An Bord Pleanála Ref.: PL93.244006

An Bord Pleanála

Inspector's Report

Addendum Report following the receipt of Further Information

Site Address: Knocknamona (and other townlands) Co. Waterford.

Proposal: 12 wind turbines, 1 meteorological mast with wind measuring equipment attached, access roads, electrical substation compound, equipment and control building.

Planning Application

Planning Authority: Waterford (City and) County Council.

Planning Authority Reg. Ref.: 14/600109

Applicants: Ecopower Developments Limited.

Type of Application: Permission

Planning Authority Decision: Refuse

Planning Appeal

Appellants: 1st Party:
Ecopower Developments Limited
3rd Party:
Michael and Giancarla Alen-Buckley
Blackwater Valley Alliance
John and Niamh Reynolds

Type of Appeal: 1st party –v- refusal and 3rd party –v- refusal

Observers: 35 observers - see section 9.1 of report

Date of Site Inspection: 30th December 2014

Inspector: **G. Ryan**

1.0 INTRODUCTION

1.1 INTRODUCTION TO THIS ADDENDUM REPORT

1.1.1 I have written this report following a request from the board to provide an addendum report in respect of information received by the board since my initial inspector's report dated 10th April 2015.

1.1.2 I had recommended refusal of permission for 1 reason, relating to noise impacts at nearby dwellings.

1.1.3 The board sought further information on two issues under Section 132 of the Planning and Development Act 2000. The first requires details relating to the impacts of road widening and construction access, and the second relates to the analysis methodology for shadow flicker. In addition, the board drew the applicant's attention to the 'Ó Grianna' grid connection issue, and required the applicant to submit a revised EIS.

1.1.4 The applicant responded by submitting information including an EIS addendum and a revised NIS. The Board considered the further information to be significant and revised public notices were required. The further information was circulated to prescribed bodies and observers, and responses were received.

1.1.5 This report should be read in conjunction with my initial report of 10th April 2015. In the interests of brevity, I have confined this report to matters impacted upon by the further information, although in order to achieve a clear and comprehensive assessment of some issues, a wider remit is required on some topics, which will by necessity involve some repetition.

1.1.6 I have structured this report such that the numbered section heading should broadly correspond with those of my initial report, for ease of reference.

1.2 INTRODUCTION TO CASE

1.2.1 The subject proposal is for a windfarm development in an upland area of west Waterford, which is predominantly under Coillte forestry. An existing (but not operational at the time of my inspection) windfarm of 8 turbines sits to the immediate northwest such that the proposed development would in visual terms be an extension to it. The applicant applied for 12 turbines with a tip height of 126m. The site is located within a 'Strategic Area' under the County Development Plan, one of two such areas. Permission was refused by the planning authority largely due to visual impact and impacts on residential amenity.

1.2.2 The applicant appealed the refusal of permission and has submitted a proposition that 3 of the 12 proposed turbines be omitted. Additional documentation in respect of this proposition has been submitted. There were also three 3rd party appeals and 35 3rd party observations.

1.2.3 This report, and my initial inspector's report are written against the backdrop of a significant development in the proposal's legal context, which has occurred since the appeal was submitted to the board. The court decision in Ó Grianna -v- An Bord Pleanála stipulates a closer relationship between EIA for windfarms and their grid connection than has been practice to date.

2.0 SITE

2.1 As per the information supplied by both the applicant and the 3rd parties following the S132 further information request, it would appear that the adjacent Woodhouse windfarm, which was under construction at the time of my site inspection, is now complete, with turbines turning.

2.2 Otherwise, there is no additional comment or assessment needed on this topic following the receipt of further information. See the corresponding section of my initial report.

3.0 PROPOSAL

3.1 BROAD OUTLINE

3.1.1 No additional comment or assessment needed on this topic following the receipt of further information. See the corresponding section of my initial report.

3.2 ENVIRONMENTAL IMPACT STATEMENT

3.2.1 No additional comment or assessment needed on this topic following the receipt of further information. See the corresponding section of my initial report.

3.3 PROPOSITION OF AMENDMENTS AT APPEAL STAGE

3.3.1 No additional comment or assessment needed on this topic following the receipt of further information. See the corresponding section of my initial report.

3.4 S132 FURTHER INFORMATION REQUEST BY THE BOARD

3.4.1 On foot of a direction dated 27th July 2015, the board issued a request to the applicant which covered the following broad issues

- Road widening
- Shadow flicker methodology
- Grid connection re EIA (Ó Grianna)

3.4.2 The full text of the request is as follows.

(1) The Board notes that the proposed development would require some road widening and completely new temporary roads through third party lands (including a major intervention required in the townland of Carronahyla to accommodate an existing acute junction between the L2024 and the L8077) in order to accommodate the swept path requirements of vehicles delivering turbine components. While the engineering requirements in respect of these haul routes have been identified in the Environmental Impact Statement, the Board considers that the potential environmental impacts arising from such works have not been fully considered. Accordingly, the applicant is requested to submit details clarifying how it is proposed that these works will be delivered together with a comprehensive analysis of the direct and indirect environmental impacts associated with such works.

(2) The methodology employed by the applicant in relation to analysis of the impact of the proposed development in relation to shadow flicker as set out in Section 10.2 of the submitted Environmental Impact Statement is based on an 'hours per year' parameter and does not include the 'minutes per day' parameter as described and recommended in the Wind Energy Guidelines. The applicant is requested to provide an assessment of the impact on the proposed development in terms of shadow flicker based on a 'minutes per day' analysis. Comprehensive documentation including the mapping of lands affected, if any, is required.

