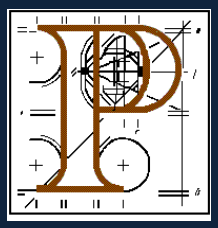
An Bord Pleanála Ref.: PL08.244066

An Bord Pleanála



Inspector's Report

Site Address: Ballyhorgan South and East, Irramore, Lissahane, Muckenagh Co. Kerry

Proposal: A windfarm of 10 turbines and associated works.

Planning Application

Planning Authority:	Kerry County Council
Planning Authority Reg. Ref.:	14/13
Applicants:	Stacks Mountain Windfarm Ltd.
Type of Application:	Permission
Planning Authority Decision:	Refuse

Planning Appeal

Appellants:	Stacks Mountain Windfarm Ltd.
Type of Appeal:	1st Party –v- Refusal
Observers:	Dromclough N.S. Parents' Association. John O'Donoghue and Loreto Weir Liam, Michael, Louise, Eileen Somers Dromclough National School Sinn Féin Advice Clinic An Taisce – Kerry Association Aidan Galvin Aidan Linnane North Kerry Wind Turbine Awareness Group John O'Sullivan Cllr John Brassil
Date of Site Inspection:	29th December 2014

Inspector: **G. Ryan**

1.0 INTRODUCTION

1.1 The subject proposal is for 10 large (156.5m to tip) wind turbines in a lowland area of North Kerry. Further information was sought by the planning authority, who subsequently issued a refusal of permission largely on visual and residential amenity grounds. The applicant submitted an appeal to this decision, and the board has also received 11 3rd party observations, of which 10 oppose the proposed development.

1.2 This report is written against the backdrop of two significant developments in the proposal's legal and policy context, which have occurred since the appeal was submitted to the board. The first is the court decision in O'Grianna -v- An Bord Pleanála, which stipulates a closer relationship between EIA for windfarms and their grid connection than has been practice to date and indeed than has been undertaken in this case. The second development is the adoption of the 2015-2021 Kerry County Development Plan, and in particular objective EP-12, which amounts to an effective moratorium on any further permissions for windfarms in North Kerry until 80% of existing permissions are either implemented or expire.

2.0 SITE

2.1 CONTEXT AND TOPOGRAPHY

2.1.1 The subject site is located in a lowland rural area in North Kerry around 5km southwest of the town of Listowel and around 2.5km east of the village of Lixnaw. Finuge is a smaller settlement still and lies at a crossroads just 1.4km northeast of the nearest turbine. Dromclough is a settlement/area that lies to the immediate southeast of the subject site. There is no discernible shape or centre to Dromclough, although there is a school and church within 2km of the nearest proposed turbine.

2.1.2 The site is located in a plain that runs from Listowel in a southwest direction to Ballyheigue Bay and containing the settlements of Listowel, Finuge Lixnaw, Abbeydorney, and Ardfert. Tralee is at the southern end, where the plain meets the sea. This plain is framed to the northwest by the coastal high ground running east from Kerry Head and to the Southeast by the Stacks Mountains.

2.1.3 The N69 runs from Listowel to Tralee along the foot of the Stacks Mountains, and passes to the south of the subject site. The R557 provides something of a parallel route from Listowel to Tralee, and passes to the north of the site through Finuge. A

local road L1027 runs from northeast to southwest past the site's southern boundary, whereas the L6055 and L6056 pass through the site, creating a triangle of roads to the southeast of the site. The L6055 is the easternmost of the pair and continues to meet the N69, whereas the L6056 is the westernmost, with a sharp switchback at its southern end[1].

2.1.4 The wider area around the subject site and outside of the small settlements is characterised by agricultural landuses with intermittent bogland and a small amount of commercial forestry. There is a comparatively large amount of dispersed housing, much of which is of relatively recent construction.

2.2 SITE CHARACTERISTICS

2.2.1 The site itself is quite varied and is an amalgam of landholdings and landuses, crisscrossed by public roadways. At the centre of the site is an area of intact raised bog, fringed by a significantly larger area of cutaway bog. The proposed location for T10 is at the fringes of this intact/cutaway bog, whereas T2, T5 are in locations that appear to be within the cutaway bog. Moving outwards, T1, T4 and T5 are on marginal land fringing the cutaway bog. T3, T6, T7, and T8 are shown in agricultural fields of varying quality, whereas T9 is shown in an area of forestry to the northeast.

2.2.2 The locations of all turbines are roughly level relative to each other, and indeed the land as it stretches towards the River Feale remains roughly level. However, to the immediate southeast of the site at Knockreagh and Knockburrane, the land rises and offers views across the site from the housing and public roads in this area.

3.0 PROPOSAL

3.1 BROAD OUTLINE

The scheme consists of works that can be summarised as follows.

3.1.1 The erection of 10 turbines with a tip height of 'not more than' 156.5m. The applicants have presented the proposal in terms of the permitted tip height setting a permitted 'envelope' for the scheme, such that any combination of hub heights and rotor diameters might be implemented by the applicant within this upper bound. I note that the photomontages use a rotor diameter of 113m, which would give a hub height of 100m.

[1] I have discerned these road numberings as best I can from cross referencing the planning officer's report with the swept path diagrams in Chapter 12 of the EIS. There is no comprehensive mapping of the road network nomenclature.

3.1.2 The proposed turbine locations are linked by a U-shaped roadway consisting of some new roads, some existing bog roads (to be upgraded), and a short section of the L6056 public road. This route interfaces with the public road network at 4 points where it crosses or joins the L6056 and L6066. The main site access point would be at the L6066, with the main site access route being from here to the N69 along the L6066.

3.1.3 The proposed site infrastructure is clustered along this U-shaped roadway, including a number of peat disposal areas – notably around T5, a met mast location, the proposed substation, and temporary construction compound to the west of the L6056, just south of T7. A large borrow pit is proposed off a spur road to the south of T5, in the north-facing slope of the hillside.

3.1.4 The applicant anticipates that the proposed turbines would have a rated electrical power output in the 3MW 'range', giving an estimated installed capacity of 30MW (EIS Section 3.4.1.6) As per the appeal submission, the scheme would have a nominal output of 25.3MW. The grid connection would be via an existing 'Gate 3' connection offer connected with Reamore electricity substation, 11.1km to the south, in the Stacks Mountains (as per appeal submission)

3.2 ENVIRONMENTAL IMPACT STATEMENT

3.2.1 The scheme is described predominantly within Chapter 3 of the applicant's EIS – 'The Proposed Development' - as well as throughout the EIS. The Chapters covered in the EIS are as follows.

1 Introduction
2 Background to the Proposed Development
3 Description of the Proposed Development
4 Human Beings
5 Flora and Fauna
6 Soils and Geology
7 Water
8 Air and Climate
9 Noise and Vibration
10 Landscape
11 Cultural Heritage
12 Material Assets
13 Interaction of the Foregoing
APPENDIX 1 Scoping Responses
APPENDIX 2 Planning Drawings

APPENDIX 3	Construction Methodology Drawings
APPENDIX 4	Health Study References
APPENDIX 5	NPWS Site Synopses
APPENDIX 6	Natura Impact Statement
APPENDIX 7	Vascular Species List
APPENDIX 8	Turbine Base Botanical Surveys
APPENDIX 9	Species Distribution Maps
APPENDIX 10	Peat Stability Assessment
APPENDIX 11	Recharge Co-efficients
APPENDIX 12	Certificates of Analysis
APPENDIX 13	Carbon Calculations
APPENDIX 14	Glossary of Noise Terms
APPENDIX 15	Preliminary Noise Contour
APPENDIX 16	Turbine Noise Data
APPENDIX 17	Modelling Parameters
APPENDIX 18	Noise Contours at Various Wind Speeds
APPENDIX 19	ZTV and Photo Locations Map (A0 Size)
APPENDIX 20	Cultural Heritage Photographs

3.2.2 My assessment at Section 11.0 below draws on the contents of the EIS where relevant to the issues raised in the appeal.

3.3 FURTHER INORMATION SUMBMISSION (SUBATANTIVE)

3.3.1 The planning authority requested further information of the applicant on 9 points, and the substantive response to this request was submitted by the applicant on 25th July 2014. The submission was readvertised by way of revised public notices stating that significant further information had been furnished to the planning authority, and that further submissions would be accepted.

3.3.2 The further information request is replicated in its entirety below, indicated with vertical lines along the left of the text. The applicant's response is summarised below each item.

3.3.3 Item 1 – Borrow pit and foundation methodology

> 1 (i) Taking into account the scale of the proposed borrow pit, a more detailed study is required to be carried out on the proposed borrow pit. Taking specific account EPA's Environmental Management Guidelines - Environmental Management in the Extractive Industry (Non-Scheduled Minerals) 2006 in particular, the study is required to provide detail on any noise, dust and water quality impacts arising from operations at the proposed borrow pit. In addition to the issues covered by the EPA document, the study is required to identify whether or not

blasting will occur during the removal of material from the borrow pit and provide precise details of any impacts which may arise.

The EPA's Environmental Management Guidelines referred to relates to quarries operating over a much longer period than the 3-4 months proposed for the borrow pit in question. The submission outlines the methodologies and relative benefits of rock breaking versus blasting, including a full noise assessment of both options (Table 1.2 of submission) with modelled noise levels in terms of dB $L_{Aeq(1hr)}$ at each of the 299 nearby properties covered by the EIS. In all instances, blasting is shown to have a lower noise impact than rock breaking under this metric. Rock breaking is described as having more continuous noise due to the plant used, with blasting by its nature being more intermittent. [Effectively, in response to the planning authority's request for clarity, the submission keeps both methodologies 'in play'.]

Mitigation measures for these methodologies, and for dust generation, are set out. Water quality issues arising from the borrow pit are also discussed.

(ii) Taking into account the volume of peat to be removed from some of the components of the development and the uncertainty as to whether or not piling and more specialized construction measures will be required at some of the turbines, a detailed method statement is required to be provided on the construction of Turbine No.'s 2, 4, 5, 8, and in particular 10 and the proposed access road leading to Turbine No. 10 along with details of the water quality management measures proposed in relation to same.

The applicant has included Appendix 1 and 2 which consist of method statements on this topic. It is proposed to construct all new roadways directly on a solid formation 'where possible'. The access road to T10 would be constructed using a floating road methodology as it is an area of peat with a depth greater than 1.5m. A method statement for this option is contained in Appendix 3. Piled foundations would be required at T10 due to peat depth for both the turbine base and the hardstand areas. A preliminary method statement for this option is contained in Appendix 4. Peat stability is addressed further under Item 3, by way of Appendix 7 to the submission, and under Chapter 7 of the EIS.

3.3.4 Item 2 – hydrology, flora, and fauna.

2 (i) Please clarify the impacts of construction works, in particular excavation works, on the hydrology that maintains the raised bog annexed habitat.

Approximately 18% of the study area is occupied by cutover raised bog, and 5% by raised bog. The only habitat present within the study area corresponding to an EU Habitats Directive Annex I designation is 'depressions on peat substrates of the

Rhynchosporion'. The wet bog pools which correspond to this habitat are found towards the centre of the remaining uncut raised bog and none would be affected by the proposed development. The raised bog at Ballyhorgan does not correspond to either of the Annex I habitat types 'active raised bogs' or 'degraded raised bogs still capable of natural regeneration'.

The response refers to a report by Michael Gill of Hydro Environmental Services Ltd. The hydrology of the bog has been altered significantly by peat cutting. Four of the proposed turbines are to be located within the original raised bog footprint, with only one being actually located on the edge of the intact raise bog.

(ii) Please clarify the methodology/best practices used in determining and assigning impacts on flora/fauna for example "permanent slight negative effect" or "short term slight negative impact".

The applicant provides a clarification of the terminology used.

(iii) It will be necessary to undertake a Fish Survey. The aim of this survey shall be to evaluate the fish status, type, nature and extent of the suitable habitat and the ecology of the riverine systems that drain the development site. This shall be undertaken in consultation with IFI.

The applicant has submitted a fish survey, which was undertaken in consultation with IFI. The survey is mapped by way of Figure 2.3.1., and the report in its totality is included in Appendix 5 of the submission. The results are summarised in Section 2.3.1.2 of the submission.

The applicant concludes that Channel Sections 4, 5, 7,9 (North and South of T8 and T9) provide potentially suitable substrate for spawning fish species and may support spawning Atlantic salmon (including one 1-year old), Brown Seat trout, Lamprey, and European Eel. Electro-fishing surveys were carried out and four fish species were recorded: Brown Trout, Atlantic Salmon, Eel, and Stickleback. Other watercourses have varying fisheries potential. Mitigation is proposed regarding the issue of surface water run-off.

(iv) Although it is stated (page 5-37 of the EIS) that there are some areas of low scrub, but no mature trees, near to the proposed turbines, nevertheless it is recommended that more detail on the likely flight paths of the Leisler's bat, which can fly at rotor-swept height in open area, is provided to fully assess the effects of potential barotrauma mortality on the species.

The submission makes reference to work undertaken in respect of the originally submitted EIS. Table 2.4.1 of the submission details observations of this species specifically, and Figure 2.4.1 maps these observations throughout the site, which are quite well spread. No evidence of significant commuting routes was recorded.

It is well known that Leisler's Bat does fly in open areas at heights at which collision with a rotating wind turbine is possible, and a number of the observations were in open areas. It follows that design mitigation measures that avoid trees, scrub, and watercourses/waterbodies will be less effective for this species than for others. There are conflicting theories regarding turbine risk to bats. Given that there are small numbers of individuals involved and there are no indications of a significant roost nearby, it is considered that the risk to local populations of Leisler's Bat is not likely to be significant.

(v) On page 5-38 of the EIS, it is stated that otters may potentially use the small watercourses that cross the development site. The otter is a species listed for strict protection in Annex IV of the EU Habitats Directive, and any otters using this site are likely to be from the River Feale part of the Lower River Shannon cSAC, which has otter as one of its conservation targets. It is not clear from the EIS if the potential otter use of the site includes resting places or breeding sites. A derogation licence is required to damage such habitat. Therefore, a detailed survey for otter breeding sites and resting places in the water courses in the development site is required to be carried out as part of the EIS.

A detailed survey was undertaken on 5th June 2014. The survey focussed on the watercourses in the northeast of the site. The survey recorded in each instance the presence or otherwise of spraints, prints, slides, couches, potential holts, and feeding signs. No signs of otter were recorded.

(vi) Please clarify the methodology employed by the applicant in undertaking Vantage Point survey and the reasons for the location of VP's within the centre of the site further to best practices outlined in SNH guidelines SNH's 2013 guidelines *Recommended Bird Survey Methods to Inform Impact Assessment of Onshore Wind farms.*

The applicant provides a defence of the methodology employed.

(vii) Please clarify the year of surveys discussed in Sections 5.4.1.4 and 5.4.1.5 (Table 5.1) as both 2012 and 2013 survey work is mentioned.

All surveys were undertaken in 2013.

(viii) The NIS submitted by the applicant is a Stage 1 screening report and not a NIS. Considering the complexity of the mitigation proposed in the proposed development, the applicant is required to revise the report accordingly so that a Stage 2 Appropriate Assessment is undertaken and presented in a NIS.

A revised Appropriate Assessment report has been prepared and is contained as Appendix 6 of the submission in order to clarify the

issues relating to structure, format, and data presentation. It documents bothy the initial screening exercise and NIS.

3.3.5 Item 3 – Peat stability, runoff, and marsh fritillary

3 (i) On page 6-7 of the EIS, it is concluded that there is a 'low to medium risk of peat instability/ failure at the Ballyhorgan wind farm site'. Please clarify if the medium risk part of this range prediction is as a result of turbine T10 and immediate infrastructure location.

A Peat Stability Assessment (PSA) was prepared by AGEC consulting and was included as Appendix 10 of the EIS. On foot of the planning authority's FI requirements on archaeology, additional data was available to AGEC. The original PSA was updated and is provided by way of Appendix 7 of the submission.

The 'low' risk pertains to turbines T1 to T9, and the 'medium' risk pertains to T10, but the PSA clearly outlines how T10 can be developed and risks controlled through construction methodologies and mitigation measures. Excerpts are quoted. There are no recorded peat failures on the site.

(ii) The area to the south and west of Turbine No. 9 is close to one of the Enniscrone stream tributaries, with both road crossings, road turns and a peat storage area on peaty soils. Please provide a detailed drainage mitigation drawing of this area showing the location and type of mitigation features proposed to avoid loss of peat silt into the stream.

Further details in this regard are set out in Figure 3.2.1 of the submission. The methodology proposed is outlined in the submission.

(iii) Please confirm that a 'not' is missing from the sentence on page 5-46 of the EIS: `The marsh fritillary breeding site will be affected in any way....'.

The applicant confirms that a 'not' was indeed missing.

3.3.6 Item 4 – Delivery route, construction traffic, and grid connection

4 (i) Delivery Route

- Please confirm that as per S12.1.6.1 of the EIS *Preliminary Route* Assessment, that no 3rd party lands (including roadside hedgerows/ditches) are required to facilitate turbine delivery.
- If there is a possibility that any 3rd party lands (including hedgerows/ditches) may be required at any location, please furnish copies of 3rd party land agreements for same.

- Any minor alterations to the public road referred to in S12.1.6.1 are to be undertaken under licence by Kerry County Council at the expense of the developer. Please confirm developer's agreement.

No 3rd party lands are required. The only road works required are set out in Section 12 of the EIS and relate to improvements to the existing road corridor – localised strengthening etc. The applicant acknowledges and agrees that these works must be undertaken under license by the local authority at the expense of the developer.

(ii) Construction traffic

- S3.5.2 of EIS states that *"Construction materials such as concrete, steel and construction materials will follow the same transport route... from both north and south of the N69 to the proposed development site"* Please submit a list of control measures to ensure the strict adherence to the proposed route shown in Fig 3.19 for all deliveries and empty departures. A construction traffic management plan must be agreed with KCC roads office.

- Table 12.1.6 estimates a total of 750 truckloads of Concrete and a total of 1,717 truckloads of Sand/Binding/Stone will be required. Please submit details of proposed strengthening works required on L6055 & L6056 to facilitate these HGV movements.

