd</sup> April 2009 to 8<sup>th</sup> May 2009. As pointed out by the applicant's agent, average wind speeds of 7.0 m/s are just about achievable at a height of 60m according to this data. It is also stated that the applicant's consultants calculated an average wind speed from April to September of 6.31 m/s.



10.24 The above figure illustrates 30 year averages for mean monthly wind speeds (1961 – 1990) taken from Dublin Airport. Met Éireann confirmed to me that these measurements are taken at a height of 10m above ground level. It is noteworthy that the sample wind speeds taken from the monitoring mast are for a period (April - May) when 30 year mean wind speeds at Dublin Airport are below average. Moreover, the average wind speed of 6.31 m/s highlighted by the applicant for April to September is for the 6 months of the year when wind speeds are below average. It should also be pointed out that the 30 year average at Dublin Airport is for the period 1961 to 1990 before predictions that Ireland's climate may become warmer, wetter and windier due to climate change.

10.25 In my opinion, the height of the turbines should be kept to an absolute minimum in a location such as the appeal site. I do not consider that the applicant has adequately demonstrated that the proposed turbines will be at a height to receive an annual average wind speed of 7.0 m/s and no higher; it appears to me that smaller turbines may still be viable. The monitoring mast is in place since April 2009 and I consider that wind speed samples should also be presented for the months when wind speeds tend to be above average (December – March). I do not consider that it is appropriate to base the height of the wind turbines on samples taken over a short period when wind speeds tend to be lower. The Board may wish to seek a broader sample range from the monitoring mast as further information from the applicant. However, in the absence of same, I would recommend that if the Board is minded to grant permission for the proposed development, that some further reduction in height should be required by way of condition. I note that the Heritage Officer would also like to see the turbine height reduced further from the proposed reduction to 91m. A reduction in height would also help to address my concerns highlighted above relating to the visual impact of the turbines.

10.26 In terms of precedent for turbine height, the Planning Authority refer to the 82.5m Country Crest turbine which is considered to be within a similar landscape. The applicant correctly points out that the ground level at the Country Crest turbine is 62.5m above sea level when the proposed turbines are approximately 15m above sea level. The Wind Energy Strategy states that wind speeds of 7.5 – 8.0 m/s are available at the location of the Country Crest turbine, with speeds of only 7.0 – 7.5 m/s available at the location of the appeal site. It may therefore be argued that some increase over the height of the Country Crest turbine is justified at the appeal site. However, I would point out that the appeal site is in a more sensitive and prominent location than the Country Crest site. Thus, I would suggest to the Board that in the

event of a grant of planning permission, that an appropriate height for the proposed turbines would be 86m with the hub height being reduced to 60m.

*Impact on radar and search and rescue helicopter services*

- 10.27 The IAA noted in its initial correspondence that it had concerns with the height of the 100m turbines. This prompted a request for further information from the Council and in response the applicant submitted an independent survey to assess the potential impact of the turbines on radar facilities at Dublin Airport.
- 10.28 The IAA responded to the further information by commenting that the applicant's survey only addresses the impact of the turbines on Primary Secondary Radars (PSR) and not on secondary radars. The survey of primary radars confirms the IAA's fears that the turbines will allow primary targets to be generated by PSR radars and it is considered that this additional clutter will dilute the effectiveness of the PSR radar display and possibly lead to an undeclared plane not being identified. It is stated that if clutter is foreseen as a potential problem by air traffic controllers, the application will be opposed but that an in-depth study on the full impact on Dublin Airport operations will be carried out upon receipt of clarification of further information.
- 10.29 A subsequent technical memo assessing the impact of the wind turbines at Dublin Airport confirms that from a line of sight analysis the turbines are likely to be detected by radar, causing intermittent clutter, but that it is common for land based radars to encounter clutter, especially in urban areas. In term of the operational significance of the region where the turbines are to be located, it is noted that despite the potential for some clutter on PSR's, the impact is likely to be minimal. There are no concerns for physical obstruction of unknown aircraft operating at low level outside the controlled airspace and from an operational perspective, it is concluded that there is no justifiable objection against the proposed development.
- 10.30 The IAA confirmed that the technical memo addressed its concerns in respect to its radar surveillance domains. However, an additional issue arose in relation to search and rescue helicopter services. It was highlighted that the turbines are too close to current low level routes used in poor weather operations. A alternative route is being investigated but the IAA state that it cannot support the granting of permission pending the satisfactory outcome of this route.
- 10.31 It is noted in the Planner's Report that verbal conversations with the IAA have taken place regarding this issue and it has been confirmed that search and rescue helicopters are very flexible in terms of the routes they can take; the issue therefore relates to the time involved in identifying the alternative routes. In view of this, the Planning Authority attached a condition to the grant of permission requiring the developer to submit written details that an alternative low level route for search and rescue helicopters has been agreed between the IAA and CHC Ireland (search and rescue helicopter operators) and that the proposed development will not interfere with search and rescue helicopter services.
- 10.32 I note that the only written correspondence on this issue from the IAA includes a request not to grant planning permission for the turbines pending the satisfactory outcome of the alternative search and rescue route. Thus, the Board may wish to seek further information from the applicant to confirm that this matter can be resolved to