(3) The Board draws your attention to the recent High Court judgments in the case of Pól Ó Grianna and Others - v - An Bord Pleanála in respect of a proposed windfarm development in County Cork. In his judgment, Mr. Justice Michael Peart found, inter alia, as follows:-

- *The connection to the national grid forms an integral part of the overall development of which the construction of the turbines is the first part;*
- *The cumulative effects of the construction of the turbines and the connection to the national grid must*

be assessed in order to comply with the Environmental Impact Assessment Directive.

The Board is of the view that the Ó Grianna judgment may be relevant to the current proposed windfarm development and is concerned that the details submitted in respect of a connection to the national grid may be inadequate for the purposes of carrying out an environmental impact assessment for the entire project, including the assessment of cumulative impacts.

The Board notes that Section 3.7 of the Environmental Impact Statement submitted with the application states that the power from the proposed windfarm will be transported to the existing Dungarvan 110KV substation on the Dungarvan/Cappoquin Road (N72), 6km to the north-east of the subject application site. However, details of such a connection have not been provided.

Having regard to the above, and to the requirement of the EIA Directive that projects likely to have significant effects on the environment are subject to an assessment with regard to their effects before consent is given, the Board considers that, in the absence of detailed proposals for the connection to the national grid, it may not be possible for the Board to complete an assessment in accordance with the requirements of the Directive and that, as such, the proposed development may be contrary to proper planning and sustainable development.

In accordance with the Section 132 of the Planning and Development Act 2000 you are required to submit on or before 21st September, 2015, the following:

A revised Environmental Impact Statement to incorporate sufficient information to enable An Bord Pleanála to complete an Environmental Impact Assessment in relation to the overall proposal, including the grid connection. The level of detail should be such as to enable the Board to complete an Environmental Impact Assessment in accordance with the requirements of the EIA Directive, and should include the following details in respect of a proposed grid connection:-

- *Route corridor for proposed grid connection;*
- *Pole/tower type and height, if relevant;*
- *Line voltage;*
- *Overground and/or underground connection or combination of both.*

The Environmental Impact Statement should consider the cumulative effects of the proposed windfarm and the proposed grid connection (based on these details).

The revised Environmental Impact Statement should also fully incorporate necessary revisions in response to items number (1) and (2) above.

Please also submit a revised Habitats Directive screening, and if necessary a revised Natura Impact Statement, in respect of the overall proposal, including the grid connection.

Upon receipt of the particulars sought, the board will consider the question of revised public notices.

Please note that to facilitate circulation/comments, 10 hard copies and 1 soft copy of the required particulars should be submitted.

3.5 S132 FURTHER INFORMATION SUBMISSION - OVERVIEW

3.5.1 The applicant submitted a number of documents in response to the board's request, which are summarised in the following sections.

- Cover letter
- Revised EIS (rEIS)
    - Volume 1 – Chapters 1 to 10
    - Volume 2 – Chapter 11 (Landscape and Visual)
    - Volume 3 – Chapters 12 and 13 (Cultural Heritage
    - Volume 4 – Chapters 14 to 18, plus
        - Screening for AA + NIS (whole project – Tab 18)
        - Screening for AA (Haul Route Works – Tab 19),
        - Screening for AA (Grid Connection – Tab 20)
- 3 revised drawings were submitted.

3.6 S132 FURTHER INFORMATION SUBMISSION – COVER LETTER

3.6.1 Prepared by Ecopower Developments, this letter makes the following points of note in relation to the issues raised in the board's further information request

3.6.2 Road works

3.6.3 The potential impacts arising from road works necessary to accommodate vehicles during delivery of turbine components are included in Chapters 3 (3.7.1 to 3.7.7) and Chapter 7 of the rEIS

3.6.4 Shadow Flicker

3.6.5 A revised assessment incorporating both 'minutes per day' and 'hours per year' parameters is included in Chapter 10 of the rEIS and in Appendix 10.4. New mapping of affected lands is also included (Figure 6).

3.6.6 Grid Connection

3.6.7 This issue is covered within Chapter 3 (3.7.8 to 3.7.12), Chapter 7, and Appendix 7.5. Two candidate route corridors are shown in Figure 1GC in Section 3.7.9 of the rEIS, and these route are assessed within the rEIS, including cumulative impacts.

3.6.8 rEIS

3.6.9 The revised EIS is an update and consolidation of the submitted EIS and the appeal information, and incorporates all the necessary information for the assessment of the reduction of the scheme from 12 turbines to 9 at appeal stage.

3.6.10 The original photomontages depicted the cumulative visual impact of the proposed windfarm and the neighbouring Woodhouse windfarm, which was under construction at the time. Now that the Woodhouse windfarm is operational, revised photomontages could be compiled using photographs of the actual Woodhouse windfarm. (Volume 2 of rEIS). Revised cumulative analysis is included in the rEIS.

3.7 S132 FURTHER INFORMATION SUBMISSION – REIS

3.7.1 The revised EIS, which I will refer to as the rEIS, follows the broad structure of the initial EIS. See Table 1 in Section 11.4 below for a comparison of the original and revised EIS/NIS documents.