- Any strengthening works required will be undertaken by Kerry County Council at the expense of the developer. Please confirm developer's agreement.

The applicant refers to Figure 3.19 of the EIS which sets out delivery routes and goes on to document the enforcement methodology for this route.

A preliminary traffic management plan is presented in the submission.

(iii) Grid Connection

- S 3.4.8 Grid Connection of EIS details the proposed grid connection to Muingnaminnane to the south as shown in Fig 3.12. S3.4.8 states that "Eirgrid or ESB Networks will be responsible for obtaining all necessary consents required to make grid connection". Full road width reinstatement and supervision of the works at all times by KCC is required. Please confirm acceptance of this.

- In the event of the proposed grid connection shown in Fig 3.12 being unavailable or unattainable, please submit proposed alternative grid connection locations or means of connection.

The works to lay the underground cable that would link the proposed wind farm to the electricity grid network does not form part of the current planning application, although the preferred

route is described in the submitted EIS. The applicants note and accept that full width road reinstatement would be required at all times along the route. The applicants are also aware of the requirement to obtain a Road Opening License from Kerry County Council.

As per the further information request, two additional potential routes are shown in Figure 4.3.1. Undergrounding of the cable route to the Muingnaminnane substation is preferred and has been used by a sister comply to connect Knocknagoum Wind farm with the National Grid at Muingnaminnane.

3.3.7 Item 5 – watercourse crossing points

> 5 Please provide detail in relation to all new proposed watercourse crossing points.

8 new water crossing are proposed. 4 of the existing 5 water crossings are proposed to be upgraded. 2 would cross natural watercourses and 6 wound cross man made agricultural drains. These are all mapped in Figure 5.1 of the submission.

The most appropriate crossing type for this location was chosen in consultation with the IFI. The three types of crossing are detailed in text and also visually in Figure 5.2. Table 5.1 links them to the specific crossing points within the site.

3.3.8 Item 6 - Archaeology

> 6 In relation to the potential for sub-surface archaeological material or features to be encountered, the EIS recommends pre-development archaeological testing. As such pre-development archaeological testing is required to be carried out on all turbine bases, borrow pit, peat disposal areas, access roads (new access roads), substation and control building sites, hardstands and cable routes. The ring fort Ke016 038 shall be temporarily fenced off during archaeological testing of the borrow pit site. A report on the results of this testing is required to be submitted to the Planning Authority.

A report has been prepared by Tobar Archaeological Services and is attached as Appendix 8. It provides a detailed account of the results of the archaeological testing carried out from the DoAHG. It concludes that no archaeological finds, features, or deposits were noted in 50 of the 51 test trenches. Trench 26 within the footprint of the proposed borrow pit presented possible remains of a relict field boundary. The study recommends additional archaeological monitoring and geophysical survey work which could be required by way of condition.

3.3.9 Item 7 – Visual Impact

7 You are hereby advised that the Planning Authority has serious concerns in relation to the visual impact of the proposed development and in particular the height of turbines proposed. In order to further assess the visual impact of the proposed development it will be necessary to submit further photo montages at the flowing [sic] locations:

- On the L-1027 to the east of junction with L-6056 at a point with open views towards the proposed wind farm
- On the L-1027 to the south west of Irramore Church at a point with open views towards the proposed wind farm
- On the L-1027 to the north east of Dromclough School at a point with open views towards the proposed wind farm
- On the N69 close to the entrance to Pallas Wind Farm at a point with open views towards the proposed wind farm
- On the N69 between the Six Crosses and Mountcoal Cross at a point with open views towards the proposed wind farm
- At Finuge GAA grounds at a point with open views towards the proposed wind farm

New photomontages (7.1 to 7.6) at the required locations are provided. All are within close proximity to the proposed development. Locations 3 and 4 are less than 1km from the nearest turbines. It is to be expected that from these locations the most proximate turbines will appear larger than others. Section 7.4 of the submission discuses each of the photo locations

3.3.10 Item 8 – Proximity to adjacent landholdings and consent

8 In accordance with the Renewable Energy Strategy 2012, KCDP 2009-2015, Section 7.4.5.21 *'Turbines shall be located no closer than 2.5 times the blade diameter from the boundary of adjacent properties. Exceptions may be made in cases where written consent of the landowner has been obtained'.* The proposed development does not comply. Please comment and address.

Figure 8.1 identifies the landholdings within 2.5 x rotor diameters from each turbine. All relevant landowners have given consent. Appendix 9 of the submission consists of copies of 'proximity consents'.

3.3.11 Item 9 - Proximity of T7 to roadway

> 9 You are hereby advised that the Planning Authority has serious concerns in relation to the proximity of Turbine No. 7 to the L-6056. Please comment and address.

The turbine blades will not overhang the public road. It would not impact in any way on traffic safety at this location. Photos are included of turbines close to roadways.

3.4 FURTHER INORMATION SUMBMISSION (UNSOLICITED AND SUPPLEMENTARY)

3.4.1 Prior to the planning authority's issuing of the request for further information, the applicant submitted unsolicited further information on a number of occasions asserting that site notices had been removed and replaced, and that the matter is being monitored. There is also correspondence on the file on the matter from the local Gardaí responding to a request from the applicant to witness the erection of site notices. The Gardaí question what legal function they might have in this regard, and state that they do not get involved in witnessing such matters.

3.4.2 Prior to the planning authority's issuing of the request for further information, the applicant submitted unsolicited further information which sought to address several of the issues raised in the 3rd party submissions on file. The submission refers to noise, wildlife, shadow flicker, visual impact, health, public consultation, property values, tourism, and flooding. In general terms, it points to sections of the EIS where these matters are addressed, rather than adding any new material.

3.4.3 Following the submission of the substantive response to the planning authority's further information request, the applicant made a second unsolicited submission of an overview map showing the locations of the additional photomontage viewpoints.

4.0 SUMMARY OF REPORTS AND SUBMISSIONS TO THE PLANNING AUTHORITY

4.1 SUBMISSIONS FROM EXTERNAL CONSULTEES

4.1.1 Health and Safety Executive

4.1.2 Received prior to the further information request, the first submission from the HSE notes a number of aspects of the proposed development. There should be a documented procedure put in place for monitoring, recording, reporting, and handling noise and shadow flicker complaints. The HSE

recommends that the mitigation and control measures set out in the EIS be strictly adhered to.

4.1.3 A second submission received subsequent to the further information submission states that the HSE have no further comments.

4.1.4 Kerry Airport

4.1.5 The airport manager of Kerry Airport submitted an email to the planning authority prior to the further information request stating that they would not be making any submission on the application.

4.1.6 Irish Aviation Authority

4.1.7 Received after the further information submission, the IAA state that they have no objections subject to a requirement for an agreed scheme of warning lighting, notice, and 'as built' coordinates for charting purposes.

4.1.8 Department of Arts Heritage and the Gaeltacht (nature conservation)

4.1.9 Received prior to the further information request, this submission notes that the proposed wind farm is within 1.5km upstream of the River Feale part of the Lower River Shannon cSAC. To comply with the EU Habitats Directive, there must be no reasonable scientific doubt that the proposed development would not have adverse effects on the cSAC. This means that there must be a low risk of siltation or pollution of the stream draining the site into the River Feale, and an insignificant risk of peat soil failure and erosion into the stream.

4.1.10 The NIS is misleadingly titled, as it contains a screening assessment, and not a full NIS. It states that "provided that all mitigation measures incorporated into the EIS to avoid and reduce adverse effects on the receiving environment are implemented appropriately, the potential for any significant impacts on the Lower River Shannon SAC can be excluded." The Department recommends that any project which requires either an intensive survey to establish the usage of an area by a species (e.g. foraging hen harrier breeding in the adjacent SPA), or extensive and complex mitigation measures (e.g. for slit and pollution control in a peatland upstream of a cSAC should not be screened out. A full NIS should be required by way of further information.

4.1.11 It should be clarified whether the medium risk peat instability referred to in p6-7 of the EIS is due to T10.

4.1.12 T9 is near the Enniscrone Stream. Detailed drainage and mitigation should be shown.

4.1.13 More detail is required on the likely flight paths of Leisler's bat, which can fly at rotor-swept height in open areas, in order to fully assess the effects of potential barotrauma mortality on this species.

4.1.14 On p5-38 of the EIS, it is stated that otters may potentially use the small watercourses that cross the site. This species is listed for strict protection in Annex IV of the Habitats Directive, and any otters using this site are likely to be from the River Feale part of the Lower River Shannon cSAC, which has otter as one if its conservation targets. It is not clear from the EIS whether the potential otter use of the site include resting places or breeding sites. A derogation license is required to damage such habitat. A detailed habitat survey for otter breeding sites and resting places in the water courses should be carried out.

4.1.15 The applicant should be asked to clarify a potential error on p5-46 of the EIS regarding marsh fritillary.

4.1.16 In the interests of clarity, it is worth noting that this submission is referred to by parties to the appeal as emanating from the NPWS (National Parks and Wildlife Service). While the NPWS may have had an input into the content of the submission from their parent department, I note that the correspondence itself is stated as emanating from the Development Applications Unit (DAU) of the DoAHG.

4.1.17 Much of this submission was incorporated in the further information request.

4.1.18 Department of Arts Heritage and the Gaeltacht (archaeology)

4.1.19 Received subsequent to the further information request, this submission from the Department's Development Applications Unit notes the findings of the Archaeological Report submitted to the County Archaeologist for review. The department recommends further testing and possible further mitigatory measures on foot of this texting.

4.1.20 The department agrees with the County Archaeologist's recommendation regarding buffer zones to all Recorded Monuments. The department recommends that all groundworks be archaeologically monitored under license, as a condition of planning permission.

4.1.21 An Taisce

4.1.22 An initial submission received prior to the planning authority's request for further information makes a number of points which can be summarised as follows.

- Other windfarms in the area are sited in the adjoining Stacks Mountains where the landform consists of hills, valleys, and considerable conifer plantations which help to integrate the turbines into their surroundings. The subject site is very different, being relatively flat in a low ling area of farmland with cut away bog.

- In terms of visual impact, the turbines would impact on more people than would normally be the case in other areas. Impacts on property values, tourist attitudes, noise, and health and safety are discussed.

- The depth of bog at Turbine 10 is more than 6.2m deep. The construction methods for this turbine are questioned, as is the 'floating roads' construction methodology.

- Drainage to the River Feale is noted.

- While the site is not in the Stacks Mountains SPA, a longer survey concentrating on the Hen Harrier would be desirable.

4.1.23 A second submission, received subsequent to the further information submission, this submission makes a number of points which can be summarised as follows.

- The borrow pit would require a considerable amount of rock excavation and will be noisy and disturbing

- Turbine 10 is not a suitable location due to depth of peat. Construction of the turbine bases would require the removal of large amount of peat.

- Leister's Bat could be under threat. Hen Harrier is also present in the area, and the fish survey showed that some water channels have fishery potential.

- The additional photomontages submitted confirm that the turbines would dominate the landscape when viewed from public roads in the vicinity.

4.1.24 A third submission received 3 days later notes that the data submitted relates to noise within the audible range only, and that there have been indications from a number of sources

indicating that noise at certain frequencies, or outside the audible range, can have effects on the health of particularly sensitive individuals. Research is ongoing and not yet fully conclusive, but a considerable number of local people could be put at risk.

4.2 INITIAL DEPARTMENTAL REPORTS

4.2.1 Roads Report

4.2.2 Recommends requesting further information on a number of points, which are reflected in item 4 of the planning authority's further information request (see section 5.1 below).

4.2.3 Environment Section

4.2.4 Notes the proposal for a 36,000m^3 borrow pit and the establishment of a series of dedicated peat storage areas, and that section 3.4.3 of the EIS states that material will be removed from the borrow pit by rock breaking, but that blasting might also be used.

4.2.5 Notes the volume of peat to be removed, and expresses reservations in relation to the siting of Turbine No. 10 in peat of 6.2m depth. The author encountered bog quaking at this location. Notes the Peat Stability Report from AGEC stating that special construction measure and retaining structures are likely to be required at this point, along with Section 3.8.2 of the EIS which states that some turbine foundations may have to be piled.

4.2.6 Recommends requesting further information on a number of issues, reflected in item 1 of the planning authority's further information request (see section 5.1 below).

4.2.7 Biodiversity Officer Report

4.2.8 The presence of an annexed habitat recorded on site is noted – depressions on peat substrates of the Rhynchosporion. This habitat is outside a Natura 2000 site, and is therefore addressed in the EIS as opposed the NIS. T10 is adjacent to this habitat.

4.2.9 Notes that the NPWS have requested a more thorough assessment of the site for use by otters and bats. Notes that a marsh fritillary survey was undertaken, and the species was recorded. However, it was recorded outside the development area, and it is unlikely that the development would impact on the species.

4.2.10 Recommends requesting further information on a number of issues, reflected in item 2 of the planning authority's further information request (see section 5.1 below).

4.2.11 AA Screening Report (by Biodiversity Officer)

4.2.12 This report addresses the 5 Natura 2000 reports within 15km of the subject site, before going on to disregard 3 of these on the basis of there being no linkages to the subject site.

Site type	Site name	Distance from subject site	Considered further
cSAC	Lower Shannon	800m	yes
	Moanveanlagh Bog	8.7km	no
SPA	Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle	1.4km	yes
	Kerry Head	12km	no
	River Shannon and River Fergus Estuaries	14km	no

Table 1

4.2.13 Table 1 of the report sets out the conservation objectives for each of the 2 sites to be considered further.

4.2.14 The report notes specialist reports, advice, and recommendations received, including the submission from the NPWS and the NIS from the applicant, which was in fact a Stage 1 screening report with a FONSE (Finding Of No Significant Effects).

4.2.15 Section 3 of the report presents the potential significant impacts on Natura 2000 sites, including indirect effects relating to water quality, collision with Hen Harrier, and cumulative effects with permitted and operational windfarms.

4.2.16 The report concludes that significant effects on Natura 2000 sites cannot be ruled out, and that AA is required. The applicant should be asked to submit a Stage 2 AA / NIS in accordance with Section 177U of the Planning and Development Act 2000, as amended.

4.2.17 County Archaeologist

4.2.18 Recommends conditions.

4.3 REPRESENTATIONS

4.3.1 263 3rd party submissions were received by the planning authority. The issues raised largely are reflected in the grounds of the 3rd party observations summarised in section 10.0 below, and are summarised in the planning officer's report as follows.

- Proximity of the wind farm to dwellings
- Scale of the individual turbines
- Visual impact to local residents
- Devalue properties/dwellings
- Visual impact on the landscape
- Impact on tourism in the area
- Impact on quality of life
- Impact on wildlife
- No proper consultation took place
- Photomontages are unrealistic
- Impact from shadow flicker
- Noise pollution
- Health implications for young and old
- Impact on telephone, TV. and broadband signals
- Impact on roads infrastructure, bridges etc.
- Impact on obtaining planning permission for dwellings
- Turning the area into an industrialised zone
- Adding to the carbon footprint
- Resulting in large number of homes being put up for sale
- Flooding risk
- Health and safety
- Leading to depopulation
- Impact on foundations/structure of dwellings from heavy traffic
- Interfering with views
- Lack of proper consultation re 8th variation of KCDP
- Excessive density of wind farms in the area.
- Height of the turbines
- Pollution
- Incorrect/misleading information in the application
- Negative impact on climate
- No need for further wind energy production Impact on the flight path of the whopper swan
- Impact on pets/dogs
- Inaccurate assessment of shadow flicker
- Interfere with turf cutting
- Impacting negatively on the sales of property in the area
- Impact on Ballyhorgan House & Demesne
- Impact on turbary rights
- Impact from construction noise and traffic
- Proposal needs to be justified on basis of appropriate national, regional & local policy

A further 106 submissions were received by the planning authority following the receipt of further information.

4.4 PLANNING OFFICER'S FIRST REPORT

4.4.1 The report incorporates a number of photographs from the locations of the applicants' photomontages.

4.4.2 Pre-planning consultations are noted.

4.4.3 The planning officer notes correspondence on file from the applicant stating that notices erected were persistently being removed.

4.4.4 The report quotes sections from the 2006 DoE guidelines, the National Spatial Strategy, Regional Planning Guidelines, Kerry County Development Plan 2009, Renewable Energy Strategy 2012, and its associated Landscape Character Assessment.

4.4.5 The biodiversity officer's AA screening report is inserted into the planning officer's report.

4.4.6 Also contained within the planning officer's report is an Environmental Impact Assessment Report, presumably authored by the planning officer. This section summarises the EIS by chapter, and comes to a conclusion under several of the headings. Many of these findings are reflected in the planning authority's further information request. The report notes that Shadow flicker impact mitigation depends on agreement being reached with the affected parties.

4.4.7 The appraisal portion of the report begins on page 16. Much of the findings of this section are reflected in the further information set out in Section 5.1 below.

4.4.8 Domination of the landscape by the turbines is stated as being the main concern of the planning authority at this stage. Further photomontages are required.

4.4.9 These lands are zoned Rural General in the county plan, and as such generally have a higher capacity to absorb development than other rural designations. Nonetheless, development in these areas must be integrated into their surroundings. The proposed wind farm by reason of its scale, height and proximity to dwellings, located on a generally low lying, relatively flat landscape with slight undulations may not integrate with its surroundings, in contravention of Objective ZL 12-1 of the county plan. It is considered that the landscape in this area does not have the capacity to absorb a development of this scale owing to the height of turbines proposed.

4.4.10 Having regard to the scale and proximity of the proposed turbines to residences in the area, it is considered that the proposed wind farm may have a negative impact on residential amenities in the area, on quality of life, tourism, and has the potential to devalue property in the area

4.5 DEPARTMENTAL REPORTS FOLLOWING FURTHER INFORMATION SUBMISSION

4.5.1 Roads Report

4.5.2 An email on file states that the author is satisfied with the applicant's replies to roads queries.

4.5.3 Environment Section

4.5.4 The environment section has strong reservations in relation to the siting of Turbine 10 in peat up to 6.2m deep , the need to use temporary piling for the crane staging at this location, and the potential impact on water quality in the area.