the satisfaction of the IAA and search and rescue helicopter operators. However, it does seem that alternative routes are possible and the condition attached by the Council ensures that no development can take place until the route has been finalised. The applicant notes that the new route will only be used when visibility is poor and existing routes will be unaffected by the proposal.

Impact on bird species

- 10.33 The site lies between the Malahide and Rogerstown Estuaries which are both cSACs, SPAs, pNHAs and Ramsar sites. Rogerstown Estuary is also a Statutory Nature Reserve. It is advised within the Windfarm Guidelines that where developments are likely to have an adverse impact on SACs, SPAs, etc., permission should only be granted where there are no alternatives or where there is an overriding reason in favour. Other than the visual impact of the proposed turbines, it appears that the proposed turbines have the potential to impact on bird species. The exclusion zone for wind energy developments in proximity to designated sites, as outlined in the Wind Energy Strategy, is 500m; Rogerstown Estuary and Malahide Estuaries are 2km and 2.5km respectively away from the appeal site.
- 10.34 The previous application on the appeal site was withdrawn following the Council's request for a bird survey that could not have been completed within statutory deadlines. The current application now includes an Appropriate Assessment and a Bird Assessment Report. The Appropriate Assessment concludes that the proposed turbines will have no significant impacts on waterbirds through mortality or alteration of commuting routes between Rogerstown Estuary, Malahide Estuary or Baldoyle Bay.
- 10.35 As noted in the planner's report, the calculation of mortality rates through collision events is of particular importance given the location of the site between the estuaries. A collision risk model was prepared and of the range of collision estimates given, those relating to the Golden Plover are most concerning, as this species is of special conservation interest at Malahide SPA. It was discovered that the high rates of golden plover was due to the presence of a winter wheat field immediately west of the appeal site.
- 10.36 The NPWS consider that the proposed development is unlikely to have a significant impact upon the integrity of the SPA's but recommend that post construction monitoring is carried out to include bird surveys for October to March; estimates of proportion of birds flying at collision height; corpse searches after construction; and appropriate scavenger and detection rate calibration surveys.
- 10.37 The applicant has asked by way of further information to examine alternative layouts for the turbines; however, the Appropriate Assessment report illustrates that flightlines for birds are spread over the entire car park and there is no advantage in relocating turbines within site.
- 10.38 Birdwatch Ireland has raised a number of concerns relating to the survey work and collision model, as well as the non collection of breeding season data for priority species, including the Barn Owl. A number of other queries were raised by appellants relating to Brent Geese, the movement of other waterbirds in the location of the turbines and height bands used for the collision risk model.