3.8 S132 FURTHER INFORMATION SUBMISSION – REVISED NIS

3.8.1 The applicant has submitted a revised Natura Impact Statement (rNIS -Tab 18 of Volume 4 of the rEIS), which is intended to substitute for the initial NIS submitted as Appendix 13.7 of the EIS.

3.8.2 My intention is to draw on this document during my AA Screening in Section 11.5 below, as per the approach taken in my initial report.

3.9 S132 FURTHER INFORMATION SUBMISSION – ADDITIONAL PLANNING DRAWINGS

3.9.1 3 revised drawings were submitted, relating to site drainage layout, located in a pouch at the rear of Appendix 15.1 of the revised EIS.

4.0 SUMMARY OF REPORTS AND SUBMISSIONS TO THE PLANNING AUTHORITY

4.1.1 See my initial report in respect of all submissions received in advance of the date of my report. Subsequent submissions received by the board following the receipt of further information under S132 are dealt with under section 9.1 below.

5.0 PLANNING AUTHORITY DECISION

5.1.1 The planning authority refused permission for two reasons, relating to heritage, tourism, roads, residential amenity, cumulative impacts, noise, property values, public access, and visual impacts.

5.1.2 See the corresponding section of my report for more information in this regard.

6.0 HISTORY

6.1 Since my initial report, a decision on the following case has been made by the board, as highlighted by the post-S132 3rd party observers

PL93.245211 (PA Ref. 15/51) - permission **refused** by the board on 8th February 2016 for 8 turbines at Ballymacarbry Co. Waterford, 26km to the north. This decision post-dates the board's request for further information in the subject case by around 1 month. The board's reasons and considerations were as follows:

> *Notwithstanding the location of the site within a preferred area for wind energy in the Waterford County Development Plan 2011 – 2017, it is considered that the proposed development, by reason of its height and extent, would constitute a visually dominant feature in a vulnerable scenic landscape, as outlined in policy 6.2 of this Plan, and would interfere with the character of the landscape which it is considered necessary to preserve.*
>
> *In deciding not to accept the Inspector's recommendation to grant permission, the Board noted the inherent conflicts between the wind energy policies and the policies relating to landscape and scenic routes, as set out in this County Development Plan, and considered that, in this particular location, the proposed development would, if permitted, become a dominant feature and*

impact detrimentally on the environmental quality and scenic landscape of the area.

6.2 Otherwise, no additional comment or assessment is needed on this topic following the receipt of further information. See the corresponding section of my initial report.

7.0 POLICY

7.1 I note that there have been no changes to the county development plan since my initial report, and no ministerial directives have been issued. As such, No additional comment or assessment is needed on this topic following the receipt of further information. See the corresponding section of my initial report.

7.2 In my initial report, I referred to the National Landscape Strategy, which was in draft form at the time. The adopted policy 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.

8.0 GROUNDS OF APPEAL

8.1 The first party appal was submitted by the applicant, Ecopower Developments. I would characterise the appeal of consisting of two broad themes. The first is a rebuttal of the refusal reasons, with the second theme centring on a proposition to omit 3 of the 12 proposed turbines. It must be stated, however, that the first theme – rebuttal of the refusal reasons – is framed entirely with reference to the 9 turbine proposition.

8.2 Three 3rd party appeals were submitted from Michael and Giancarla Alen-Buckley, Blackwater Valley Alliance, and John and Niamh Reynolds. These appeals covered a range of issues including visual, environmental, residential amenity, policy, and EIA.

8.3 No additional comment or assessment needed on this topic following the receipt of further information. See the corresponding section of my initial report.

9.0 SUMMARY OF RESPONSES TO THE APPEAL

9.1 PLANNING AUTHORITY

9.1.1 The planning authority made an initial submission to the appeal, as summarised in Section 9.1 of my initial report.

9.1.2 Subsequent to the receipt of further information on foot of the board's request under S132, the planning authority made a submission stating they had no further comment to make.

10.0 OBSERVERS TO THE S132 FURTHER INFORMATION

10.1.1 A total of 11 observations to the initial appeal were received from 3rd parties, as summarised in Section 10.0 of my initial report.

10.1.2 On foot of the cross-circulation and readvertising of the further information received by the board, a number of additional observations were received, both from the original observers, and from new parties. A full list of observers to the board post-S132 is as follows.

10.1.3 3rd party Appellants (3 of 3)

- Niamh and John Reynolds
- Blackwater Valley Alliance (2)
- Michael and Giancarla Alen-Buckley (2)

10.1.4 3rd party observers to the appeal (7 of 35)

- John and Amy Brady
- Philip Wingfield
- Tom Feerick
- Orla Breathnach and Mark Walsh
- Kathleen Mulcahy
- John Cullinane and Others
- Drumhills Community Wind Farm Awareness Group