4.5.5 Recommends conditions, including the omission of Turbine 10, the banning of blasting at the borrow pit, the appointment of an environmental manager, and the on-site management of pollutants.

4.5.6 Biodiversity Officer

4.5.7 Notes the further information submission. Recommends that if a grant of permission is considered that conditions be attached to require that Turbine 10 is omitted and that a suitable qualified environmental manager be employed to oversee the environmental mitigation measures proposed by the applicant.

4.5.8 County Archaeologist

4.5.9 Recommends conditions including further testing and survey work. Refers specifically to a possible bank and ditch uncovered in Trench 26. Buffer zones are to be applied to all monuments.

4.6 PLANNING OFFICER'S SECOND REPORT

4.6.1 The first portion of the report is effectively the planning officer's first report. The 2nd report begins at the section titled 'report on further information received..'

4.6.2 The report includes a new 'Stage 2: Appropriate Assessment' authored by the Biodiversity Officer which concludes that the proposed development would not adversely affect the integrity of a European Site.

4.6.3 The report also includes a new 'Environmental Impact Assessment Report' section, which appears to replicate the comparable section from the planning officer's first report, with some additional content.

4.6.4 The appraisal section of the report notes the additional submissions received.

4.6.5 The additional photomontages are of particular note. The height of these turbines can be seen to completely dominate the surrounding landscape. There is significant ribbon development in the area and the visual dominance of 10 turbines would lead to visual confusion and clutter.

4.6.6 Recommends refusal for the reason stated at 5.2 below.

5.0 PLANNING AUTHORITY DECISION

5.1 FURTHER INFORMATION REQUEST

5.1.1 Prior to deciding the application, the planning authority requested further information on 9 issues, which can be summarised as follows. Many of the items can be traced back to departmental reports or submissions from external consultees. The entirety of the further information request and subsequent response is replicated in section 3.2 above.

Item No.	Topic
1	Borrow pit and foundation methodology.
2	Hydrology, flora, and fauna.
3	Peat stability, runoff, and marsh fritillary
4	Delivery route, construction traffic, and grid connection
5	Watercourse crossing points
6	Archaeology
7	Visual Impact
8	Proximity to adjacent landholdings and consent
9	Proximity of T7 to roadway

Table 2

5.2 DECISION

The planning authority refused permission for one reason, as follows.

> *Having regard to the size and scale of the proposed turbines relative to the nature of the receiving environment of hilly and flat farmland, it is considered that a windfarm development of the scale proposed would create a significant visual intrusion in this landscape by reason of the height and spatial extent of the proposed turbines which are to be excessively dominant and visually obtrusive when viewed from the surrounding countryside and villages. The proposed windfarm would have a significant impact on the value and character of the landscape in the area and would seriously injure the amenities and quality of life of communities and individuals who dwell in the area. The proposed development would, therefore, seriously injure the visual amenities of the area, would be country to the provisions of the Wind Energy Guidelines for Planning Authorities, DoEHLG, 2006 and would be country to the proper planning and sustainable development of the area.*

6.0 HISTORY

6.1 PALLAS WINDFARM

PA reference numbers 01/2720, and extension of time applications 01/92720 01/992720 01/82720 (2013) relate to a 25 turbine windfarm located on high ground – (approx. 200mODM as opposed to approx. 10mODM in the case of the subject proposal) around 3.5km south of the subject site. The turbines in this instance are in the order of 100m high.

6.2 OTHER WINDFARMS IN NORTH KERRY

The appeal parties make reference to a large number of existing and permitted windfarms in the wider area of North Kerry, although I do not consider it of value to reference them directly in this report. I note that Section 2.2.3 of the EIS contains a summary of a large number of such applications.

6.3 OTHER PERMISSIONS IN THE VICINITY

GIS mapping was submitted to the board by the planning authority. It is not indicative of any outstanding permissions in closer proximity to the turbines than the housing pattern currently in existence.

7.0 POLICY

7.1 NATIONAL LANDSCAPE STRATEGY

This document is referred to by parties to the appeal. Following a period in draft format, this document was issued by the DoAHG on 26th May 2015. It does not make any reference to windfarms, nor does it have a spatial component. It does include an objective to prepare a national landscape character map, along with other subsequent actions, at a later date.

7.2 WIND FARM DEVELOPMENT: GUIDELINES FOR PLANNING AUTHORITIES, 2006

These Guidelines offer advice to planning authorities, are intended to ensure a consistency of approach throughout the country in the identification of suitable locations for wind energy development and the treatment of planning applications for wind energy developments. Some of the main topics covered are as follows:-

- The need to identify suitable areas in development plans;
- Making and assessment of planning applications, including suggested conditions.
- The siting and design of wind farms including advice for different types of landscapes.
- Visual impact is among the more important considerations and advice is given in chapter 6 on spatial extent, spacing, cumulative effect, layout and height. There is an emphasis on the distinctiveness of landscapes and their sensitivity to absorbing different types of development
- Chapter 5 addresses the environmental implications of wind farm developments and in particular the impact on designated sites, habitat and species. The bird species considered most at risk are raptors, swans, geese, divers, breeding waders and waterfowl, with migratory birds and local bird movements also important. The impact on other species, particularly those listed for protection, needs also to be assessed.
- The need for information on the underlying geology of the area including a geotechnical assessment of bedrock and slope stability and the risk of bog burst or landslide.
- Geological consultants should be employed to ensure that sufficient information is submitted.
- Other impacts on human beings such as noise and shadow flicker. The guidelines include specific standards on these issues, ad discussed in Sections 11.10 and 11.11 below.

7.3 REGIONAL PLANNING GUIDELINES FOR THE SOUTH-WEST REGION 2010-2022

Section RKI-01 sets out Key Issues for the region. Item 10 states that

> *"The South West Region has significant natural resources (renewable energy, primary production), the value and potential of which for economic development have not been fully realised. This provides a major opportunity for the future development of sustainable rural economies and tourism."*

Section 5.6.30 states that

> *"Demand for electricity in the region is expected to rise by 60% by 2025. Wave and wind technologies together with bioenergy resources are expected to play a significant part in meeting additional demand with excess renewably generated power being exported through an enhanced transmission grid to other regions within the state."*

These principles are also reflected in RTS-09, which further states that the development of wind farms shall be subject to

- *the Wind Energy Planning Guidelines*
- *consistency with proper planning and sustainable development*
- *criteria such as design and landscape planning, natural heritage, environmental and amenity considerations.*

There is no spatial component to the RPGs on the issue of Wind Energy.

7.4 KERRY COUNTY DEVELOPMENT PLAN 2009-2015 (SUPERSEDED)

This plan was in force at the time of the application, the planning authority's decision, and the appeal to the board, but has since been superseded by the 2015 plan. Needless to say, all the parties refer to this plan in their submissions. It is largely similar to the 2015 plan insofar as it applies to the proposed development. The primary difference is that the 2009 plan did not contain an equivalent to Policy EP-12 (see Section 7.5 below).

7.4.1 Renewable Energy Strategy (RES)

In 2012, variation 8 to the 2009 County Plan introduced a Renewable Energy Strategy (RES). It is of relevance in this instance as the 2015 Plan refers back to the 2012 RES in its own policies, notwithstanding that the 2015 plan supersedes the 2009 plan, of which the RES is a variation.

The RES has as a major input a Landscape Character Assessment (LCA), an associated document. The Landscape Character Area which relates to the subject site is the Listowel Plain. The LCA breaks down this area by way of 4 viewpoints, and comes to a position on the development capacity of each area. The two closest to the subject site area as follows

Cloonen View Point (around 10km west of the subject site)

> *"there is capacity for wind development in the flattest part of this area. Turbine height is an issue, a hub height of 50-75m is considered appropriate for this area due to the nature of the landscape (flat and open), and there is a high level of population, acting as constraints to wind energy development."*

Glanoe View Point (around 4km south of the subject site)

> *"It is generally a flat landscape, with no prominent features. There is a high density of population dispersed over the area. There was no consensus between the three public consultation summary maps regarding this area. Due to its flat nature it does not have any outstanding landscape qualities. Therefore this area has been zoned as Open To Consideration. Appropriate locations for wind development will be determined by the landscape capacity in any given area within the landscape character area and the potential impact on residential amenity."*

Table 7.4 of the RES finds that there is capacity in the area, but that constraints include population and impact on landscape.

Table 7.5 sets out the 'Wind Deployment Zones'. The top tier 'strategic site search areas' lie to the east of the site, on the Limerick border. The subject site sites centrally within the largest block of second tier 'open to consideration' lands, stretching from Abbeydorney through Lixnaw to Tarbert. The next largest block lies to the west and southeast of Castleisland, with smaller blocks along the Cork border and centrally on the Iveragh Peninsula.

7.5 KERRY COUNTY DEVELOPMENT PLAN 2015-2021

This plan was adopted on February 16th 2015, after this appeal was submitted to the board, and indeed after all submissions were made to the file. Several of the observations refer to the draft plan and proposed material alterations that were in train at the time of writing.

7.5.1 Energy policy

Chapter 7 of the plan covers Transport and Infrastructure, with Section 7.6 covering 'Energy/Power Provision'. The following objectives are of relevance to the subject proposal.

> *"**EP-1** Support and facilitate the sustainable provision of a reliable energy supply in the County, with emphasis on increasing energy supplies derived from renewable resources whilst seeking to protect and maintain biodiversity, archaeological and built heritage, the landscape and residential amenity. [Objective EP-7 covers a similar theme]."*

Objective **EP-11** is to

> *"Implement the Renewable Energy Strategy for County Kerry (KCC 2012)"* [See Section 7.4.1 above].

I note that Section 1.8 of the Plan, which refers to Ministerial Guidance states that

> *"The DEHLG is currently revising the National Wind Energy Guidelines. It is the intention of the Planning Authority to review its Renewable Energy Strategy (RES) following the completion of the revised National Wind Energy Guidelines."*

Section 7.6.2, which deals with Renewable Energy specifically states that

> *"Due to the fact that the planning permission for 402 turbines have been granted and 216 of them remain to be constructed , the majority of which are located in the Municipal Districts of Tralee and Listowel the most densely populated rural area in western Europe , planning for windfarms in areas open to consideration in the Tralee and Listowel Municipal Districts will only be considered when the areas designated as Strategic have been developed to their capacity and the effect of such development can be fully quantified or when the of existing turbines in the areas zoned as strategic are considered obsolete have been replaced due to technological advancements by modern turbines producing multiple outputs of energy in comparison to existing turbines.*

This principle is then reflected in the following objective.

> ***"EP-12** Not to permit the development of windfarms 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, 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."*

7.5.2 Landscape policy and other spatial designations

Map 12.1c covers the subject site and environs on this issue of Amenities/Views and Prospects. There are no designations or specific features relevant to the subject site or proposed development, in my opinion. There are views and prospects to the south and southeast of Listowel, but due to distance and topography, the proposed development would not impact on these views.

7.6 NATURAL HERITAGE DESIGNATIONS

The Lower River Shannon Special Area of Conservation extends up the River Feale to the north of the site and the River Brick to the west and south of the site. The subject site drains to the River Feale, which is around 1km from the nearest turbine location at its nearest point.

The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle Special Protection Area lies in the uplands to the southeast of the subject site. It is around 2km from the nearest turbine at its nearest point.

8.0 GROUNDS OF APPEAL

8.1 The first party appal was submitted by McCarthy Keville O'Sullivan Planning and Environmental Consultants on behalf of the applicant, Stacks Mountain Windfarm. It was received by the board on 6th November 2014. The grounds of the appeal are set out in a bound A4 landscape booklet, and can be summarised as follows.

8.2 OVERVIEW

8.2.1 The planning authority's reason for refusal relates solely to the visual impact of the proposed development, and a perceived threat to the amenities and quality of life of communities and individual that live in the area. This is not necessarily reflected in council policy. The design team does not concur with the conclusion that has been reached by the planning authority. The refusal reason is highly subjective. The landscape around the site has the capacity to absorb a windfarm of the type proposed.

8.2.2 The planning authority may have not had enough information within the application documentation to give the confidence to grant permission in this instance. Additional detailed analysis of the landscape context is being provided within the appeal.

8.2.3 Residential amenity is the issue central to the planning authority's refusal reason, and can be broken down into visual amenity, shadow flicker, and noise.

8.3 POLICY CONTEXT

8.3.1 The appeal reiterates the policy context for the proposed development (Section 2), referencing the Kerry County Development Plan 2009-2015 on issues such as views and prospects, the 2012 Renewable Energy Strategy (RES), landscape policy, and the Landscape Character Assessment (LCA) which informed the RES. Within the LCA, the Glanoe Viewpoint was the most liberal for windfarm development within the Listowel Plains.

8.4 SITE SELECTION

8.4.1 Kerry has been allocated 370MW of wind energy development under the Gate 3 grid connection process, which amounts to 9.4% of the national total for wind energy. The applicant controls grid connections DG262 and DG263, totalling 25.3MW, the total output of the subject proposal. Grid connection would be by way of an underground cable along the road network to Reamore substation, 11km to the south.

8.4.2 The appeal details the site selection process leading up to the subject proposal, starting with an area within a 15km radius of the Reamore Substation. Figure 3.2 shows the 3 'strategic' or 'open for consideration' blocks within this zone, overlaid with address points. A 500m buffer was applied, taking account of the 2006 guidelines. Table 3.1 of the appeal shows the synopsis of this assessment which ruled out 2 of the 3 blocks, and identified the subject site as an available block of land of sufficient scale. It was confirmed through discussions with relevant landowners that a sufficient area of land could be assembled, and the project was progressed.

8.5 PLANNING AUTHORITY DECISION

8.5.1 Section 5 of the appal presents a synopsis of the planning authority's processing of the case, including reference to internal reports.

8.6 SHADOW FLICKER AND NOISE

8.6.1 Noise and shadow flicker are typically the subject of conditions attaching to planning permissions for windfarm development, which set absolute limits for both, in line with the current guidance of the day. If that guidance changes over time, or in the course of the application, the board will implement conditions that are in line with whatever guidance is appropriate.

8.6.2 The planning authority's EIA finds that the proposed development would not have a significant residual impact on human beings, but that the visual impact is considered to have implications on the residents of the area and their quality of life. As such, the sole area of concern is the landscape or visual impact of the proposal.

8.6.3 The appeal notes that the proposed development would be in compliance with the proposed separation distances in the DoECLG's 2013 document "Proposed Revisions to Wind Energy Development Guidelines 2006 Targeted Review in relation to Noise, Proximity and Shadow Flicker" which recommends a separation distance of 500m. Refers to Section 4.7.3.1 of the EIS which provides a detailed list of 299 dwellings in the vicinity. Most are more than 1km from the nearest turbines, and no 3rd party dwellings are less than 500m. 13 dwellings belong to landowners who are participating in the proposed project.

8.7 VISUAL AMENITY

8.7.1 The applicant asserts that whether proposed turbines are 86m, 126m, or 156m, their size and scale is very large when compared to structures or landscape features. However, the capacity of the landscape in which they are built is the critical consideration, rather than just the turbine size.

8.7.2 The appeal notes that 10 photomontages were produced in conjunction with the EIS and a further 6 on foot of the further information request. Figure 6.3 of the appeal submission is a map showing a composite of all 18 viewpoints.

8.7.3 Section 6.5 of the appeal discusses the material presented by the applicant to date on this topic, and asserts that the proposed development would be acceptable in terms of its visual impact as the receiving landscape has sufficient assimilative capacity. The appeal discusses the effect of distance, and uses the nearby existing Pallas windfarm as an example.

8.7.4 Section 6.6 of the appeal discusses issues such as screening and topography as mitigating factors. Section 6.7 presents an analysis of the impact of screening, using two nominal orbital routes around the site, an inner and outer perimeter route. An assessment of the roadside screening was undertaken along these routes in advance of the submission of the appeal.

8.7.5 Section 6.8 of the appeal presents the recently constructed Monaincha[2] windfarm near Roscrea Co. Tipperary by way of a case study. This uses the same size turbines proposed for the subject site. Photographs and a key map are provided [albeit that just one photo is linked to a number on the key map]. Potential visibility of the subject proposal from nearby towns is also discussed.

9.0 SUMMARY OF RESPONSES

9.1 PLANNING AUTHORITY

9.1.1 The planning authority submitted a map showing planning histories in the immediate vicinity of the subject site. They would appear to date from at least 1993. As stated previously in section 6.3 above, there do not appear to be any outstanding permissions for development that would be closer to the turbines than the existing houses.

[2] This case does not appear to have come before the board. However a site history is available within the inspector's report for a more recent redesign and relocation of an anemometer mast (http://www.pleanala.ie/casenum/243513.htm)

10.0 OBSERVERS

10.1.1 A total of 11 observations were received from 3rd parties. There are common threads in these observations, and many of the parties are of one mind on many of the issues. The observations reflect the points made in the 369 3rd party submissions that were made to the planning authority, which are summarised in Section 4.1 above. Other additional items of note are summarised below in respect of each observation.

10.2 LIAM, MICHAEL, LOUISE, EILEEN SOMERS

10.2.1 The observers give an address of Knockreagh, a townland to the southeast of the subject site, to the south of the site of T6. The houses in this townland are clustered such that it is possible to narrow down the observers' house to one of the houses in the range H107-H121, H292, H293. The observers imply that they own more than one house in this area. I note that several of these houses are of relatively recent construction. From the photographs submitted, it would appear that one of their houses may be H113

10.2.2 The photomontages are based on roadside views, but the appellants' properties are located on elevated sites above the roadway, with views across the subject site. They would have a direct view of each and every wind turbine. Photographs are included indicating views from their house(s), with turbine locations marked.

10.3 DROMCLOUGH NATIONAL SCHOOL

10.3.1 On the basis of available mapping, submitted photographs, and site inspection, Dromclough National School is located in the townland of Dromclough approximately 1.8km and 1.5km east of T6 and T8 respectively.

10.3.2 The observation presents information regarding the enrolment levels of the school, and the school's recent achievements. The observation raises concerns about the health and wellbeing of the students arising from the proposed development. The appeal raises concerns that the proposed development would affect enrolment and staffing. There is no vegetation between the school and the proposed turbines. There are 3 other national schools in the vicinity, all of which have also objected. The observation asserts that this is the most densely populated rural area in Europe. A less suitable place for a windfarm could hardly be imagined.