- 10.39 The applicant submits that the Bird Assessment Report clearly shows that there is little movement of waterbirds over the location of the proposed turbines. It is also pointed out that Brent Geese use man made features to navigate and there is anecdotal evidence that the Dublin-Belfast railway line is used for this purpose. With respect to height bands, it is confirmed that these are based on Scottish guidelines as there is no Irish equivalent. This was acceptable to the NPWS.
- 10.40 The applicant's agent responded to all Bird Watch Ireland's concerns, including those relating to the collection of breeding season data for Barn Owl. It was noted that the focus of the bird assessment was winter birds but that the Barn Owl would be unlikely to traverse the car park unless travelling between hunting areas or to/from roosts. It is also stated that Barn Owls would not fly any higher than 30m and turbine rotors would be a minimum of 50m above ground level. However, this height relates to the turbines as applied for. The minimum height of the rotor blades would be 34m following my recommendation to reduce the height of the turbines to 86m. This height would probably still be above the flying height of Barn Owls. Notwithstanding, the Board may wish to seek further information from the applicant to include an assessment of the reduced turbine heights on bird commuting routes or on the risk of collision.
- 10.41 It would appear that the proposed turbines are not in any direct flight path for birds flying between the estuaries. The collision rates for Golden Plover can be attributed to the presence of a feeding habitat in proximity to the appeal site. It is unlikely that this field would also remain a feeding habitat in all subsequent years. I note that the Council has attached a condition to the grant of permission requiring monitoring to be undertaken post construction. In my opinion, monitoring should only take place if there are actions that can be taken in the event unexpected consequences. I note that the Country Crest turbine has been permitted for a period of 12 years. I would propose the attachment of a similar condition to any grant of permission in this instance. This would allow for the impacts of the turbines to be reassessed.

Proximity to roads

- 10.42 An appellant considers that the turbines would distract passing motorists along the nearby roads and this could give rise to a significant traffic hazard. It is noted that there are 52,000 passing motorist per day on the M1, which is 1km west of the site. The R132 is approximately 500m from the site and there are other public roads to the north and south at a similar distance away.
- 10.43 It is stated in the Wind Energy Strategy that the NRA recommend that wind energy developments should be located at least 200m from the outer edge of national routes. The Wind Farm Guidelines also note that best practice indicates that it is advisable to achieve a safety set back from National and Regional roads of a distance equal to the height of the turbine and blade. The proposed turbines are therefore well enough set back to comply with these advices.
- 10.44 I would be of the view that the turbines may prove to be somewhat distracting to motorists viewing them for the first time but should eventually become part of the landscape. I have suggested above that additional photomontages of the turbines could be produced for locations along the R132 as further information. However, in view of the set back distances complying with the Guidelines and Strategy, I would be

satisfied that this will not be a significant issue. I also consider that some consideration should also be given to the history of wind mills in the area.

Noise and other impacts

- 10.45 Other matters raised in appeal submissions and under the assessment of the application include noise impact, shadow flicker and electromagnetic interference.
- 10.46 I visited the Country Crest wind turbine on a breezy day and listened for sound in close proximity to the structure. I would be satisfied that given the ambient noise levels in the vicinity of the appeal site that the proposed turbines will not cause any undue noise disturbance. I also consider that the turbines are sufficiently away from any habitable dwelling to minimise any impacts associated with overshadowing or shadow flicker.
- 10.47 I would be satisfied that the proposal will not impact on electromagnetic conditions given the findings of the electromagnetic impact assessment accompanying the planning application.

Conclusion

- 10.48 Overall, I consider that the proposed development is acceptable subject to appropriate conditions requiring a reduction in height and limitation in the duration of the permission. The proposal is located in an area open to consideration for wind energy developments within the Fingal Wind Energy Strategy and is not precluded under the zoning objective for the site. Furthermore, the proposed turbines comply with national and EU policies relating to the development of renewable sources of energy, and with the Development Plan policy to improve the energy efficiency of existing building stock. I am also satisfied that the turbines will not give rise undue visual intrusion or generate any significant impacts on nearby designated sites or protected structures.

**RECOMMENDATION**

Having considered the contents of the application, grounds of appeal and the provisions of the Development Plan, together with my site investigations and assessment of the planning issues, I recommend that permission be granted for the following reasons and considerations and subject to the conditions set out below.