10.1.5 New observers post-S132 (109 – in folder travelling with file)

Jennifer O'Connell

James Barry

Andrea Jameson

Anne Higgins

Jackie Carroll

Glenbeg National School Bord of Management

Tara Lanigan O'Keeffe

A & S Wilson

David Murphy and Gillian Dowd

Pat and Joanie Lennon

Charles Keane Bart

Kristin Jameson

Tim van der Knaap

Kieran and Aisling Cahill

Donagh and Janine Cummins

Cyril and Nicholas O'Donnell, Gemma Flynn

Ardglass Wind Turbine Action

Awareness Group

Sharon Guiry

Jerry O'Donovan

Stephen Doyle

Antoinette O'Brien

Simone Grey

Victoria Barrett

Paul Daly

Claire Tobin

Jason Cairns

Sean Moore

Patrick Massey

Tom Joe and Mary Murphy

Michael Mernin

James O'Brien

Gerald O'Donovan

James Michael O'Brien

John Mernin

Annemarie Roynane

Liam and Valerie O'Donnell

Sharon McKenna

Philip McGrath

Liam and Aisling Grace

Dorothy Race

John Tobin

Geraldine Fitzgerald

Anna Maria O'Donnell-Cloona

Ned Sweeney

Aiden O'Brien

Brendan Mernin

James Mernin

Maurice, Philip, and George Peet

Stephen Mernin

Michael Andrade

Margaret Rosner

Malachy Ward

Colin Landers

Josephine McIntosh

Regina O'Brien

JJ Fitzgerald

Timmy Coughlan

James Roynane

Michael Moore

Margaret Tobin

Tom and Mary Hickey

Aine Fitzgerald

DA Cotter

Donal Hickey and Emma Dickinson

Dave Fingleton

Shannon Kelly-Fitzgerald

Seamus Breathnach

Brendan Mernin

Glenbeg National School Parents' Association

Janine Fay

Nicola Murtagh

Suir Valley Environment Group

Niamh and Mark Kuhne

David Reid

Neil van Dokkum

Fintan Veale

Mike O'Neill

Noel and Midi Walsh

Phil Grey

Pat Lee

Donal Buckley

Nellie O'Brien

Sarah McCabe

Ann Marie Higgins

Nora Buckley

Catherine Buckley

Anne Halpin

Joan Mernin

Michael and Vera Murphy

Brian and Olivia Coughlan

David Moore

Declan Arraglin

Kirsty Arragin

Pauline O'Gorman

Lynda Clancy

Edith and Liam Harty

Dan Buckley

William O'Donnell

Michael Reynolds

Teresa O'Donnell

Olivia Laarhoven

Deirdre Whelan and Others

Alan Fitzgerald

Claire Buckley

Oliver Cassidy

Henry Fingleton

Maeve Barrans

Pamela Brennan

Susan Wingfield

10.1.6 New matters, not raised in the initial 3rd party submissions – and therefore addressed in my initial report – can be summarised as follows

10.2 PRECEDENT

10.2.1 Refers to a recent decision by the board under PL93.245211 whereby permission was refused for 8 turbines at Ballymacarbry Co. Waterford, 26km to the north [See Section 6.0 above for details].

10.3 ROADS AND TRAFFIC

10.3.1 The proposed grid connection includes 11 river crossings affecting 9 attractive stone bridges along the rivers Colligan and Brickey. It is queried whether these bridges would be capable of sustaining the required works. Drilling is proposed under the River Colligan. This is a very important salmon and sea trout river, which is not referenced. Inland Fisheries Ireland have not been referenced.

10.3.2 The access route would run past the local [Glenbeg] national school, which already suffers from traffic issues. This road is also subject to issues regarding forestry traffic. This road is inadequate in width and horizontal alignment. Other routes could perhaps be used.

10.3.3 The incorrect road name has been used in relation to the haul route. It is the L2022, not the L8077 as stated by the applicant.

10.4 NOISE, VIBRATION, SHADOW FLICKER

10.4.1 Refers to experienced impacts from the adjacent Woodhouse windfarm, since the turbines started rotating in April 2015. Rest and relaxation in the observers' homes is no longer possible.

10.4.2 Refers to impacts of shadow flicker from the two existing turbines near Ring.

10.4.3 The applicant has failed to identify a number of dwellings within 1km

10.5 GRID CONNECTION

10.5.1 The proposed grid connection and associated road works does not form part of the subject application and is not concluded within the 'red line' application site. There is no exemption for these works, and they are not included in the application. There is no consent from the relevant landowners.

10.5.2 The board does not have the power to retrospectively reconfigure the application to undo the project splitting.

10.5.3 Refers to the Planning and Development Amendment Regulations 2016.

10.6 EIA

10.6.1 The new EIS submitted to the board following the S132 request was not requested by the board. There is an onus on the board to return this documentation to the applicant or to advise that the board will only have regard to those issues raised in the S132 notice.

10.6.2 The EIS was deemed to be inadequate by the PA. The board do not have the discretion to 'repair' the EIS after the fact.

10.6.3 The Knocknamona and Woodhouse windfarms are effectively the same project, and require a comprehensive EIS.

10.7 VISUAL IMPACT

10.7.1 The photomontage and visualisation techniques used are inadequate and misleading. Reports to this effect are included in the submission on behalf of the Allen-Buckleys and the Blackwater Valley Alliance.

10.7.2 An Historic Landscape Assessment by a Historic Architecture and Landscape Consultant is included in the submission on behalf of the Allen-Buckleys and the Blackwater Valley Alliance.

10.8 FLORA AND FAUNA

10.8.1 Bird and bat activity in the area has decreased since the opening of the Woodhouse windfarm.

10.8.2 The proposed development would impact on the habitat of the Freshwater Pearl Mussel

10.9 OTHER ISSUES

10.9.1 Concerns are raised regarding the disposal of waste from the proposed development.

11.0 ASSESSMENT AND EIA

11.1 As with the entirety of this report, this assessment is intended to be read in conjunction with initial inspector's report dated 10th April 2015. I have mirrored the structure of my initial report below. This report concerns itself with the additional assessment required in relation to any aspect of the further information submitted by the applicant on foot of the board's S132 request, or any relevant matters raised in submissions subsequently received.