10.3.3 Pallas windfarm is located in a sparsely populated area, with much smaller turbines. The comparisons with Monaincha

windfarm are not credible as it is located in an entirely different landscape.

10.3.4 The appeal references health effects from wind turbines due to noise and shadow flicker.

10.3.5 Opposition to the windfarm is greater than is presented by the applicant.

10.3.6 Of the 402 turbines for which planning permission has already been granted in Kerry, 216 remain to be constructed. The majority of these are in the municipal districts of Listowel and Tralee, which have more than their fair share of turbines.

10.3.7 The proposed development is already affecting house sales in the vicinity, and would continue to do so if permitted.

10.3.8 A copy of the observer's initial submission to the planning authority is appended.

10.4 SINN FÉIN ADVICE CLINIC

10.4.1 The proposed development would set a precedent both in terms of the height of the turbines, and also their location in a low lying valley with dispersed but a dense rural population.

10.4.2 The proposed development would affect tourism in the underdeveloped north of the county. The Wild Atlantic Way passes to the west of the site and would create a negative visual impact on this route.

10.4.3 Listowel is to the immediate north of the site and has been designated an 'Historic Town' by the DoAHG. It is currently one of only 3 towns in this pilot scheme.

10.5 AN TAISCE – KERRY ASSOCATION

10.5.1 To ensure Ireland meets its target of 40% of electricity from renewable sources by 2020, it is not necessary to locate all turbines along the western seaboard. Kerry is already in a position that it will be able to supply more than its fair share of renewable energy, and cannot be expected to continue covering all the 'open to consideration' areas with more turbines.

10.5.2 North Kerry does not have as vibrant a tourist trade as the south of the county, but does have Ballybunion and Listowel, with key access at the Tarbert ferry. Many will travel the N69 past the subject site.

10.5.3 The land form at the subject site is very different to the windfarm locations in the Stacks Mountains. This is a flat area.

There are considerable number of dwelling houses in the area, many of them sited on higher ground to the east and south, centred on Knockburrane and Knockreagh. Windfarms are generally sited on higher ground where they are further away from roads and housing, and frequently screened by fog or are less visible against white clouds. They would be much more visible at the subject site. The proposed development would affect property prices.

10.5.4 The centre of the site is raised bog, but the drainage taking place on the adjoining cut-over area has damaged it so that it is no longer growing. The depth of bog at T10 is more than 6.2m deep. As per the planning authority's recommendation, this turbine should not be erected.

10.5.5 On the issue of noise, have there been surveys carried out at operating wind farms to see if they comply with the predicted levels given in the EIS?

10.5.6 The presence of Hen Harrier is notable, and a longer survey concentrating on it would be desirable.

10.6 DROMCLOUGH N.S. PARENTS' ASSOCIATION

10.6.1 The proposed development would harm the future of the school. Families will move away, and future residents will not settle in the area. The proposed development would lower the quality of life for families and students currently living in the area due to stress, noise pollution, interference with phone, broadband signals, etc., and health risks. [For location, see Section 10.3 above].

10.7 JOHN O'DONOGHUE AND LORETO WEIR

10.7.1 The applicant states that his home is at Mountcoal, directly to the east of the proposed development, and within 2km. Mountcoal is a townland stretching south from Dromclough National School to the N69, and a distance beyond.

10.7.2 The proposed turbines are far too large and close to peoples' homes, and will be alien structures in this rural environment.

10.7.3 The EIS is flawed. The observer has seen otters and whooper swans within 1km of the River Feale as it flows through Finuge village.

10.7.4 There are numerous ringforts within the site which are currently being applied for protection under the National Monuments Acts. The EIS does not cover this issue properly. The observation cites a number of historical sites in the wider area, including a ringfort a short distance north of Lixnaw.

10.8 AIDAN GALVIN

10.8.1 The observer gives an address of Irramore, which is a townland within and to the immediate east of the subject site. The location of T8 is within Irramore. 3 roads pass through this townland, forming a rough 'H'. Most of the housing is along the east-west road in the centre of the townland.

10.8.2 The observer is a contributing landowner to the development and fully supports the proposed windfarm.

10.8.3 The observation notes recently published proposed material amendments to the Draft County Devolvement Plan including an objective *"Not to permit the development of windfarms in areas open to consideration in the Tralee and Listowel Municipal Areas until 90% of turbines already granted permission has been constructed and the full impact of their presence can be assessed."* The original draft plan published on 24th January 2014 did not contain any such provisions.

10.8.4 The proposed windfarm at Ballyhorgan is fully compliant with the 2012 RES. The proposed amendment has not been adopted and therefore it cannot be enforced. The proposed amendment appears to conflict with other objectives of the plan which encourages the provision of wind farm development at designated or appropriate locations. The IWEA (Irish Wind Energy Authority) have made a submission to the planning authority in relation to the published amendments stating that it is not reasonable to state that 90% of the permitted turbines should be constructed prior to permitted further development; it may be unfeasible or unviable for many of these wind farms to proceed. A copy of the IWEA submission on this issue is appended to the observation.

10.8.5 The proposed development also appears to contravene and conflict with the Wind Energy Guidelines issued to planning authorities by the Department of the Environment. These guidelines require development plans to be positive and supportive of Wind Energy. The DoE has previously required planning authorities to alter their plans to comply with national guidelines in relation to Wind Farm development (most recently in Donegal). The observer anticipates that the department would have a similar issue with the current proposed amendments to the county plan, but the outcome of this process may not be known or finalised until after An Bord Pleanála have made their decision on the current appeal.

10.8.6 The observer strongly asks that this amendment be removed, and notes that should the amendment be adopted, that the board can under Section 37(2) still grant permission for a

development even if it materially contravenes the development plan if

(i) the proposed development is of strategic or national importance,

(ii) there are conflicting objectives in the development plan or the objectives are not clearly stated, insofar as the proposed development is concerned, or

(iii) permission for the proposed development should be granted having regard to regional spatial and economic strategy for the area, guidelines under section 28, policy directives under section 29, the statutory obligations of any local authority in the area, and any relevant policy of the Government, the Minister or any Minister of the Government, or

(iv) permission for the proposed development should be granted having regard to the pattern of development, and permissions granted, in the area since the making of the development plan.[3]

10.9 AIDAN LINNANE

10.9.1 As with the previous observer, this observer gives an address of Irramore, which is a townland within and to the immediate east of the subject site. The location of T8 is within Irramore. 3 roads pass through this townland, forming a rough 'H'. Most of the housing is along the east-west road in the centre of the townland. The observer identifies his house as being H98 as shown on the applicant's drawings.

10.9.2 The observation states that it is being made on behalf of the observer and 9 other parties. Of the 10 total parties, numbers are given for 5 of these houses, as per the applicant's drawings. Most are immediately proximate to the observer's house, with one to the north, on the R557 west of Finuge.

10.9.3 The observer asserts that the application was not clear as to where shadow flicker would be experienced. Table 4.10 shows the houses H97-H103 and H241-H246 as experiencing shadow flicker in the south and west windows, but all turbines are to the north and northwest of these homes.

10.9.4 The applicant has failed to acknowledge the existence of otters in the area.

[3] Wording as per current legislation

10.9.5 There are at least 87 extra houses within the 2km buffer zone that had not been counted. The population of the area is higher than is presented by the applicant.

10.9.6 The applicant's noise assessment is at odds with the assessment carried out by renowned noise consultant Dick Bowdler, as seen in the noise report attached to the North Kerry Wind Turbine Awareness Group observation report.

10.9.7 The observer points to precedent for refusing permission in similar circumstances at Cloghan Co. Offaly under PL19.243253[4].

10.9.8 The observation is accompanied by a number of letters from other residents of the area, a map illustrating the point at 10.9.5 above, and a DVD containing a video of swans in the area.

10.10 NORTH KERRY WIND TURBINE AWARENESS GROUP

10.10.1 Landscape and Visual

10.10.2 The domination of the landscape is a primary concern. The photomontages submitted are inadequate. The wide angle lens used distorts the proportion and size relationship between foreground and background elements. 3D modelling is far more effective, and the observers request that the board request the applicant to submit such a model.

10.10.3 The applicant suggests that the landscape does not have expansive views due to dense hedgerows and mature lined field boundaries. This runs contrary to photographs 6.4 to 6.7. In any event, a 6-7m hedgerow would not obscure a 156.5m turbine.

10.10.4 The observation refers to the report from Doyle + O'Troithigh on this issue (see Section 10.10.38 below)

10.10.5 Ecology

10.10.6 The surveys used are insufficient in scope and intensity and do not comply with best practice methodology. The applicant states that here were no otters within the ecological footprint of the development, yet there are otters present in the River Feale, less than 1km away, as per a recent RTE documentary. The observation is accompanied by an undated letter from a Conservation Ranger from the NPWS SW Region stating to whom it concerns that otters are present in the Feale Catchment and tributaries of the River Feale.

[4] Correct reference number - PL19 .242354

10.10.7 Bird surveys are not consistent with approved and recommended methodology outlined by Percival, 2003 [details cited]. The applicant's ecological consultant has only undertaken 18 hours of observation per vantage point, 50% of the required minimum.

10.10.8 The high frequency of Peregrine flight activity within the site would indicate an occupied breeding territory.

10.10.9 There is no reference to the internationally significant population of Whooper Swan (Cashen River flock) within 2km of the site. This species can be highly mobile and can cover substantial distances between roosting and foraging sites. The proposed development is to be located within a key migration route.

10.10.10 No specific surveys for Hen Harrier were undertaken during the winter, despite the NPWS confirmation that there is a large known communal roost within 2km of the development and that the wider landscape supports 5 further known root sites.

10.10.11 The level of survey undertaken on bats does not comply with the best practice guidance recommended by the Bat Conservation Trust (Bat Surveys - Good Practice: Surveying for Onshore Wind Farms.) Recommended methodologies are cited.

10.10.12 The NIS noted conditions capable of sustaining Freshwater Pearl Mussels, yet no survey was conducted. The conclusion that "No impacts to Freshwater Pearl Mussels are likely as populations are located in the Cloon catchment in Co. Clare"[5] is ludicrous and displays a woeful disregard.

10.10.13 The applicant's ecological consultant has inadequately considered the cumulative impacts of the existing 9 windfarms and permitted additional 12 windfarms that have been granted planning permission within a 17km radius of the proposed development on fauna.

10.10.14 Proximity to schools and homes

10.10.15 The EIS identified 299 private houses but did not mention the 4 primary schools and 3 pre-schools that are situated within 2km of the site. These sites were not included in the assessments of noise or shadow flicker. The submission details the current options of each of these 4 schools, Dromclough, Killocrim, Scoil Mhuire Gan Smal Lixnaw Girls, and Scoil Mhuire De Lourdes Lixnaw Boys.

[5] I cannot find a reference to this effect.

10.10.16 Page A-32 of the [planning authority's] Landscape Character Assessment identifies the proposed site as an area with "a high concentration of dwellings located in the countryside".

10.10.17 The observation refers to the report of Dick Bowdler (see section 10.10.31 below), which concludes that there are 3 flaws in the assessment – incorrect interpretation of the guidelines, incorrect background noise levels, and incorrect turbine noise levels. If this is correct, the proposed development would breach the night noise level of 43dB at all listed properties.

10.10.18 Shadow flicker

10.10.19 The applicant's survey has inexplicably omitted more than 90 homes that exist within the boundaries and buffer zone of the proposed development.

10.10.20 The predictions in Figure 4.7 of the EIS are misleading and inaccurate. For example, at house numbers 97-101, 103, 241-246 and 296, shadow flicker is predicted for the south and west facing windows, whereas there are no turbines proposed to be built to the south of these homes.

10.10.21 Shadow flicker in excess of the 30 minutes per day and 30 hours per year permitted by the DoE Guidelines is predicted to occur at 104 and 116 houses respectively.

10.10.22 None of the proposed mitigation measures such as black out blinds or hedging have been discussed with the members of the community on whom they would be imposed.

10.10.23 Planning Policy

10.10.24 The public consultations leading up to Variation 8 [Renewable Energy Strategy] of the 2009 County Development Plan were inadequate.

10.10.25 The proposed development would be contrary to the policies of the incoming 2015 County Development Plan which designates this area as being a site of last resort for windfarms. The observation quotes draft Objective EP-11.

10.10.26 Other issues

10.10.27 The width of the turbine blades has not been specified. There is a danger that passing drivers could be temporarily blinded by sun glare.

10.10.28 There has been insufficient public consultation.

10.10.29 The proposed borrow pit, from which it is proposed to extract 36,000m^3 of material amounts to a quarry and therefore the

statutory requirements for establishing a quarry must be satisfied. The observation presents a number of questions in this regard.

10.10.30 The observation is accompanied by a petition with 497 signatures.

10.10.31 Report form Dick Bowdler re noise

10.10.32 The 2006 DoE guidelines make reference to an absolute noise level limit of 35-40dB(A) in low noise environments where background noise is less than 30dB(A). UK guidance (ETSU-R-97) from which the DoE guidelines are derived sets out tests to determine what this lower limit should be based on the number of dwellings in the neighbourhood, the effect of noise limits on the kWh generated, and the duration and level of exposure.

10.10.33 The applicant applies a noise limit of 35dB where background noise is less than 30dB, but then jumps to 45dB where background noise is greater than 30dB. This cannot be a correct interpretation and is contrary to common sense. Fig 1 of the report shows how the transition from low background noise to normal background noise is dealt with under ETSU-R-97.

10.10.34 Section 3.2 of the report raises concerns regarding the cross referencing of measured wind speed against measured background noise levels. Sections 4.5, 4.6, and 4.7 raises concerns about the noise level characteristics of the modelled turbines, and presents information that suggests that they may be louder than modelled (see Appendix 2 and 3 of the report).

10.10.35 Tables, 1, 2, and 3 show that if a correct interpretation of DoE limits is applied, and even assuming the applicant's background noise and turbine noise figures are correct, exceedances of the DoE limits would occur. Tables 4, 5, 6 use the applicant's interpretations of the guidelines but with Mr Bowdler's assumed figures on noise generation from the proposed turbines. Tables 7, 8, 9 show the situation if Mr Bowdler is correct in respect of both the interpretation of guidelines and the noise output from the turbines.

10.10.36 Houses H033, H091, and H122 are used as examples[6], which are to the north, east, and south of the site respectively. In the 1st scenario, exceedances are in the order of 3dB, in the 2nd the results straddled the limits, whereas in the 3rd, exceedances range from 5.8dB to 6.5dB.

[6] Albeit that H091 is used twice and H122 not at all in the first scenario – Table 3.

10.10.37 I note that a less expansive version of this report, but covering the main assertions above, was included in the original submission to the planning authority by this observer.

10.10.38 Report from Doyle + O'Troithigh on landscape impacts

10.10.39 The proposed development would further add to the 180 permitted turbines within 3 and 12.5km of the subject site. The landscape has reached its capacity to absorb any further wind energy development.

10.10.40 The report cites many planning polices relating to the site and the proposed development.

10.10.41 The applicant has provided an inappropriate interpretation of the planning authority's Landscape Character Assessment insofar as it relates to the Listowel Plan LCA and in particular the Glanoe viewpoint. The applicant seems to ignore the last sentence. The Development Capacity Summary states.

> *It is generally a flat landscape, with no prominent features. There is a high density of population dispersed over the area. There was no consensus between the three public consultation summary maps regarding this area. Due to its flat nature it does not have any outstanding landscape qualities. Therefore this area has been zoned as Open To Consideration. Appropriate locations for wind development will be determined by the landscape capacity in any given area within the landscape character area and the potential impact on residential amenity.*

10.10.42 The Visual Screening Assessment submitted as part of the first party appeal was essentially a windscreen survey. The assessment confirms that the proposed development would be visible at varying degrees from 84% and 70% of the inner and outer circular route respectively.

10.10.43 The applicant's reference to the Monaincha Wind Farm in Tipperary as a precedent is not appropriate.

10.10.44 The report notes the stance taken by the planning officer on the issue of visual impact.

10.10.45 The applicant's claims regarding the question of whether the planning authority's decision is contrary to Ministerial Guidelines is unfounded.

10.11 JOHN O'SULLIVAN

10.11.1 The observer gives an address of Charles Street, Listowel, which is around 6km northeast of the nearest turbine.

10.11.2 There are already planning permissions granted for over 225 turbines in North Kerry. The cumulative effect appears to be ignored in the RES. The 406 wind turbines that have already been granted permission in Kerry, the most in any county in Ireland, will have a negative effect on tourism in the entire county, which is of national importance.

10.11.3 The Landscape Character Assessment associated with the RES understates the area's tourism potential.

10.11.4 The County Councillors have passed a motion to protect the north of the county from inappropriate developments that might detract from the landscape.

10.11.5 The present turbine density in north Kerry (225) is approximately 25 per $100km^2$, which is double that of the country with the accepted highest turbine density in Europe, Denmark, which has 11 per $100km^2$.

10.11.6 The observation contains a number of extracts of the LCA and RES to support the grounds of the objection.

10.12 CLLR JOHN BRASSIL

10.12.1 The observation states the agreement of the Fianna Fáil group of councillors in Kerry County Council with the planning authority's decision. However, some of the concerns raised by residents and the Fianna Fail group have not appeared in the planning authority's reasons for refusal, such as shadow flicker, wildlife, and environmental concerns.

10.12.2 Less than half of the 420 turbines that have been granted in North Kerry have been constructed. The impact of these turbines needs to be assessed once constructed. Until that happens, the development of windfarms should only be considered in areas zoned as strategic. This forms part of the new Kerry County Development Plan which will be adopted and finalised by February 2015.

10.12.3 The nature and scale of the proposed development is totally at variance with the population of the area. In order for An Bord Pleanála to be consistent with their previous refusals for housing developments in the area, they should also deem this application to be inappropriate.