**REASONS AND CONSIDERATIONS**

Having regard to national and EU policy relating to the development of sustainable development resources and to the general suitability of the site for a wind powered electricity generating facility, together with the relevant Development Plan policies and objectives relating to wind farm development; it is considered that, subject to compliance with the conditions set out below, the proposed development would not seriously injure the visual amenities or the landscape character of the area, would be acceptable in terms of traffic safety and convenience, would not be likely to have a significant detrimental effect on protected species and would, therefore, be in accordance with the proper planning and sustainable development of the area.

## 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, except as may otherwise be required in order to comply with the following conditions. Where such conditions require points of detail to be agreed with the planning authority, these matters shall be the subject of written agreement and shall be implemented in accordance with the agreed particulars.

**Reason:** In the interest of clarity.

2. The proposed development shall be amended as follows:
  - (a) The hub height of both wind turbines shall a maximum height of 60m and the overall height shall be no more that 86m.

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:** In the interests of visual amenity.

3. This permission shall not be construed as any form of consent or agreement to a connection to the national grid or to the routing or nature of any such connection.

**Reason:** In the interest of clarity.

4. This permission shall be for a period of twelve (12) 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. The wind turbines including masts and blades shall be finished externally in a light grey colour.

**Reason:** In the interest of visual amenity.

6.
  - (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.

7. 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.

**Reason:** In the interest of residential amenity.

8. 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 road safety and the proper planning and sustainable development of the area.

9. Soil, rock and sand excavated during construction shall not be left stockpiled on site following completion of works. Details of treatment of stockpiled materials shall be submitted to and agreed in writing with the planning authority prior to the commencement of development.

**Reason:** In the interest of visual amenities of the area.

10. 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.

11. Prior to the commencement of development, the developer shall submit for the written approval of Planning Authority details of an agreement between the developer, the Irish Aviation Authority & CHC Ireland, that an alternative low level route used by Search & Rescue helicopters has been agreed and that the proposed development will not interfere Search & Rescue helicopter routes.

**Reason:** In the interest of clarity and to ensure that effective control can be maintained over the proposed development.

12. The developer shall carry out post-construction monitoring of this site in relation to the various species of birds. This shall include:
- (a) Bird-use survey data for the months October to March inclusive for three consecutive seasons, in all weather conditions, and including night time;
  - (b) Further estimates of flight height made during the bird-use surveys to produce estimates of the proportion flying at collision height;
  - (c) Corpse searches undertaken post-construction and on-site, during all appropriate months for three consecutive years;
  - (d) Appropriate scavenger and detection rate calibration surveys, using birds of an appropriate size e.

This information shall be forwarded to the Planning Authority and the National Parks & Wildlife Service, for 3 no. consecutive years post construction, following the undertaking of the survey as required above.

**Reason:** In the interest of proper planning and sustainable development of the area.

13. Shadow flicker associated with the proposed turbines shall not exceed 30 hours per year or 30 minutes per day for any of the dwellings located within 500m from either Turbine 1 or Turbine 2.

**Reason:** To safeguard the residential amenities of adjacent dwellings.

14. The developer shall ensure that due care is taken with regard to the storage and disposal of fuel, solvents or oils on site associated with the proposed development. Any such material shall be stored in bunded tank(s) as necessary.

**Reason:** To protect the amenities of the area and protect surface and ground water sources.

15. The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including hours of working, noise management measures and off-site disposal of construction/demolition waste.

**Reason:** In the interests of public safety and residential amenity.

16. Noise associated with the proposed turbines shall not exceed levels of 43 dB(A) during night time hours (22.00hrs – 7.00 hrs) and 45 dB(A)10 or a maximum increase of 5 dB above background noise at the nearest noise sensitive location (as identified in Figure 2, Technical Report, Noise Impact Assessment, October 2007, submitted on 15th June 2009) during day time hours (7.00 hrs – 22.00 hrs).

**Reason:** To safeguard the residential amenities of adjacent dwellings.

17. 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 be removed within three months of decommissioning.

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

18. 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.

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**Donal Donnelly**  
**Inspector**

30<sup>th</sup> June 2010