11.2 The primary areas covered in the S132 submission were road widening, grid connection, which now fall within the revised EIS (but not the application). These works are described in the first instance in Section 3.7 of the revised EIS where the works are described, and also where relevant throughout the body of the revised EIS. Also included on foot of the S132 request is revisions to the shadow flicker methodology. This is contained in the first instance in Appendix 10.4 of the revised EIS.

11.3 At this juncture, it is worth mapping out a summary of the information that is currently before the board from the applicant across the 3 primary phases of submission relating to EIA, namely

- Application (original EIS)
- Appeal (amendments and additions to EIS)

- S132 Further Information (complete revised EIS)

11.4 Where the Appeal submission is intended to replace a section of the EIS, it is included on the same row as the original section. Where it is intended to supplement the original EIS, it is included in a separate row. This table is effectively a revision to Table 3 of my initial report. I have highlighted in grey sections of the revised EIS that are significant and that have a direct bearing on the issues raised in the further information request.

Orig. EIS Chapter / Appendix	Topic	Appeal Appx.	Appeal Appendix Topic	FI EIS Chapter/ Appendix	FI EIS topic
1	**Introduction**			**1**	**Introduction**
2	**European and National Policy Context**			**2**	**European and National Policy Context**
3	**The Proposed Development**			**3**	**The Proposed Development**
4	**Site Selection Process**			**4**	**Site Selection Process**
5	**Waterford County Development Plan**			**5**	**Waterford County Development Plan**
6	**Wind Energy Guidelines**			**6**	**Wind Energy Guidelines**
6.1	Pre-planning consultation			6.1	Pre-planning consultation
6.2	Letter from Irish Aviation Authority			6.2	Letter from Irish Aviation Authority
7	**Construction Impacts and Employment**				
				7	**Public Road Network**
7.1	Haul Route, Roads and Bridges Assessment				

Orig. EIS Chapter / Appendix	Topic	Appeal Appx.	Appeal Appendix Topic	FI EIS Chapter/ Appendix	FI EIS topic
7.2	FWD Survey			7.3	FWD Survey
7.3	Swept Path Analysis for works to Public Road			7.4	Swept Path Analysis
				7.1	Figures
				7.2	Windfarm Haul Route Survey Results
				7.5	Roads, Bridges, and Services along the Grid Connection
		5	Construction Traffic Management including traffic volume updates and construction timetable.		
8	**Air and Climate Impact Assessment**			**8**	**Air and Climate**
				8.1	Air and Climate Impact Assessment
				8.2	Grid – Air and Climate Impact Assessment
				8.3	Telecommunications Impact Assessment
				8.4	Television Impact Assessment

Orig. EIS Chapter / Appendix	Topic	Appeal Appx.	Appeal Appendix Topic	FI EIS Chapter/ Appendix	FI EIS topic
9	**Socio-Economic Impact Assessment**			**9**	**Socio-Economic Impact Assessment**
		4	Tourism and Amenity Report – Rethink Tourism	9.1	Tourism and Amenity
				9.2	Haul Route – Tourism and Amenity
				9.3	Grid – Tourism and Amenity
				9.4	Facilitating Public Access During Construction
10	**Residential Amenity**			**10**	**Residential Amenity**
10.1	Noise and Vibration Impact Assessment			10.1	Noise and Vibration Impact Assessment
10.2	Telecommunications Impact				
		7	Examination of the noise impact of omitting T5, T9, and T12 and statements of the planner's report		

Orig. EIS Chapter / Appendix	Topic	Appeal Appx.	Appeal Appendix Topic	FI EIS Chapter/ Appendix	FI EIS topic
		10	Revised Shadow Flicker Effect Map for 9-turbine proposal		
				10.2	Haul Route – Noise and Vibration Impact Assessment
				10.3	Grid – Noise and Vibration Impact Assessment
				10.4	Shadow Flicker
				10.5	Traffic and Transportation
				10.6	Safety and Health
11	**Landscape and Visual Assessment**	2	Entire revised Chapter	**11**	**Landscape and Visual Assessment**
				11.1	ZTVs and photomontages
12	**Cultural Heritage Assessment**	3	Entire revised Chapter	**12**	**Cultural Heritage Assessment**
				12.1	Cultural Heritage Assessment of the Haul Route Works
				12.2	Cultural Heritage Assessment of the Grid Connection
13	**Ecological Impact Assessment**			**13**	**Ecological Impact Assessment**

Orig. EIS Chapter / Appendix	Topic	Appeal Appx.	Appeal Appendix Topic	FI EIS Chapter/ Appendix	FI EIS topic
13.1	Examples of Evaluation at Different Geographic Scales			13.1	Examples of Evaluation at Different Geographic Scales
13.2	Consultations			13.2	Consultations
13.3	Maps and Drawings			13.3	Figures
13.4	Aquatic Ecology+B402			13.4	Aquatic Ecology
13.5	Bat Activity Distribution Mapping			13.5	Bat Activity Distribution Mapping
13.6	Ornithology			13.6	Ornithology
				13.7	Ecological Impact Assessment of the Grid Connection
13.7	Natura Impact Statement	8	Entire revised NIS	**18**	**AA Screening and NIS**
		6	Ecological Appraisal of the Construction Traffic Haul Route		
				19	Screening for AA for Windfarm Haul Route Works
14	**Geotechnical Impact Assessment**			**14**	**Geotechnical Impact Assessment**
A	Figures			14.1	Figures