11.0 ASSESSMENT

11.1 In accordance with the requirements of Article 3 of the European Directive 85/337/EEC, as amended by Council Directives 97/11/EC and 2003/35/EC and Section 171A of the Planning & Development Act 2000-2010, the environmental impact statement submitted by the applicant is required to be assessed by the competent authority, in this case by the Board. In effect, it is the board that undertakes the EIA. In this assessment, the direct and indirect effects of the proposed project need to be identified, described and assessed in an appropriate manner, in accordance with Articles 4 to 11 of the Directive.

11.2 Such an EIA undertaken here in this report will, by virtue of the specific range of issues pertinent to this appeal, cover most of the issues that would in any event have been covered in an inspectors' assessment in a non-EIA case.

11.3 Other issues can be addressed under the following headings;

- Principle of Development and policy context
- Legal and Procedural matters

While these fall outside what could be considered relevant to the EIA, it should be noted that they are also addressed as part of the applicant's submitted EIS (Chapters 1, 2, 3 of the EIS refer).

11.4 In the interests of clarity, I propose that my assessment be structured on the basis of the 2 headings above, followed by a series of headings addressing the EIA of the scheme, mirroring the structure of the applicant's original EIS (grouped where appropriate), but also drawing on the submissions of other parties to the appeal, on relevant policies, data, and my own observations, analysis, and conclusions. I propose that these subsequent headings be laid out as follows.

- EIS – Compliance with Planning and Development Regulations 2001
- EIA – Alternatives Considered (EIS Chapter 2)
- EIA – Human Beings – Separation Distances (EIS Chapter 4)
- EIA – Human Beings - Noise and Vibration (EIS Chapter 9)
- EIA – Human Beings – Shadow Flicker and other issues(EIS Chapter 4)
- EIA – Flora and Fauna (EIS Chapter 5)
- EIA – Soils and Geology, Water (EIS Chapters 6 and 7)
- EIA – Air and Climate (EIS Chapter 8)
- EIA – Landscape (EIS Chapter 10)
- EIA – Cultural Heritage (EIS Chapter 11)
- EIA – Material Assets (EIS Chapter 12)
- EIA – Interaction of the Foregoing (EIS Chapter 13)

11.5 PRINCIPLE OF DEVELOPMENT AND POLICY CONTEXT

11.5.1 Broad policy context

11.5.2 The EIS makes reference to European and National policy which the applicant considers to be relevant to the proposed development. It is indeed the case that much of this policy is broadly supportive of renewable energy in general and wind energy developments in particular. I note that many 3rd party submissions criticise wind energy in principle, questioning its economic justification, environmental performance, and broad social impacts. While this is indeed a valid, valuable and worthwhile area for debate, I do not consider it within my remit to enter into an assessment of such issues, nor take a position on the matter. The forum for such matters lies in the formulation of policy at a national, regional, and local level.

11.5.3 I note that the Regional Planning Guidelines also broadly support renewable energy, but that they do not have a spatial component in this regard.

11.5.4 Wind Energy Development Guidelines (Department of Environment, Heritage, and Local Government 2006)

11.5.5 These guidelines, hereafter referred to as the 2006 Guidelines are the primary national policy on wind energy developments. They were issued under Section 28 of the Planning and Development Act, 2000, which requires both planning authorities and An Bord Pleanála to have regard to them in the performance of their functions.

11.5.6 I do note that they are 9 years old, and that they were written at a time when there were significantly fewer windfarms in Ireland, with significantly smaller turbines on average. I also note that the DoEHLG engaged in public consultation in respect of a focused review of certain aspects of these guidelines (noise, proximity, and shadow flicker). The public consultation phase of this review closed in February 2014.

11.5.7 County Development Plan – broad policy context

11.5.8 The County Development Plan is broadly supportive of renewable energy developments in general, and wind energy developments in particular, albeit with the caveat that environmental considerations and impacts on residential amenity must be considered against the delivery of such objectives. See Objective EP-1 at Section 7.5.1 above.

11.5.9 Objective EP-12 of the 2015 County Development Plan

11.5.10 While the plan is broadly supportive of the proposed development, Policy EP-12 presents what could be an insurmountable policy hurdle. It bears repeating at this point.

> ***"EP-12** Not to permit the development of windfarms 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, 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."*

11.5.11 The background to this objective is given in Section 7.6.2 of the plan which states that permission has been granted for 402 turbines in Kerry, of which 216 remain to be constructed, the majority in the Municipal Districts of Tralee and Listowel.

11.5.12 At the time of the adoption of the plan, the percentage of permitted turbines having been constructed stood at 46% on the basis of Section 7.6.2 of the plan. It is reasonable to assume that in the intervening 3 months, the additional turbines constructed or permissions expired has not increased this percentage signficantly, and that it remains below 80%. As such, to comply with objective EP-12 would require a straight refusal of permission at this time, without reference to any additional qualifying considerations.

11.5.13 The 2015 plan was adopted by the Elected Members of Kerry County Council on 16th February 2015 and is effective since 16th March 2015. As such, its adoption post-dates both the planning authority decision and the submission of the appeals and observations. In a previous format – introduced as a material amendment to the draft format - it was referred to in the observations from Aidan Galvin and North Kerry Wind Turbine Awareness Group. At that juncture it referred to a figure of 90% of permissions to be implemented, and did not account for expired permissions.

11.5.14 Given the gravity of this objective, it is worth giving close scrutiny to the question of whether it is compatible with other policies in the plan, the policies of superior planning policy, and legislative requirements.

11.5.15 EP-12 -v- other policies of the CDP

11.5.16 The observer Aidan Galvin asserts that the objective that would later become EP-12 is flawed as it is contrary to other objectives of the plan. I do not concur with this position. The

plan remains positively disposed towards Wind Energy Development in the – albeit small – remaining areas to the south of the county. Furthermore, the 'moratorium' in the north of the county is conditional and time limited.

11.5.17 EP-12 -v- legislation

11.5.18 Section 10(2)(b) of the 2000 Planning and Development Act (as amended) requires that a development plan shall include objectives for: *"the provision, or facilitation of the provision, of infrastructure including transport, energy and communication facilities, water supplies, waste recovery and disposal facilities (regard having been had to the waste management plan for the area made in accordance with the Waste Management Act, 1996), waste water services, and ancillary facilities."*

11.5.19 The 1st Schedule of the Act sets out "Purposes For Which Objectives May Be Indicated In Development Plan". The following items are of note.

1. *Reserving or allocating any particular land, or all land in any particular area, for development of a specified class or classes, or prohibiting or restricting, either permanently or temporarily, development on any specified land.*
3. *Preserving the quality and character of urban or rural areas.*
11. *Regulating, promoting or controlling the exploitation of natural resources*

11.5.20 In my opinion, EP-12 is not contrary to the constraints of the Planning Act, and indeed is consistent with the terms of what constitutes an admissible policy under the 1st Schedule.

11.5.21 EP-12 -v- Ministerial Guidance on Development Plans

11.5.22 Chapter 4 of the DoE's Development Plan Guidelines for Planning Authorities deals with Development Plan Objectives, and walks through Section 10(1) of the Planning and Development Act 2000. No section of these guidelines would bring Objective EP-12 into question, in my opinion.

11.5.23 EP-12 -v- 2006 Wind Energy Guidelines

11.5.24 EP-12 could be considered in broad terms as concerning itself with the question of cumulative impacts. I note that the 2006 Guidelines do deal with cumulative impacts, but generally only at Planning Application stage, not at policy stage. Section 3.6.3 does suggest that planning authorities use GIS to monitor and review the degree to which the policies and objectives of the development plan are being achieved. As such, the objective

could be considered as being consistent with the methodologies advocated in the 2006 guidelines.

11.5.25 The appeal from Aidan Galvin asserts that the policy is contrary to the 2006 guidelines which require that development plans be positive and supportive of Wind Energy, and notes previous ministerial directions on this issue such as recently in Donegal. A copy of the direction in question is available on Donegal County Council's website. It required the planning authority to remove parts of the development plan including a requirement that turbine be set back a distance of ten times the tip height from residential properties and other centres of human habitation.

11.5.26 On the basis of the list of such directions available on the Department's website, and the timelines evident, the 2015 Kerry plan is within the 'window of opportunity' for such a direction to issue.

11.5.27 However, I note the manager's report for 2015 Kerry plan, available online, which refers to a submission from the Minister. The recommendations of this ministerial submission could be considered as having been reflected in the subsequent amendments made to the objective, as referenced in section 11.5.13 above. As such, the information available is not indicative of an imminent ministerial direction, in my opinion.

11.5.28 EP-12 -v- Higher tier policy

11.5.29 The Regional Planning Guidelines are broadly supportive of renewable energy developments, as per my summary at Section 7.3 above. However, as per my analysis in relation to the broad policies of the County Plan at 11.5.15 above, I would not consider that objective EP-12 is necessarily inconsistent with this broad policy support.

11.5.30 The applicant states in their appeal that Kerry has been allocated 9.4% of the national total for wind energy under the Gate 3 grid connection process, and that the subject proposal represents 25.3MW of this 370MW allocation – 9.5%. It is worth stating however that grid connection allocations do not amount to spatial planning policy.

11.5.31 Renewable Energy Strategy

11.5.32 It is worth considering the RES in isolation from objective EP-12. From a procedural perspective, I note that the 2015 County Development Plan effectively 'rolls over' the 2012 RES from the 2009 plan on the basis that the DoE review of the 2006 Guidelines are imminent, with an objective to review the RES after they are published. It is somewhat unusual for a current

plan to rely on content from a superseded plan, but I intend to assess the proposed development on the basis of the policy context as presented by the planning authority.

11.5.33 As per Figure 2.5 of EIS, the site is squarely located in centre of one of the 2nd tier 'Open to Consideration' blocks. As such, it is relatively well placed in a policy context within the RES.

11.5.34 Material Contravention procedures

11.5.35 In his appeal, Aidan Galvin refers to the options available to the board to grant material contraventions of a Development Plan under Section 37(2) of the Planning Act under 4 specific conditions (see section 10.8.6 above), which can be summarised as follows

1 The proposed development is of strategic/national importance

2 Conflicting objectives in the development plan

3 RPGs, S28 guidelines, S29 guidelines, government/ministerial policy.

4 Pattern of development in the area.

11.5.36 I do consider the proposed development to represent a material contravention of the development plan. However, the conditions set out in Section 37(2) of the Act do not apply, in my opinion. Items 2 and 3 are covered in my assessment above. In relation to item 1, this is not a strategic or nationally important development, and in relation to item 4, there is no strong precedent for granting permission for this type of development in the vicinity.

11.5.37 Conclusion on the issue of principle of development and policy context

11.5.38 I consider that permission must be refused on the basis of objective EP-12 of the 2015 Kerry Development Plan, which places a limited 'moratorium' on windfarm permissions in this part of the county.

11.6 LEGAL AND PROCEDURAL MATTERS

11.6.1 Legal interests in lands

11.6.2 On the basis of the information available, the applicant would appear to have sufficient legal interest in the lands. I note that in the further information submission, Figure 8.1 shows a boundary for the site – labelled 'consenting land ownership overall boundary' – which is somewhat larger than the original

'red line' site along the northwestern, western and southeastern boundaries. It takes in lands that would have otherwise been outside the site, but within 2.5 x rotor diameters. These lands are stated to be owned by James Barton, Dermot O'Connell, Liam Somers[7], and Michael Kissane. There are 'proximity consents' on file in respect of all thse parties.

11.6.3 Duration of permission

11.6.4 As per the EIS, the applicant is seeking a 10-year permission. This is an option afforded by Section 41 of the Planning and Development Act, to allow a deviation from the standard period of 5 years. Such a condition would indeed be consistent with the legislation. The 2006 Wind Energy Guidelines (DoEHLG) state (Section 7.20) that "Planning authorities may grant permission for a duration longer than 5 years if it is considered appropriate, for example, to ensure that the permission does not expire before a grid connection is granted.".

11.6.5 However, given that no extenuating circumstances have been presented by the applicant, I can see no justification for considering a 10-year permission.

11.6.6 Turbine 'envelope'

11.6.7 The application does not specify a hub height or blade diameter but rather an overall height to tip that would allow for various combinations of dimensions. The inference is that permission would be granted on this basis. Section 3.4.1.2 of the EIS refers.

11.6.8 I am aware that under PL04.RP2104, the board dealt with a point of dispute as to whether variations in hub height and blade length are permissible with the terms of a permitted development. In this instance, the parent permission - PL04.240281 – framed the proposal as per the current application, with just a single overall tip height. As such, given that the variants were within this 'envelope', the board issued a determination in favour of the applicant.

11.6.9 However, while I appreciate the applicant's objective is to maximise the options available, I have difficulties with framing my assessment and recommendation in this way. There is a significant difference in visual terms between a tall hub height with small diameter swept path and a short hub height with large diameter swept path. There are also implications for noise, shadow flicker, and impacts on birds and bats.

[7] One of the 3rd party observers on file is a Liam Somers, although given that the signatures differ, I would assume that this is a different Liam Somers.

11.6.10 While some latitude might be appropriate to allow for variations in turbine models and suppliers, it is my opinion that there should be a higher degree of clarity on the basic parameters of the proposed development. In my opinion, what the applicant is proposing would be equivalent to a permission for an apartment block that stipulated the overall height, but left it to the developer to decide the number of stories and apartments.

11.6.11 Grid Connection

11.6.12 This matter is referred to initially in Section 3.4.8 of EIS, where it states that

> *"The works to lay the underground cable that will link the proposed windfarm to the electricity grid network will not form part of the planning permission application that this EIS accompanies, although it is described in this EIS as being part of the proposed wind farm development." This position is reiterated in the further information response.*

11.6.13 An indicative route is shown in Figure Fig 3.12 of EIS running along public roads through the Stacks Mountains to a substation that is said to be 11.1km to the south. This substation is referred to variously as Reamore in the initial application and Muingnaminnane in Section 3.4.8 of the EIS and in the response to Item 4(iii) of the further information request.

11.6.14 The application states that the grid connection would be via an existing 'Gate 3' connection offer. In the first party appeal, the applicant states that they control grid connections DG262 and DG263, which total 25.3MW, the total output of the subject proposal.

11.6.15 In addition to the preferred route, two additional potential routes are shown in the further information response to item 4(iii) of the further information request, as summarised in section 3.3.6 above. All routes skirt or pass through the Stacks Mountains SPA.

11.6.16 It is my understanding that the 'Gate 3' consent referred to by the applicant refers to consent to access the national grid under a process that seeks to balance network capacity with energy supply and demand. It is does not amount to consent for the physical grid connection itself, which may require planning permission, or may be exempt under the 2001 Planning and Development Regulations (as amended).

11.6.17 The following sections of Peart J's judgement from the O'Grianna case addressing the issue of 'project splitting' are of relevance.

.. in reality the wind farm and its connection in due course to the national grid is one project, neither being independent of the other

… it points to a prematurity in the seeking of permission for the construction of the wind farm ahead of the detailed proposals for its connection to the national grid from ESB Networks. I appreciate that Framore have indicated that it simply is not possessed of the necessary information in this regard and could not include it in its EIS. But that does not mean that given more time and further contact with ESB Networks it could not be achieved so that it could be included in an EIS which addressed the impact of the environment of the total project "at the earliest stage".

…

In that way, it is difficult to see any real prejudice to the developer by having to wait until the necessary proposals are finalised by ESB Networks so that an EIS for the entire project can be completed and submitted, and so that a cumulative assessment of the likely impact on the environment can be carried out in order to comply with both the letter and spirit of the Directive.

11.6.18 My interpretation of this judgement is that there should be sufficient detail in a windfarm EIS relating to the grid connection to allow for a cumulative and comprehensive assessment of environmental impacts. In the absence of such information, the EIS is defective, and permission cannot be granted. Whether the grid connection would or would not be exempted development or would or would not have significant environmental impacts is a moot point. The O'Grianna judgement, in my opinion, requires that grid connection be incorporated into the EIS, and that this be before the board when the board conducts their EIA.

11.6.19 The material presented by the applicant shows a preferred route. Firstly, a preference does not amount to a proposal. Secondly, there is insufficient detail relating to this grid connection to allow for an assessment from an EIA perspective.

11.6.20 The application to the planning authority, and indeed the appeal to the board, both predate the judgement in the O'Grianna case. Indeed, the 2006 Guidelines advise that indicative options for grid connection are sufficient. Nevertheless, the board is obliged to assess and determine the case within the current legislative context. As such, the EIS is legally defective, and the board is precluded from granting planning permission at this time.

11.6.21 My findings on this issue feed into the considerations at 11.7 below.

11.6.22 Conclusion on the issue of legal and procedural matters

11.6.23 The applicant has sufficient legal interest in the lands.

11.6.24 I do not consider that there is sufficient cause to grant a 10 year permission.

11.6.25 I have difficulties with the framing of the proposed development as a loose 'envelope' without specific dimensions. This could perhaps be addressed by condition tying down the proposed development to a nominal set of dimensions.

11.6.26 The lack of specific proposals with regard to grid connection presents legal difficulties.

11.7 EIS – COMPLIANCE WITH PLANNING AND DEVELOPMENT REGULATIONS 2001

11.7.1 Article 94 and Schedule 6 of the Planning and Development Regulations 2001, as amended, set out the information to be contained in an EIS and, in my opinion, the document accompanying the application technically accords with the said details, with the subjects to be addressed set out therein. I note the matters presented by the applicant in their appeal, where relevant. This material validly supplements the initial EIS, in my opinion, and comes within the terms of the process as outlined by legislation.

11.7.2 However, as per my assessment at 11.6.11 above, and in light of the O'Grianna judgement, the lack of information regarding grid connection is a critical shortcoming in the EIS. It would not comply with the requirement of item 1(a) of Schedule 6 of the Regulations, namely that the EIS contain *'A description of the proposed development comprising information on the site, design, and size of the proposed development'*

11.7.3 Conclusion on the issue of compliance with planning and development regulations 2001

11.7.4 Given that an element of the proposed development – the grid connection – is not included in the description of the prosed development, Article 94 is therefore not complied with. The EIS is therefore defective in the current legislative context and permission cannot be granted.

11.8 EIA – ALTERNATIVES CONSIDRED (EIS CHAPTER 2)

11.8.1 The EPA guidelines on EIA state that in some instances neither the applicant nor the competent authority can be realistically expected to examine options that have already been previously determined by a higher authority such as a national plan or regional programme for infrastructure. I consider this to be an appropriate standpoint particularly given the nature of wind farm proposals. I consider that the county-level wind energy strategy adequately addresses this issue.

11.8.2 Nevertheless, the applicant does present a significant amount of information on this issue, which is covered in Sections 2.3 of the EIS and in detail at Section 2.8 of the EIS. The strategic level site search process is outlined in full, and would appear to be robust and logical.

11.8.3 In terms of turbine layout, Figure 2.4 of the EIS shows site-specific constraints, albeit with the turbine locations omitted. A cross reference with the site layout indicates that the turbine layout is effectively dictated by these constraints.

11.8.4 Conclusion on the issue of alternatives considered

11.8.5 The proposed development is acceptable in this regard.

11.9 EIA – HUMAN BEINGS – SEPARATION DISTANCES (EIS CHAPTER 4)

11.9.1 Separation distances between dwellings and proposed turbines is not a planning issue in its own right, but does feed into the considerations of Noise and Vibration and Shadow Flicker below. There are also some related matters to consider

11.9.2 Several 3rd parties present the area as being the most densely populated rural area in Western Europe. This assertion is also reflected in Section 7.6.2 of the 2015 County Development Plan. I am aware of other areas staking claim to this title, such as Gweedore in Donegal. Whether this is the case or not, the pattern of development in the area is certainly indicative of a high demand for dispersed housing in recent decades, and a relatively permissive response to this demand from the planning authority.

11.9.3 The first party appeal notes that the proposed development would be compliant with the terms of the draft discussion document on wind energy development issued by the DoECLG in 2013 (see section 11.5.6 above) as there are no 3rd party dwellings within 500m. While it is clear that a 500m buffer from dwellings was used to inform the turbine layout, the information presented in Table 4.9 of the EIS runs contrary to this

assertion. House H86 is 500m from the nearest turbine, as is H119 and H140. The latter pair are involved in the project according to the EIS, but H86 is not. H88 is 475m from the nearest turbine.

11.9.4 The manner in which the applicant has presented information on this topic in a disaggregated manner impedes a clear understanding of the issues at hand. It would have been useful had the applicant added the turbines to Fig 4.7 of the EIS. It would also have been useful to know the occupants of the houses that are, say, between 475m and 600m. On the basis of my cross referencing of the information presented, there appear to be 17 such properties, of which 10 are not connected to the proposal.

11.9.5 The observer Aidan Linnane states that there are at least 87 extra houses within the 2km buffer zone that had not been counted, and submits a map to this effect. However, on inspection, none of these missing houses are among the closest houses to the proposed turbines aside from one derelict house.

11.9.6 I note on the issue of proximity that the planning authority's RES requires that turbines be located no closer than 2.5 times the blade diameter from the boundary of adjacent properties except where written consent has been obtained. This was put to the applicant by way of further information item 8. As stated previously, the applicant included additional lands in their response, along with the necessary proximity consents. As previously stated, the applicant has chosen not to specify a rotor diameter. However, applying a nominal diameter of 113m as per the photomontages, a buffer of 282m is required. The revised lands and consents submitted by way of further information are compliant with this requirement. It is my assumption that this policy relates to the issue of 'wind take' rather than residential amenity.

11.9.7 I note that the observer Aidan Linnane asserts that there is a precedent for refusing permission in similar circumstances at Cloghan Co. Offaly (PL19.242354). I note from the inspector's report for Cloghan that *"The nearest houses to the turbines are located at approximately 460m to the site boundary, with the house located approximately 475m to the north of turbine 8, and at approximately 440m to the site boundary, with the house located approximately 480m to the west of turbine 4. There are approximately 34 additional houses within 1200m of the site."* As such, the circumstances at Cloghan were that the most proximate houses were closer to the turbines than in the subject case.

11.9.8 On related matters, many of the 3rd parties raise the issue of health effects of wind turbines. These issues are discussed by the applicant in Section 4.5 of the EIS. Several 3rd parties also raise the issue of impacts on housing values, and the impacts on the likelihood of people securing further planning permissions for housing in the area, an issue which is discussed in Section 4.6 of the EIS. I note the assertions by the parties on these issues. However, I do not consider that these issues can be validly brought to bear on the planning decision in this instance.

11.9.9 Conclusion on the issue of separation distances

11.9.10 There are some ambiguities in the information presented, but this issue does not in itself present any difficulties.

11.10 EIA – HUMAN BEINGS - NOISE AND VIBRATION (EIS CHAPTER 9)

11.10.1 Background noise

11.10.2 Background noise was measured at 4 locations, as shown in Figure 9.2 of the EIS. These measurements were plotted against windspeed and curves interpolated from these data points for both the daytime and nighttime. See figures 9.3-9.10 of the EIS

11.10.3 Noise limits

11.10.4 Table 9.16 of the EIS sets out noise criteria 'curves' for the proposed development for different windspeeds. I have concerns with this approach. Firstly, the applicant has chosen to apply a single curve notwithstanding the availability of survey information from 4 locations. Applying good practice, limit curves for each of these survey locations would have been applied, either directly (i.e. paired with nearest) or by way of interpolation, to each of the identified receptors. Secondly, the limit 'curves' set out in Table 9.16 are actually 2 flat lines – one for daytime and one for nighttime - with a 'step' at 4m/s for the daytime scenario. This is not consistent with the mathematics of the limits set out in Section 5.6 of the 2006 guidelines, which can be summarised as follows.

Column:	*1*	*2*	*3*	*4*	*5*
	Prevailing back-ground noise level	**Noise limit**			
Daytime	<30dB	35-40dB	OR	5dB above background	(whichever is higher)
	>30dB	45dB			
Night time	any	43dB			

Table 3

11.10.5 Applying the 2006 guidelines to the baseline noise levels set out in the daytime figures for the 4 survey locations (Figs 9.3, 9.5, 9.7, 9.9) would result in a noise limit that would begin at low windspeeds as a flat line in the 35-40dB range (given the <30dB noise levels) before rising parallel to the baseline level at a 5dB remove, before 'flatlining' again at 45dB beyond where the baseline curve crosses 40dB (45dB-5dB).

11.10.6 By applying effectively a flat 45dB daytime limit and a 43dB nighttime limit, the applicant has presented a signficantly more permissive scenario in terms of noise impacts.

11.10.7 I note the report from Dick Bowdler presented in the observation by North Kerry Wind Turbine Action Group (see section 10.10.31 above) which also finds fault with the applicant's methodology for this reason. I concur with Mr Bowdler's reasoning in Section 2 of his report, and would refer the board to Figure 1 in this report in particular, which presents a graphical representation of this issue.

11.10.8 Modelled noise levels

11.10.9 Table 9.17 of the EIS presents modelled turbine noise at 299 properties. Appendix 18 plots in a spatial sense the modelled noise impacts for various windspeeds.

11.10.10 I note that Mr Bowdler questions the modelled noise levels, asserting that the turbine noise properties used are too low. The figures from the appendices he presents from Siemens would appear to bear out this assertion when compared with Table 9.13 of the EIS. However, I do not consider that I am in a position to make a determination on this matter, and propose to proceed on the basis of the modelled output figures presented by the applicant for the remainder of this assessment.

11.10.11 Comparisons of modelled noise levels against noise limits

11.10.12 Section 9.5.2 of the EIS presents conclusions on this issue in somewhat qualified terms where it states that that there are *"no locations highlighted in this document where the proposed development exceeds the adopted day or night time noise criteria. Therefore no mitigation measures are required."*

11.10.13 The applicant has presented the information in an disaggregated fashion that makes it very difficult to accurately compare background noise levels to modelled noise levels for the purposes of comparison against the criteria set out in the 2006 guidelines. To do so for a given receptor, one needs to identify the nearest measuring location on the map in Figure 9.2, cross reference this with the background noise curves in Figures 9.3-9.10, derive a noise limit, and compare this limit with the modelled outputs at individual dwellings as shown in Figure 9.17 or Appendix 18.

11.10.14 I do not intend to present a full reworking of the applicant's analysis. However, by way of an example, I have selected representative properties to the south (H114), east (H86), and north (168) of the subject site which are not stated as being connected to the subject proposal. Thse houses are at locations that appear to be the 3 most affected clusters of houses on the basis of the mapping in Appendix 18.

H114 (south) daytime	**dB $L_{A90,\ 10min}$ at various standardised wind speeds**								
Windspeed (m/s)	4	5	6	7	8	9	10	11	12
Modelled noise (source EIS Table 9.17)	29.8	35.5	37.5	39.0	39.3	39.5	39.5	39.5	39.5
Baseline noise level (nearest = S03) (source EIS Figure 9.7)	29	31	33	35	37	39	41	43	46
Noise limits (source DoE 2006)	35-40	36	38	40	42	44	45	45	45
Within limits by…	5.2	0.5	0.5	1	2.7	4.5	5.5	5.5	5.5

Table 4

H86 (east) daytime	dB $L_{A90, 10min}$ at various standardised wind speeds								
Windspeed (m/s)	4	5	6	7	8	9	10	11	12
Modelled noise (source EIS Table 9.17)	30.4	36.2	38.1	39.5	39.6	39.7	39.7	39.7	39.7
Baseline noise level (nearest = S02) (source EIS Figure 9.5)	30	32	33	33	34	36	36	37	38
Noise limits (source DoE 2006)	35	37	38	38	39	41	41	42	43
Within limits by…	4.6	0.8	-0.1	-1.5	-0.6	1.3	1.3	2.3	3.3

Table 5

H168 (north) daytime	dB $L_{A90, 10min}$ at various standardised wind speeds								
Windspeed (m/s)	4	5	6	7	8	9	10	11	12
Modelled noise (source EIS Table 9.17)	29.4	35.5	37.1	38.4	38.5	38.6	38.6	38.6	38.6
Baseline noise level (nearest = S01) (source EIS Figure 9.3)	30	32	33	34	34	35	35	36	37
Noise limits (source DoE 2006)	35	37	38	39	39	40	40	41	42
Within limits by…	5.6	1.5	0.9	0.6	0.5	1.4	1.4	2.4	3.4

Table 6

11.10.15 As such, as per my analysis, the noise limits would be exceeded at the housing to the east of the subject site, with modelled noise impacts running very close to the limits to the north and south.

11.10.16 I note that Mr Bowdler in his report undertook a similar exercise in relation to houses that were closer still to the proposed turbines (Tables 1, 2, 3), and also found excesses in the critical 6-7m/s windspeed range. The source he used for the baseline noise levels is not completely clear, but appears to be broadly consistent with my figures above. In any event, I concur with the logic and the methodology. I also note that Mr Bowdler explored combinations of this issue with his assertions about the modelled outputs of the turbines themselves, as discussed in Section 10.10.31 above.

11.10.17 Construction noise

11.10.18 I consider it reasonable that the acceptable levels of noise during construction phase should be higher than during the operational phase. I consider the proposed development to be acceptable in this regard.

11.10.19 I note that the issue of blasting versus rock breaking at the proposed borrow pit is covered under item 1 of the further information request. The applicant effectively wishes to keep options open in this regard. The planning authority's Environment Section in their report recommend that blasting be prohibited.

11.10.20 Conclusion on the issue of noise and vibration

11.10.21 One of the findings of the O'Grianna judgement referred to at 11.6.11 above was that the board is not bound by the standards set out in the DoE Guidelines. Nevertheless, it remains the case that it is established practice that these standards are at the very least applied as a 'yardstick' against the modelled performance of windfarms. Indeed, it is against these standards that all parties to the appeal state their case for or against the proposed development.

11.10.22 On the basis of my assessment above, I consider that the applicant's methodology for assessing noise impacts was flawed. Furthermore, applying what I consider to be the correct methodology yields results that are in excess of the limits set out in the 2006 guidelines. I consider that the proposed development should consequently be refused permission on the basis of noise impacts.

11.10.23 Performance in relation to standards in DoE consultation document

11.10.24 The Department of Environment Community and Local Government issued a document entitled "Proposed Revisions to Wind Energy Development Guidelines 2006 Targeted Review in relation to Noise, Proximity and Shadow Flicker" in December 2013. The status of this discussion document is discussed at Section 11.5.4 above, but to reiterate, they have no status whatsoever. I present them here for information and comparative purpose only.

11.10.25 The discussion document proposes a limit of 40dB$L_{A90\ 10min}$ across the board, which takes account of WHO guidelines. Applying this threshold to the proposed development in the case of my 3 examples above, all turbines would be compliant with these limits.

11.11 EIA – HUMAN BEINGS – SHADOW FLICKER (EIS CHAPTER 4)

11.11.1 Applicant's position on shadow flicker

11.11.2 Section 4.7 of the EIS deals with this issue. As per the 2006 guidelines, this impact is modelled in terms of maximum minutes per day and maximum hours per year. The guidelines set out limits of 30 in both instances.

11.11.3 Table 4.10 of EIS shows modelled impacts in maximum minutes per day in 'blue sky' scenario (100% sunshine during daylight hours). 30 mins is exceeded in 104 of the 299 houses modelled. Of these, 12 belong to landowners.

11.11.4 Table 4.11 presents modelled impacts in maximum hours per year. 116 houses would experience an exceedance of the 30 hours per year figure. The table also presents figures on the basis of a 72% 'write-down' to account for meteorological conditions. Under this scenario, just 8 houses would experience an exceedance of the 30 hour limit, of which 2 are participating landowners.

11.11.5 Proposed mitigation is set out within section 4.8.3.9.1 of the EIS and begins with a complainant being asked to keep a log of shadow flicker events occurring on at least five different days. This would then be compared with the predicted occurrence of shadow flicker. In the event that no agreement is reached, a visit would be carried out to verify the occurrence of shadow flicker.

11.11.6 If an occurrence of shadow flicker is *"proved to cause an issue for a dwelling occupant, mitigation options will be discussed"* including installing window blinds, screening vegetation, and other site specific measures which might be agreeable to the affected party. If it is not possible to mitigate the problem locally, it would be possible to use the wind turbine control system to cease operation of the turbines causing the shadow. Table 4.12 gives an example of how this might be implemented in the case of 4 houses.

11.11.7 The appeal submission from the applicant goes on to state that noise and shadow flicker are typically the subject of planning conditions, and that the board will implement conditions that are in line with whatever guidance is appropriate.

11.11.8 3rd party and consultee positions on shadow flicker

11.11.9 Aidan Linnane in his observation points out specific problems with shadow flicker modelling where windows that do not face turbines are modelled as having shadow flicker. North Kerry Wind Turbine Action Group also refer to this.

11.11.10 HSE raise the issue of procedures for monitoring, recording, reporting, and handling noise and shadow flicker complaints

11.11.11 My assessment of shadow flicker modelling

11.11.12 Firstly, I note that the 30 mins per day and 30 hours per year criteria are exceeded for 104 and 116 of the houses modelled. These are not insignificant numbers of properties.

11.11.13 I do not concur with the applicant's 'write down' of the annual figures for metrological corrections. The 2006 guidelines are somewhat ambiguous in this issue, but contain at footnote 11 a reference to the fact that "*the shadow flicker recommendations are based on research by Predac, a European Union sponsored organisation promoting best practice in energy use and supply which draws on experience from Belgium, Denmark, France, the Netherlands, and Germany".*

11.11.14 I have had sight of the document 'Spatial planning of wind turbines' by Predac. In its section on Shadow Flicker it includes the following recommendation:

> *"It is recommended at neighbouring dwellings and offices that flickering shadows are not exceeding 30 hours / year or 30 mins per day with normal variation in wind direction and with clear sky. This follows the German norm of 30 hours a year at clear sky)."*

11.11.15 This section also outlines the national experiences in Belgium, Denmark, France, and the Netherlands. Belgium applies the 30/30 with clear sky, whereas in Denmark, 10 hours per year is allowed with average cloud cover.

11.11.16 As such, the background documentation is less ambiguous. Following this logic, one can either follow the German/Belgian logic of 30/30 with 'blue sky' or the Danish logic of 10 hours with 'average cloud cover'. Either approach produces approximately the same performance criteria, given that in northern European latitudes, the sun shines for approximately one third of the time, give or take

11.11.17 The applicant's contention that the 30 hours per year limit applies to an 'average cloud cover' scenario mixes these two approaches to produce a performance criteria that is effectively in the order of 3 times more permissive than other northern European countries.

11.11.18 As such, I propose to disregard the 72% 'write down' applied by the applicant. Infringements of the 30 mins and 30 hour guideline figures would be experienced at 104 and 116

properties, as noted by North Kerry Wind Turbine Action Group.

11.11.19 Furthermore, some houses would experience up to 3 times the 'per day' threshold and some over 5 times the 'per month' threshold set out in the 2006 guidelines.

11.11.20 My assessment of shadow flicker mitigation

11.11.21 Management arrangements whereby turbines are intermittently turned off to avoid exceedance of shadow flicker are envisaged by the guidance documentation. 2006 guidelines, and indeed the Irish Wind Energy Authority's own best practice guidelines refer to such measures. However, in relation to the subject site, it should be noted that while the shadow flicker impacts are modelled specifically, mitigation is only discussed in the abstract, albeit with examples.

11.11.22 In my opinion, this falls far short of what could be considered an appropriate and proportionate mitigation measure. The EIS has identified exceedances of required thresholds for shadow flicker. In such circumstances, it is my opinion that the mitigation measures should be incorporated by way of a direct undertaking by the applicant inherent to the proposal. The conditional and circuitous chain of events and intermediary steps between a 'perceived' exceedance and the control of the turbines, which places the onus on residents without any form of arbitration, is not appropriate.

11.11.23 I note that both the HSE and North Kerry Wind Turbine Action Group raises concerns with the applicant's proposed approach in this regard. I concur with these concerns.

11.11.24 Conclusion on the issue of shadow flicker

11.11.25 The applicant has presented a situation whereby national guidance limits would be exceeded, applied a misinterpretation of the terms of that guidance, suggested possible mitigation that falls short of an enforceable commitment, and inferred in their appeal that the matter could be addressed by way of condition by the board. I would not recommend that permission be granted on this basis.