Orig. EIS Chapter / Appendix	Topic	Appeal Appx.	Appeal Appendix Topic	FI EIS Chapter/ Appendix	FI EIS topic
B	Quarry Locations			14.2	Quarry Locations
C	Trial pit logs and photographs			14.3	Trial pit logs and photographs
				14.4	Geotechnical Impact Assessment of the Grid Connection
15	**Hydrology and Hydrogeology Impact Assessment**				
15.1	Sediment and Erosion / Storm Water Control Plan.			15.1	Sediment and Erosion / Storm Water Control Plan.
15.2	Groundwater Risk Assessment and Impact Assessment			15.2	Groundwater Risk Assessment and Impact Assessment
				15.3	Surface Water Impact Assessment of the Grid Connection
16	**Executive Summary**			**17**	**Non-Technical Summary**
		9	Summary of potential impacts, mitigation measures, and residual effect.	16	Summary of Residual and Cumulative Impacts for Each Environmental Topic Including Interaction of the Foregoing.

Orig. EIS Chapter / Appendix	Topic	Appeal Appx.	Appeal Appendix Topic	FI EIS Chapter/ Appendix	FI EIS topic
		11	Technical note to the EIS on changes due to the omission of T5, T9, and T12		

Table 1

11.5 PRINCIPLE OF DEVELOPMENT AND POLICY CONTEXT

11.5.1 In my initial report, I discussed the question of whether the scheme could or should be considered as the initial 12-turbine scheme, or indeed as the 9-turbine scheme presented by the applicant in their 1st party appeal. I concluded that the board should consider the initial 12-turbine scheme, and that the 9-turbine scheme could be considered as a modification that could be imposed by way of condition.

11.5.2 I maintain that recommendation. However, it should be noted that in my assessment, I pointed out that the 9-turbine scheme had not been advertised publicly. Since the circulation of the S132 further information, the 9-turbine scheme has now been re-advertised. The board may wish to consider this fact in determining the question of which scheme is before the board for determination.

11.5.3 There are no strategic planning policies that would apply to the consideration of the environmental impacts of the haul route and grid connection.

11.5.4 No additional assessment is necessary on this issue on foot of information submitted to the board since my initial inspector's report. I am not aware of any additional or amended planning policies that might be relevant at this time.

11.5.5 I consider the proposed development to be acceptable on this topic, both in terms of the additional information relating to the cable route, haul route, and indeed the comprehensive scheme of windfarm plus cable route, plus haul route.

11.6 LEGAL AND PROCEDURAL MATTERS

11.6.1 As stated in my initial report, several 3rd parties took task with the proposed development due to the applicant's legal interest, or asserted lack of, in the lands required for road widening to

facilitate the construction phase. Similar objections have been raised in relation to the proposed grid connection.

11.6.2 On foot of the S132 request from the board, the applicant has provided further information on both haul route and grid connection, and brought them within the ambit of the revised EIS. It is important to note, however, that permission is not being sought for these works at this time. They lie outside the planning application, but inside the EIA process. The post-S132 observers highlight this anomalous situation, and assert that it amounts to a fatal legal infirmity in the application.

11.6.3 I do not hold with this assertion, and refer back to my analysis and assessment under Section 11.6.12 of my initial report, as follows.

> *11.6.12 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.*

11.6.4 In my opinion, the Ó Grianna judgment requires inclusion of the grid connection within the EIA process, but not necessarily within the planning application process at the time of the windfarm application. This is exactly the model which the applicant has followed in response to the S132 request. The board in their request broadened out this extension of the EIA remit to include not only the grid connection, but also the haul route. I consider this to have been an appropriate addition to the process.

11.6.5 At the time of my original report, the haul route and grid connection lay outside of the EIS, and I was therefore precluded from recommending a grant of permission on foot of the Ó Grianna judgement. The revised EIS now takes account of the haul route and grid connection, as discussed in the remainder of this report. As such, the legal impediment arising from Ó Grianna no longer applies, in my opinion.

11.6.6 In my opinion, the amalgamated body of material presented in the revised EIS submitted on foot of the S132 request by the board presents a comprehensive and complete description of the proposed development and its impacts for the purposes of EIA by the board. Furthermore, and contrary to the assertions of some of the 3rd party observations, I consider that the addition of the

information within the revised EIS is legally valid. EIA is a process, not a document.

11.7 EIS – COMPLIANCE WITH PLANNING AND DEVELOPMENT REGULATIONS 2001

11.7.1 As per my assessment on this matter under my initial inspector's report, the only infirmity in this regard was the lack of information regarding the grid connection, which has now been successfully addressed, along with the haul route. As such, I consider that the proposed development is now fully compliant with Article 94 and Schedule 6 of the Planning and Development Regulations 2001.

11.8 EIA – ALTERNATIVES CONSIDERED (EIS CHAPTER 4)

11.8.1 No additional assessment is necessary on this issue on foot of information submitted to the board since my initial inspector's report. I note that the applicant has explored a number of options in relation to grid connection and haul route, which are discussed within the body of the material submitted on foot of the S132 further information request.

11.8.2 I consider the proposed development to be acceptable on this topic, both in terms of the additional information relating to the cable route, and indeed the comprehensive scheme of windfarm plus cable route.