11.11.26 In my opinion, if exceedance are identified that are inherent to the fundamental design of the scheme, the matter should be addressed by a refusal of permission or a fundamental redesign which may be possible by way of further information or conditions requiring, say, the reduction in the height or number of turbines. By applying 'performance based' conditions to inherently problematic schemes, the board runs the risk of giving planning authorities and 3rd parties

unenforceable conditions and/or giving applicants unimplementable permissions.

11.11.27 Performance in relation to standards in DoE consultation document

11.11.28 As with the issue of noise, this requires brief consideration

11.11.29 The Department of Environment Community and Local Government issued a document entitled "Proposed Revisions to Wind Energy Development Guidelines 2006 Targeted Review in relation to Noise, Proximity and Shadow Flicker" in December 2013. The status of this discussion document is discussed at Section 11.5.4 above, but to reiterate, they have no status whatsoever. I present them here for information and comparative purpose only.

11.11.30 The discussion document proposes a limit of zero shadow flicker. Applying this threshold to the proposed development, it would clearly be in non-compliance with these standards.

11.12 EIA – FLORA AND FAUNA (EIS CHAPTER 5)

11.12.1 Habitats

11.12.2 Figure 5.4 of the EIS shows the proposed development in relation to surveyed habitats on the site. Proposed Turbines T1, T3, T4, T6, and T8 are to be located on GA1: Improved Agricultural Grassland. T2 and T5 are shown on PB5 Cutover Bog, while T10 is at the transition between PB5 and PB1: Raised Bog. Turbine 7 is shown on an area of GS4: Wet Grassland, while T9 is shown on an area of WD4: Conifer Plantation.

11.12.3 The EIS concludes that the remaining high bog at Ballyhorgan is not active because of the drying-out associated with the cutting of the bog from the edges inward. It does not correspond to either of the Habitats Directive Annex I habitat types 'active raised bogs' or 'degraded raised bogs still capable of natural regeneration'. However, there are small pools on the raised bog which represent the Annex I habitat 'Depressions on peat substrates of the Rhynchosporion'.

11.12.4 Birds

11.12.5 There were no signs of grouse in the surveys undertaken. Bird species of conservation significance which were considered to be possibly present at the site and that fly at heights which could collide with the blades of an operational wind turbine were Hen Harrier, Merlin and Golden Plover. Section 5.4.1.2.3 of the EIS states that all three were recorded during the winter

vantage point survey work. Collision Risk modelling was undertaken and resulted in one modelled collision for Golden Plover every 36.8 years. Since neither of the two Hen Harrier sightings nor the single Merlin sighting within the study area were at heights greater than 5m above ground, it was not possible to model collision risk for Hen Harrier and Merlin.

11.12.6 Section 5.5.2.2.1 of the EIS discusses potential mitigation in respect of Hen Harriers, which are assumed to be present in the nearby Stacks Mountains.

11.12.7 Avoidance impacts due to cumulative windfarm development is discussed in Section 5.5.3 of the EIS.

11.12.8 An Taisce and North Kerry Wind Turbine Action Group in their observations recommend a longer survey focussing on hen harrier. North Kerry Wind Turbine Action Group criticise the bird and bat survey methodology, and refer to the presence of Whooper Swans in the vicinity. John O'Donoghue also refers to the presence of Whooper Swans.

11.12.9 Bats, other mammals, and invertebrates

11.12.10 Survey results for bats, other vertebrates and invertebrates are given in Sections 5.4.2 and 5.4.3 of the EIS.

11.12.11 Leisler's bats were found on foot of further information item 2(iv), but impacts were not considered to be significant.

11.12.12 Several 3rd parties refer to otter in the river Feale. However, no otter were found in the survey undertaken on foot of Item 2(v) of the further information request.

11.12.13 Fish

11.12.14 Salmonids where found in the surrounding streams and rivers in the surveys submitted on foot of Item 2(iii) of the further information request. John O'Donoghue says he has seen otters within 1km of the River Feale as flows through Finuge Village.

11.12.15 Conclusion on the issue of flora and fauna

11.12.16 I note that much of the DoAHG's submission was reflected in the further information request.

11.12.17 In my opinion, the survey methodology employed by the applicant appears to be relatively robust. The proposed development would be somewhat disruptive during the construction phase, but would have a significantly more benign impact during the operational phase. While the 3rd parties do make reference to species being present above and beyond the applicant's surveys, I see no evidence that would lead me

to conclude that the proposed development would have an undue negative impact on flora and fauna in the vicinity.

11.13 EIA – SOILS AND GEOLOGY, WATER (EIS CHAPTERS 6 AND 7)

11.13.1 Soils, peat stability, and foundation design

11.13.2 Soils, subsoils and bedrock distribution is set out in Figures 6.1, 6.2, and 6.4 of the EIS. Recorded peat depths are shown in Figure 6.3 and modelled peat depths are shown in the case of each turbine location in Table 6.6.

11.13.3 Turbine foundation design was left somewhat ambiguous under Section 3.4.1.3 of EIS, but was subsequently clarified under Item 1(ii) of the further information submission.

11.13.4 I note the submission of a Peat Stability Assessment by AGEC, which is included as Appendix 10 of the EIS. There are no signs of past peat failures or instability. The peat present at Ballyhorgan was noted as well drained and of relatively high strength. Subject to adherence to recommendations and control measures, the EIS – as clarified by way of item 3 of the further information request – considers there to be a low (T1-T9) to medium (T10) risk of peat instability/failure. A peat management plan in Section 3.4.4 of EIS.

11.13.5 An Taisce appeal queries peat depth at T10. They recommend that this turbine should not be erected. It is clear that this location is indeed the most problematic location in terms of foundation stability, and the response to item 1(ii) confirms that piled foundations would be required at this location, as opposed to the mass concrete foundations elsewhere.

11.13.6 The planning authority's Environment Section also expressed a number of concerns in their initial report which were reflected in the request for further information. Following the receipt of that information, the Environment Section maintained strong reservations in relation to the siting of T10 in peat up to 6.2m deep and the potential impact on water quality of the area. They recommended the omission of this turbine.

11.13.7 However, while the location of T10 presents additional challenges, I do not consider that it would be necessary to omit this turbine from the scheme, should permission be granted.

11.13.8 The proposed borrow pit is shown in section in Figure 3.7 of the EIS. It would be up to 13m deep on its upslope side.

11.13.9 Hydrology and hydrogeology

11.13.10 The hydrology of the raised bog at the centre of the site is stated as being very damaged as per Item 2(i) of FI.

11.13.11 Existing surface water drainage catchments are shown in Figure in Figure 7.2, with the streams and drains shown in Figure 7.3. The entire site drains to the River Feale.

11.13.12 Site drainage is set out in Section 3.6 of EIS, and again in Section 7. Largely illustrative. Discusses a range of standard methodologies in a general sense, without reference to the subject site. On foot of item 3(ii) of the further information request, additional details are provided regarding drainage in the vicinity of T9. The application drawings give additional clarity in this regard.

11.13.13 In terms of discharge of pollutants, the Management of concrete deliveries is described in Section 3.4.12.4 of EIS

11.13.14 Conclusion on the issue of soils and geology, water

11.13.15 In my opinion, the survey methodology employed by the applicant appears to be relatively robust. I see no evidence that would lead me to conclude that the proposed development would have an undue negative impact on soils, geology, or water in the vicinity.

11.14 EIA – AIR AND CLIMATE (EIS CHAPTER 8)

11.14.1 Chapter 8 of the EIS discusses potential emissions during construction, namely from construction machinery and due to dust arising. During the operational phase there would be effectively no emissions, with a net benefit due to reduction in dependency on fossil fuels.

11.14.2 Conclusion on the issue of air and climate

11.14.3 The parties to the appeal do not raise any significant issues under this heading. I consider the proposed development to be acceptable on this topic.

11.15 EIA – LANDSCAPE (EIS CHAPTER 10)

11.15.1 It is worth highlighting from the outset that visual impact is the sole reason for refusal by the planning authority, as set out in section 5.2 above.

11.15.2 Visual impact as presented by the applicant

11.15.3 In general terms, Chapter 10 of the EIS deals with this issue using a robust methodology and best practice. Figure 10.5 shows the location and layout of existing and permitted windfarms in North Kerry. Zone of Theoretical Visibility (ZTV) maps are shown from Figure 10.6 onwards giving plots for hub, half blade, cumulative impacts, and net additional areas from where turbines would be visible.

11.15.4 By way of a test, I compared the apparent height of Turbine 6 in Photomontage 7.1 (further information) to field widths in its vicinity at the same distance from the observer, and have compared these figures against field widths on scaled drawings. I can confirm that the depicted height of this turbine is accurate.

11.15.5 The original photomontages, while accurate, are however quite selective, and tend to avoid viewpoints from where the visual impact would be greatest. This matter was appropriately addressed by the planning authority by way of a further information request which specified a number of additional photomontages. I would draw the board's attention to both sets of photomontages.

11.15.6 I note the study of roadside screening on orbital routes, as submitted by the applicant in their appeal. This is helpful, although I note that the outer route avoids a very open and elevated section of the N69 near Mountcoal. Also, the public roads through the site at Irramore, Lissahane, and Ballyhorgan East are not included in this study.

11.15.7 Character of the receiving landscape

11.15.8 An Taisce in their observation note the difference between this landscape and that of other windfarms in the area. This theme is reflected in many of the 3rd party submissions on file. I concur with this observation. In my experience, the windfarms built in Ireland over the past decade have tended to either be in upland areas on hills, mountains, or ridges, or have been located in expansive boglands. The receiving landscape in this case is quite different in terms of landuses and topography, and does not represent either of these landscape types.

11.15.9 While the centre of the site is indeed a small raised bog, it is not particularly visible from the surrounding road network, and one does not get a sense of being within a bogland area. Rather, the character of the area is defined by mixed farmland and varying densities of dispersed housing.

11.15.10 The nearest existing windfarm to the subject site, at Pallas, is in an upland area, and the visual experience of this windfarm is informed by this relationship.

11.15.11 On the issue of topography, the site and immediate surroundings to the west and north are indeed flat. However as pointed out by An Taisce in their observation, the area southeast of the site is critical due to the fact that the houses and roads are elevated, and located on slopes facing the subject site.

11.15.12 The very fact that it would be possible to look down at the windfarm from public vantage points in close proximity to the windfarm is at the very least an unusual relationship. While these vantage points would only be in the order of 40-50m higher than the turbine base – nowhere near the hub heights - the fact that the windfarm layout could be seen in a comprehensive way presents a very particular experience. Photomontage 7.1, submitted by way of further information, illustrates this issue.

11.15.13 This is not to say that this arrangement would be necessarily unacceptable, but the departure from the usual relationship between windfarms and their surroundings must be noted. At the risk of phrasing this glibly, it is generally the case that people's experiences of windfarms are that they are 'up in the hills' or 'out in the bog'. There would be a different set of relationships with the subject proposal.

11.15.14 Moanincha near Roscrea is used as an example by the applicant. However, this windfarm seems to be better separated from housing. It is also in a flat area without nearby high ground, save for a small area to the southeast, where there are one or two houses with views across the site. The road serving them is not a through route and has a lot of screening.

11.15.15 I note that the Wild Atlantic Way is referred to by the Sinn Fein advice centre in their observation. Having viewed mapping of this route, I can confirm that it passes around 9km from the subject site at its closest, to the west at Ballybunion.

11.15.16 In terms of cumulative impact, the layout of existing and permitted windfarms is given by the applicant in Figure 10.2 of the EIS. It can be summarised as follows.

Distance from the subject site	**Number of existing and permitted turbines (cumulative)**
5km	26 turbines
10km	87 turbines
15km	180 turbines
20km	221 turbines

Table 7

11.15.17 Performance against planning policy

11.15.18 The 2006 guidelines present 6 broad categories as follows, with differing recommended responses for each.

- Mountain moorland

- Hilly and flat farmland
- Flat peatland
- Transitional marginal land
- Urban / industrial
- Coast

11.15.19 The applicant characterises the receiving landscape as 'Hilly and Flat Farmland'. I concur with this characterisation. The guidelines' associated siting and design guidance for this landscape can be summarised as follows, along with my assessment of how the development performs in relation to this guidance. I note that the observers assert that the proposed development is inconsistent with the guidelines in terms of siting and context.

Topic	2006 guidance (summarised	Scheme's performance	
Location	Ridges and plateaux are preferred.	The site is located at the lowest part of the landscape unit.	Poor
Spatial extent	Limited	Not clear. The proposed development could be considered as having an extensive or limited spatial extent	Mixed
Spacing	Regular, responding to the underlying pattern field pattern.	Compliant	Good
Layout	Linear, and staggered linear on ridges and hilltops	The layout proposed is more of a 'Random' layout as set out in the guidelines.	Poor
Height	Will tend not to be tall. Except where they are on a high ridge or hilltop of relatively large scale.	The turbines proposed are tall (156.5m is significantly greater than 100m[8] as per the classifications of the guidelines). The dispensation for 'high ridge or hilltop of relatively large scale' is not applicable in this instance.	Poor
Cumulative effect	Visibility of two or more wind energy developments is usually acceptable.	Compliant.	Good

Table 8

[8] The turbines at the nearby Pallas windfarm are in the order of 100m tall.

11.15.20 As such, the proposed development's performance against the 2006 guidelines in terms of visual impact is quite poor.

11.15.21 The planning authority's Renewable Energy Strategy includes a Landscape Character Assessment as a supporting document. The applicant asserts in their appeal that the LCA applies the most liberal regime for windfarm development to the viewpoint that is closest to the subject site, Glanoe. This does indeed appear to be the case, although I note that the LCA is merely a supporting document, and does not form part of the statutory plan, That being said, the Landscape Character Areas and Archaeological Landscapes that flow from the LCA are largely an inverse of the Wind Deployment Zones which do form part of the RES. As stated previously, the subject site falls within the 2nd tier 'open for consideration' zone within the RES.

11.15.22 Looking beyond the RES, I can find no relevant landscape or amenity policies within the wider CDP that would relate to the subject proposal in any significant way. See section 7.5.2 above.

11.15.23 I note that the planning officer's first report considered that the landscape does not have the capacity to absorb a development of this scale owing to the height of the turbines proposed. The planning officer's second report notes the additional photomontages and concludes that the height of the turbines can be seen to completely dominate the surrounding landscape, recommending refusal on this basis.

11.15.24 Conclusion on the issue of landscape

11.15.25 The information as presented by the applicant, as supplemented by way of further information, amounts to a comprehensive and accurate representation of the proposed development's impact on the landscape. The lack of certainty on the terms of the proposal (see section on 'Turbine 'envelope' at Section 11.6.6 above) presents a difficulty, although it is nevertheless possible to get a good sense of the scheme's likely impact.

11.15.26 The receiving landscape is not of any particular value in landscape and visual terms, but its landuse character and topography is such that there would be an unusual relationship between the windfarm and its surroundings that would have a tendency to exacerbate the scheme's visual impact.

11.15.27 The proposed development performs poorly against the recommendations of the 2006 guidelines in terms of siting, layout, and design.

11.15.28 Aside from objective EP-12, the planning authority's RES and wider County Development Plan present a relatively permissive policy context in terms of landscape and visual impact.

11.15.29 I note the planning officer's first report which states that as the area is zoned 'Rural General', it has a higher capacity to absorb development than other rural designations.

11.15.30 While the proposed development performs quite poorly on the topic of visual impact, I would, on balance, stop short of recommending a refusal of permission on this issue. In this regard, I disagree with the planning authority's sole reason for refusal.

11.16 EIA – CULTURAL HERITAGE (EIS CHAPTER 11)

11.16.1 The topic of archaeology is covered in Chapter 11 of the EIS. Figure 11.2 shows the recorded monuments in and around the site.

11.16.2 This issue was also the subject of item 6 of the further information request. On foot of additional work undertaken by the applicant, there were possible remains of a relict field boundary found in 'Trench 26'. The DoAHG in their submission to the planning authority subsequent to the further information request, concur with the county archaeologist's recommendation to attach conditions.

11.16.3 Conclusion on the issue of cultural heritage

11.16.4 It would appear that the parties to the appeal concur on the issue of archaeology and that this matter could be addressed by way of conditions.

11.17 EIA – MATERIAL ASSETS (EIS CHAPTER 12)

11.17.1 Construction phase access

11.17.2 Construction stage traffic generation figures are given in Chapter 12 of the EIS. The delivery route is shown initially in Fig 3.19 of EIS, and is subsequently clarified in Item 4(i) of EIS along with construction traffic.

11.17.3 Swept path analysis for long loads is provided from the N69 to the site through Mountcoal. The analysis concludes that minor amendments would be required within the road corridor at a number of points.

11.17.4 I note that the initial roads report recommends requesting further information, but that the second roads report subsequent to the further information submission states that

the author is satisfied with the applicant's responses on these issues.

11.17.5 Impacts on other material assets

11.17.6 The Irish Aviation Authority recommended conditions in relation to aircraft navigation.

11.17.7 Wireless Telecoms links shown on constraints map, and avoided.

11.17.8 I note that the applicant presents specific community gain proposals via financial contribution as set out in Section 3.2 of the EIS.

11.17.9 Section 5.8 of the 2006 guidelines deals with proximity to roads and railways and states that although wind turbines erected in accordance with standards engineering practice are stable structure, that best practice indicates that it is advisable to achieve a safety setback from National and Regional roads and railways of a distance equal to the height of the turbine and blade. Item 9 of the further information request addressed the issue of the proximity of T7 to the public roadway, the response from the applicant being that the turbine blades would not overhang the public road. This is indeed the case based on the nominal 113m diameter blades shown, which would stop just short of the roadside.

11.17.10 However, the policy in question relates to the height to tip. The turbine in question would be in the order of 3 times taller than the separation distance between the base and the L-6056 public road. However, as this is not a regional or national road, the proposed development does not fall foul of the 2006 guidelines in this regard.

11.17.11 Conclusion on the issue of material assets

11.17.12 The proposed development would not have any undue negative impacts on material assets.

11.18 EIA – INTERACTION OF THE FOREGOING (EIS CHAPTER 13)

11.18.1 I note the matrix provided by the applicant in Section 13 of the EIS on this issue, which would appear to cover the topic comprehensively.