11.9 EIA – CONSTRUCTION AND EMPLOYMENT, MATERIAL ASSETS (EIS CHAPTER 7)

11.9.1 Turbine component haulage routes

11.9.2 Turbine haulage routes are effectively as per the initial proposals. Road widening and junction improvements would be required on the local road network to the southeast of the site. The board in their S132 request asked the applicant to provide information on the potential environmental impacts arising from these works (item 1 of the request). The applicant in their response point to Chapter 3 (Sections 3.7.1-3.7.7) and to Chapter 7 of the Revised EIS.

11.9.3 Windfarm components would most likely be delivered to Belview Port. From there they would travel by the national road network as far as Pulla crossroads to the south of Dungarvan, and there onwards via the local road network, as shown in the original EIS. This route is shown in full in Figure 2HR of the revised EIS. Required road and junction widening on the local road network west of Pulla Crossroads is shown in Figure 3HR.

11.9.4 Section 7.4 of the EIS states that some of the required works are on public land, while others would be on 3rd party lands. Resurfacing of the local road network will be necessary prior to the

delivery of the turbine components. 3 of 5 culverts along the local road route are likely to need replacement prior to construction (See Figure 4 of Appendix 7.2)

11.9.5 Construction material haulage routes

11.9.6 The proposed haul route for construction material is shown in Figure 1HR in Section 3.7 of the revised EIS. It shows routes from two quarries to the northwest of the site at Keereen Aglish and Roadstone Cappagh. Routes to/from both these quarries are via the N72 and Dungarvan bypass. From there, the inbound route runs out the local road past the Glenbeg National School, whereas the outbound return route for vehicles would be via Pulla Crossroads and the N25.

11.9.7 Grid Connection

11.9.8 Information on this topic is new to the process at this point, the original EIS being effectively silent on this issue. Item 3 of the board's S132 further information request focussed on the question of grid connection.

11.9.9 Two candidate route corridors for the grid connection are detailed in Section 3.7.8 of the revised EIS, and shown in Figure 1GC. Route A is in turquoise, with Route B in red. Both would connect the on-site substation to the ESBN substation at Killadangan. Around 6km northeast of the subject site, and both would be underground. Both use a mixture of public roads and forestry tracks along the southwestern sections. They are the same route along the central portion, and to the northeast, Route A runs along pubic roads whereas Route B cuts 'across country' for sections.

11.9.10 The proposed construction methodology for the grid connection is set out in Section 3.7.10 of the EIS. A road opening license would be required from the local authority.

11.9.11 Potential Environmental Impacts from haul routes and grid connection

11.9.12 Impacts from the haul routes (turbine and construction material) arise in the first instance from works necessary to accommodate the turbine components, and also from the increase in HGV traffic on these roads. These impacts are potentially significant but temporary. Impacts from the grid connection route also relate to the construction phase. Thereafter, the grid connection, being entirely underground, is unlikely to have any perceptible environmental impact.

11.9.13 In my opinion, the primary potential impacts are discharge of material to watercourses during the construction phase, and

disruption to neighbouring landuses due to HGV traffic and construction activity.

11.9.14 Chapter 7 of the revised EIS describes the above works in detail, along with their potential impacts. It acknowledges that there is potential for cumulative impacts between the haul routes and grid connection works. 'Mitigation by design' measures, including aspects of best practice are set out in Section 7.5, with residual impacts set out in Section 7.6. Residual impacts are stated as being either non-existent or positive. I would agree with this assessment. The chapter is accompanied by a helpful set of figures and maps that set these issues in context.

11.9.15 Appendix 7.2 gives Windfarm Haul Route survey results, which feed into a quantities assessment of traffic impacts. It also includes a photographic account of the turbine component haul route from the N25 to the site, with particular attention given to the areas where widening is required, HR1, HR2, HR3, HR4, HR5 (See Fig 3).

11.9.16 Potential environmental impacts from these works are described by topic as they arise elsewhere within the revised EIS. However, under this topic, I consider that sufficient information has been provided. I note the 3rd party submissions on this issue, as summarised at Section 10.3 above). In my opinion, impacts on the traffic capacity of the surrounding roads would not be undue, and physical impacts on the road network would be managed and addressed under the proposals submitted. I consider the proposed development to be acceptable in this regard.

11.10 EIA – AIR AND CLIMATE (EIS CHAPTER 8)

11.10.1 I note that Appendix 8.2 of the revised EIS consist of an assessment of the grid connection on this topic. No significant issues arise. No additional assessment is necessary on this issue on foot of information submitted to the board since my initial inspector's report.

11.10.2 I consider the proposed development to be acceptable on this topic, both in terms of the additional information relating to the cable route and haul route, and indeed the comprehensive scheme of windfarm plus cable route plus haul route.

11.11 EIA – SOCIO-ECONOMIC IMPACT (EIS CHAPTER 9)

11.11.1 I note that Appendices 9.2 and 9.3 of the revised EIS deal with the potential impact on tourism and amenity from the haul route and grid connection. There would be some crossover with the Sean Kelly Cycle Route, with some scenic routes designated in the County Development Plan, and with some local recreational routes. Access to a golf club could be affected. Impacts are stated in the

revised EIS as being moderate and temporary. I would concur with this assessment. Mitigation measures are proposed, including that construction traffic and grid connection works would avoid the annual cycle along the Sean Kelly route.

11.11.2 Appendix 9.4 of the revised EIS covers public access to the site during the construction phase, which would be maintained, albeit with rolling diversion routes.