11.18.2 The primary interaction of note is the potential for fugitive material arising during the construction period to enter surface and groundwater watercourses, with consequent impacts on flora and fauna. However, with the application of standard construction methodologies, such risks can be avoided

11.18.3 In my opinion, all other interactions have been addressed as they arose in the course of previous sections of this report.

11.18.4 Conclusion on the issue of interactions

11.18.5 There are no interactions of EIA topics that are not adequately covered in the course of the EIS and in my assessment.

12.0 Screening for Appropriate Assessment under the Habitats Directive (NIS – EIS Appendix 6 and FI Appendix 6

12.1 Significant inputs to the consideration of this issue are available from:

- The applicant's NIS (presented at further information stage)
- The reports from the planning authority's Biodiversity Officer, both before and after further information was requested. See sections 4.2.7, 4.5.6, and 4.6.2 above
- The submission pre-further information of the DoAHG.

12.2 The DoAHG raised difficulties with original NIS in that it was not an NIS, but rather a 'stage 1' screening report. This was addressed by way of item 2(viii) of the planning authority's further information request and by Appendix 6 to the further information submission titled 'Article 6(3) Appropriate Assessment Natura Impact Statement'. I will reference this 'stage 2' document in the first instance, where relevant.

12.3 The plan is not directly connected with or necessary to the management of a Natura 2000 site.

12.4 The proposed development is for a 10-turbine windfarm in North Kerry, as described in detail in sections 3.0 above.

12.5 Species, habitats, surface drainage patterns, etc. are all described in full in Chapters 5, 6, and 7 of the EIS and in the Natura Impact Statement (NIS)

12.6 In order to screen for appropriate assessment, I will undertake 6 steps, as follows

12.7 STEP 1: IDENTIFY EUROPEAN SITES WHICH COULD POTENTIALLY BE AFFECTED - CONSIDER SOURCE-PATHWAY-RECEPTOR

12.7.1 The NIS considers 5 sites in the first instance (Table 2.1 of the NIS), as does the planning authority's AA screening report. The NIS considers 1 of these for further assessment, while the planning authority consider 2.

Site type	Site name	Distance from subject site	Considered further by NIS	Considered further by PA
cSAC	Lower Shannon	800m	yes	yes
	Moanveanlagh Bog	8.7km	no	no
SPA	Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle	1.4km	no	yes
	Kerry Head	12km	no	no
	River Shannon and River Fergus Estuaries	14km	no	no

Table 9

12.7.2 On the basis of the source-pathway-receptor model, I would hold with both the applicant's and the planning authority's decision not to consider further Kerry Head SPA, Rivers Shannon/Fergus SPA, and Moanveanlagh SAC.

12.7.3 I also hold with both parties' decision to consider the Lower Shannon SAC further, as there is a hydrological connection to the subject site. I note that the DoAHG also highlight the site (see section 4.1.8 above)

12.7.4 The question of whether to consider the Stacks (etc.) SPA further is pivotal at this point. The applicant's justification for not doing so is set out in Table 2.3 of the NIS and is based on the low usage of the site by Hen Harriers and the distances involved. In my opinion, the SPA must be carried forward at this point. The applicant's assertions on this issue are more validly considered under Step 3 below.

12.8 STEP 2: IDENTIFY THE CONSERVATIN OBJECTIVES OF THE RELEVANT SITES

12.8.1 Lower Shannon cSAC (site code 002165)

12.8.2 Conservation Objectives for this site are published in a document available online, and dated 7th August 2012. They aim to define favourable conservation conditions of the following species and habitats.

1029 Freshwater Pearl Mussel Margaritifera margaritifera

1095 Sea Lamprey Petromyzon marinus

1096 Brook Lamprey Lampetra planeri

1099 River Lamprey Lampetra fluviatilis

1106 Atlantic Salmon Salmo salar (only in fresh water)

1110 Sandbanks which are slightly covered by sea water all the time

1130 Estuaries

1140 Mudflats and sandflats not covered by seawater at low tide

1150 *Coastal lagoons

1160 Large shallow inlets and bays

1170 Reefs

1220 Perennial vegetation of stony banks

1230 Vegetated sea cliffs of the Atlantic and Baltic coasts

1310 Salicornia and other annuals colonizing mud and sand

1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

1349 Bottlenose Dolphin Tursiops truncatus

1355 Otter Lutra lutra

1410 Mediterranean salt meadows (Juncetalia maritimi)

3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation

6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)

91E0 *Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)

12.8.3 In the case of each habitat or species of qualifying interest, the document sets out targets which are accompanied by attributes, measures, and notes by which the conservation status of the habitat or species may be defined.

12.8.4 Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (site code 004161)

12.8.5 Conservation Objectives for this site are published in a document available online, and dated 13th February 2015. The conservation objectives are to maintain or restore the

favourable conservation condition of a single species, the Hen Harrier.

12.8.6 The accompanying Site Synopsis (2007) notes that this SPA is

> *"a stronghold for Hen Harrier and supports the largest concentration of the species in the Country A survey in 2005 resulted in 40 confirmed and 5 possible breeding pairs, which represents over 29% of the national total."*

and goes on to state that

> *"Hen Harriers will forage up to c. 5 km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank."*

Interestingly, the Site Synopsis states that

> *"The main threat to the long-term survival of Hen Harriers within the site is further afforestation, which would reduce and fragment the area of foraging habitat, resulting in possible reductions in breeding density and productivity. The site has a number of wind farm developments but it is not yet known if these have any adverse impacts on the Hen Harriers."*

12.9 STEP 3: IDENTIFY THE POTENTIAL A) LIKELY AND B) SIGNIFICANT EFFECTS OF THE PROJECT WITH REFERENCE TO THE SITE'S CONSERVATION OBJECTIVES

12.9.1 In summary, the impacts relate to the following, with reference to the relevant Natura 2000 sites' conservation objectives.

- Construction: Run-off of silt, fuels/oils, construction materials to watercourses.
- Operational: Bird/bat collision with turbines.

12.9.2 With reference to this information, I would identify the significance of the potential risks as follows.

	Potential significant impact	**Potential receptor**
Lower Shannon cSAC	Run-off	The subject site drains to the River Feale catchment where designated habitats or species could be affected by contaminated run-off
Stacks to Mullaghareirk Mountains, West Limerick Hills & Mount Eagle SPA	Turbine collision	Designated species' (Hen Harrier) flight paths could cross the proposed development.

Table 10

12.10 STEP 4: AS ABOVE, CONSIERING IN-COMBINATION EFFECTS.

12.10.1 I do not consider that there are any specific in-combination effects that arise from other plans or projects.

12.11 STEP 5: EVALUATE POTENTIAL EFFECTS ABOVE

12.11.1 Using the source-pathway-receptor model, I do not consider, on the basis of the information submitted, that the proposed development would be likely to impact on the qualifying interests of the Natura 2000 sites in question through the potential mechanisms outlined above.

12.11.2 The design of the drainage systems on site, which I consider to be an integral part of the project itself, would be sufficient to prevent run-off off pollutants to the surrounding watercourses, which connect to Natura 2000 sites. In this regard, I disagree with the position taken by both the applicant and the planning authority's Biodiversity Officer in her AA screening report.

12.11.3 It is worth highlighting at this juncture that the proposed development is not upstream of any of the designated catchments for Freshwater Pearl Mussels within the Lower Shannon SAC.

12.11.4 On the basis of survey information on file relating to bird species present on site, and their patterns of behaviour, there would be no risk to species identified as 'qualifying interests' for any of the relevant Natura 2000 sites, namely the Hen Harrier. In this regard, I concur with the position put forward by the applicant in Table 2.3 of the NIS and disagree with the position taken by the planning authority's Biodiversity Officer in her AA screening report.

12.12 STEP 6: DETERMINE WHETHER OR NOT LIKELY SIGNIFICANT EFFECTS, INDIVIDUAL OR IN COMBINATION WITH OTHER PLANS OR PROJECTS, ON THE EUROPEAN SITES, CAN BE REASONABLY RULED OUT ON THE BASIS OF OBJECTIVE SCIENTIFIC INFORMATION.

12.12.1 In my opinion, likely significant effects, either individually or in combination with other plans or projects, on the European sites, can be reasonably ruled out on the basis of objective scientific information. The proposed development is not likely to have significant effects on any European Site in light of its conservation objectives.

12.12.2 As such, I will not proceed to 'Stage 2' appropriate assessment. I note that the applicant in their NIS did proceed to 'Stage 2' assessment, as directed by the planning authority. I would attribute this divergence in approaches to a judgement

call on whether the construction methodology proposed forms an integral part of the proposal (my assessment) or mitigation measures (the planning authority's approach).

13.0 CONCLUSION AND RECOMMENDATION

13.1 CONCLUSIONS

13.1.1 It is worth at this juncture providing a recap of my conclusions in respect of each section of my analysis above. The following text is as per the text in the concluding part of each section, and is repeated here in the boxed text the interest of clarity.

13.1.2 Conclusion on the issue of principle of development and policy context

13.1.3 I consider that permission must be refused on the basis of objective EP-12 of the 2015 Kerry Development Plan, which places a limited 'moratorium' on windfarm permissions in this part of the county.

13.1.4 Conclusion on the issue of legal and procedural matters

13.1.5 The applicant has sufficient legal interest in the lands.

13.1.6 I do not consider that there is sufficient cause to grant a 10 year permission.

13.1.7 I have difficulties with the framing of the proposed development as a loose 'envelope' without specific dimensions. This could perhaps be addressed by condition tying down the proposed development to a nominal set of dimensions.

13.1.8 The lack of specific proposals with regard to grid connection presents legal difficulties.

13.1.9 Conclusion on the issue of compliance with planning and development regulations 2001

13.1.10 Given that an element of the proposed development – the grid connection – is not included in the description of the prosed development, Article 94 is therefore not complied with. The EIS is therefore defective in the current legislative context and permission cannot be granted.

13.1.11 Conclusion on the issue of alternatives considered

13.1.12 The proposed development is acceptable in this regard.

13.1.13 Conclusion on the issue of separation distances

13.1.14 There are some ambiguities in the information presented, but this issue does not in itself present any difficulties.

13.1.15 Conclusion on the issue of noise and vibration

13.1.16 One of the findings of the O'Grianna judgement referred to at 11.6.11 above was that the board is not bound by the standards set out in the DoE Guidelines. Nevertheless, it remains the case that it is established practice that these standards are at the very least applied as a 'yardstick' against the modelled performance of windfarms. Indeed, it is against these standards that all parties to the appeal state their case for or against the proposed development.

13.1.17 On the basis of my assessment above, I consider that the applicant's methodology for assessing noise impacts was flawed. Furthermore, applying what I consider to be the correct methodology yields results that are in excess of the limits set out in the 2006 guidelines. I consider that the proposed development should consequently be refused permission on the basis of noise impacts.

13.1.18 Conclusion on the issue of shadow flicker

13.1.19 The applicant has presented a situation whereby national guidance limits would be exceeded, applied a misinterpretation of the terms of that guidance, suggested possible mitigation that falls short of an enforceable commitment, and inferred in their appeal that the matter could be addressed by way of condition by the board. I would not recommend that permission be granted on this basis.

13.1.20 In my opinion, if exceedance are identified that are inherent to the fundamental design of the scheme, the matter should be addressed by a refusal of permission or a fundamental redesign which may be possible by way of further information or conditions requiring, say, the reduction in the height or number of turbines. By applying 'performance based' conditions to inherently problematic schemes, the board runs the risk of giving planning authorities and 3rd parties unenforceable conditions and/or giving applicants unimplementable permissions.

13.1.21 Conclusion on the issue of flora and fauna

13.1.22 I note that much of the DoAHG's submission was reflected in the further information request.

13.1.23 In my opinion, the survey methodology employed by the applicant appears to be relatively robust. The proposed development would be somewhat disruptive during the construction phase, but would have a significantly more benign impact during the operational phase. While the 3rd parties do make reference to species being present above and beyond the applicant's surveys, I see no evidence that would lead me to conclude that the proposed development would have an undue negative impact on flora and fauna in the vicinity.

13.1.24 Conclusion on the issue of soils and geology, water

13.1.25 In my opinion, the survey methodology employed by the applicant appears to be relatively robust. I see no evidence that would lead me to conclude that the proposed development would have an undue negative impact on soils, geology, or water in the vicinity.

13.1.26 Conclusion on the issue of air and climate

13.1.27 The parties to the appeal do not raise any significant issues under this heading. I consider the proposed development to be acceptable on this topic.

13.1.28 Conclusion on the issue of landscape

13.1.29 The information as presented by the applicant, as supplemented by way of further information, amounts to a comprehensive and accurate representation of the proposed development's impact on the landscape. The lack of certainty on the terms of the proposal (see section on 'Turbine 'envelope' at Section 11.6.6 above) presents a difficulty, although it is nevertheless possible to get a good sense of the scheme's likely impact.

13.1.30 The receiving landscape is not of any particular value in landscape and visual terms, but its landuse character and topography is such that there would be an unusual relationship between the windfarm and its surroundings that would have a tendency to exacerbate the scheme's visual impact.

13.1.31 The proposed development performs poorly against the recommendations of the 2006 guidelines in terms of siting, layout, and design.

13.1.32 Aside from objective EP-12, the planning authority's RES and wider County Development Plan present a relatively permissive policy context in terms of landscape and visual impact.

13.1.33 I note the planning officer's first report which states that as the area is zoned 'Rural General', it has a higher capacity to absorb development than other rural designations.

13.1.34 While the proposed development performs quite poorly on the topic of visual impact, I would, on balance, stop short of recommending a refusal of permission on this issue. In this regard, I disagree with the planning authority's sole reason for refusal.

13.1.35 Conclusion on the issue of cultural heritage

13.1.36 It would appear that the parties to the appeal concur on the issue of archaeology and that this matter could be addressed by way of conditions.

13.1.37 Conclusion on the issue of material assets

13.1.38 The proposed development would not have any undue negative impacts on material assets.

13.1.39 Conclusion on the issue of interactions

13.1.40 There are no interactions of EIA topics that are not adequately covered in the course of the EIS and in my assessment.

13.2 CONCLUSION REGARDING APPROPRIATE ASSESSMENT

13.2.1 As per my analysis at 12.0 above, I have 'screened out' the proposed development for Stage 2 Appropriate Assessment.

13.3 RECOMMENDATION

13.3.1 While the scheme performs relatively well across a range of topics, there are 4 outstanding issues that preclude the board from granting permission in this instance, in my opinion.

13.3.2 Outstanding issue #1 – grid connection

13.3.3 Firstly, there is the issue of grid connection and EIA on foot of the O'Grianna judgement. The proposed development does not include sufficient detail regarding the proposed connection to the national grid in terms of route, design, and methodology such that would allow for Environmental Impact Assessment of the project in its totality. As I have determined in section 11.7 above, the EIS is therefore not compliant with Article 94 of the Planning and Development Regulations (as amended)

13.3.4 As for the options open to the board on this issue, I do not consider that a refusal of permission is appropriate. Section

111(2) of the Planning and Development Regulations (as amended) states that

> *"Where the Board decides that an EIS does not comply with article 94, or any relevant written opinion under article 95(4), as appropriate, it shall issue a notice under section 132 of the Act requiring the applicant to submit such further information as may be necessary to comply with the relevant article."*

13.3.5 This section could theoretically be construed as an option or an obligation on the board. If permission is not being refused for any other reason, I consider that it would be appropriate to revert to the applicant by way of further information on this issue.

13.3.6 Outstanding issue #2 – Objective EP-12

13.3.7 As discussed in depth in section 11.5.9 above, the medium-term 'moratorium' on windfarm permissions in the north of the county, as set out in the 2015 County Development Plan precludes a grant in this instance. It is a robust policy which holds up to scrutiny in the context of superior planning policy and legislative requirements.

13.3.8 Outstanding issue #3 – noise

13.3.9 While the noise limits set out in the 2006 guidelines are not mandatory, they are an appropriate tool, in my opinion for considering the valid issue of impacts on residential amenity of surrounding dwellings. The proposed development would, on the basis of the information available, generate noise in excess of these noise limits. Permission should be refused for this reason, in my opinion.

13.3.10 Outstanding issue #4 – shadow flicker

13.3.11 As with the issue of noise, there are modelled exceedances of the shadow flicker standards set out in the 2006 guidelines. Permission should be refused for this reason, in my opinion.

13.3.12 Recommendation

13.3.13 I recommend that permission be refused due to items 2, 3, and 4 above. Should the board disagree with this recommendation, I recommend that further information be requested on the basis of item 1.

14.0 REASONS AND CONSIDERATIONS

1. The proposed development is located in the Listowel Municipal District, and this appeal is being determined at a time when less than 80% of the turbines with permissions in this area on the date of adoption of the Kerry County Development Plan 2015-2021 have either been erected or have had their relevant permission expire. To grant permission would be a contravention of Objective EP-12 of the plan which is to not permit the development of windfarms under these circumstances. The proposed development would, therefore, contravene materially a development objective as set out in the development plan and be contrary to the proper planning and sustainable development of the area.

2. The proposed development would, on the basis of the information provided in the Environmental Impact Statement, result in levels of noise at dwellings in excess of relevant thresholds set out in 'Wind Farm Development: Guidelines for Planning Authorities' (Department of Environment, Heritage and Local Government, 2006). The proposed development would therefore be contrary to Ministerial guidelines issued under Section 28 of the Planning and Development Act 2000 (as amended). Consequently, the proposed development would be injurious to the residential amenities of the area and would be contrary to the proper planning and sustainable development of the area.

3. The proposed development would, on the basis of the information provided in the Environmental Impact Statement, result in levels of shadow flicker at dwellings in excess of relevant thresholds set out in 'Wind Farm Development: Guidelines for Planning Authorities' (Department of Environment, Heritage and Local Government, 2006). The proposed development would therefore be contrary to Ministerial guidelines issued under Section 28 of the Planning and Development Act 2000 (as amended). Consequently, the proposed development would be injurious to the residential amenities of the area and would be contrary to the proper planning and sustainable development of the area.

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G. Ryan
Planning Inspector
28th May 2015