11.11.3 I consider the proposed development to be acceptable on this topic, both in terms of the additional information relating to the cable route and haul route, and indeed the comprehensive scheme of windfarm plus cable route plus haul route.

11.12 EIA – RESIDENTIAL AMENITY - NOISE (EIS CHAPTER 10 (PART))

11.12.1 Noise – windfarm

11.12.2 At this juncture, I consider it appropriate to revisit my assessment of the noise impacts associated with the turbines themselves, as contained in my initial inspector's report. While no additional information has been submitted in this regard, my subsequent work on other windfarm cases has given me cause to reflect on my initial interpretation of the 2006 guidelines on this issue. As such, I consider it appropriate to review and amend my initial analysis.

11.12.3 Paragraph 2 of Page 30 of the 2006 guidelines reads as follows.

> *In general, a lower fixed limit of 45 dB(A)[1] or a maximum increase of 5dB(A) above background noise at nearby noise sensitive locations is considered appropriate to provide protection to wind energy development neighbours. However, in very quiet areas, the use of a margin of 5dB(A) above background noise at nearby noise sensitive properties is not necessary to offer a reasonable degree of protection and may unduly restrict wind energy developments which should be recognised as having wider national and global benefits. Instead, in low noise environments where background noise is less than 30 dB(A), it is recommended that the daytime level of the LA90, 10min of the wind energy development noise be limited to an absolute level within the range of 35-40 dB(A).*

11.12.4 I find it difficult to reconcile the internal logic of the guidelines on this issue. The general scenario of 45dB(A)/+5dB(A) is ambiguous, but is often interpreted as being 'whichever is higher'. However, this

[1] Footnote 10 of the guidelines reads "An 'A-weighted decibel' - a measure of the overall noise level of sound across the audible frequency range (20Hz-20 kHz) with A- frequency weighting to compensate for the varying sensitivity of the human ear to sound at different frequencies. The decibel scale is logarithmic. A10 dB(A) increase in sound level represents a doubling of loudness. A change of 3 dB(A) is the minimum perceptible under normal circumstances.

does not tally with the follow-on section which states that the margin of +5dB(A) may be too restrictive in quiet areas. Looking at the geometry of the '45dB(A) / +5dB(A)' intersection, this follow-on section could only make sense if the 'whichever is lower' interpretation is applied, as a drop of the 'whichever is higher' 'floor' from 45dB(A) to 35/40dB(A) would result in a *more* restrictive limit, contrary to the stated intention of this section. The only way a 35dB(A) floor as a less restrictive limit would make sense would be in the scenario whereby the limit curve 'left' of the 45dB(A)/+5dB(A) intersection was otherwise following the +5dB(A) 'arm' down to impossibly low values at low windspeeds. Or in other words, that the guidelines envisage a 'whichever is lower' approach to the 45dB(A)/+5dB(A) standard.

11.12.5 In reconciling this matter, I consider it helpful to refer to the UK document ETSU-R-97, which is referred to in appendix 6 of the 2006 guidelines. This document also advocates a hybrid approach between a 35/40/43dB(A) 'flat line' and a +5dB above background noise 'curve'. However, the clear and unambiguous approach in ETSU-R-97 that it is the 'whichever is the greater' interpretation that is applied. As such, given that this is a contributing document to the 2006 DoE guidelines, which follows a comparable logic, I propose to apply this interpretation in this instance. It should be noted that I had applied the 'whichever is lower' interpretation in my initial inspector's report, as set out in Section 11.12.28 and 11.12.33 of that report.

11.12.6 The next question becomes how to incorporate the reduced 35/40dB(A) 'floor' for 'quiet areas' (less than 30dB(A) background noise). I have seen two interpretations of this element of the 2006 guidelines, both of which can be explained in terms of a baseline noise curve that passes through the 30dB(A) level, and considering what happens moving right along the curve, at a baseline level of 31dB(A). Under some interpretations I have seen presented, the noise limit would jump immediately to 45dB(A) on passing the 30dB(A) baseline threshold. Under other interpretations, as presented under ETSU-R-97, the limit curve would proceed to the right (increasing windspeeds) and begin to shadow the baseline noise curve at a +5dB(A) remove – 36dB(A) threshold at a 31dB(A) baseline, etc. This former interpretation aligns with the methodology applied by the applicant, and is the one I will follow in this revised assessment.

11.12.7 Below are revised analysis tables for selected properties based on this revised interpretation. I have applied the standard of +5dB(A) above baseline noise level for all windspeeds, with an absolute floor of 45dB(A), dropping immediately (stepping) to 40dB(A) (the guidelines present an optional range of 35-40dB(A)) where the baseline noise levels are less than 30dB(A) at any wind speed.

11.12.8 I have selected 3 properties for consideration – H1, H3, and H14 based on their being the locations of the highest modelled noise impacts, and representative of those properties in the immediate vicinity. I have combined the modelled noise levels contained in Table 10-9 of the revised EIS (which shows cumulative levels with Woodhouse), with the noise curves given in Appendix A of Section 10 of the revised EIS.

H1 (north of windfarm) daytime	**dB $L_{A90,}$ at various standardised wind speeds**								
Wind speed (m/s)	4	5	6	7	8	9	10	11	12
Modelled noise (source rEIS Table 10-9)	31	36	39	41	41	41	41	41	41
Baseline noise level (NML3 as proxy) (source rEIS Section 10 Appendix A)	29	31	32	33	35	36	37	39	41
Noise limits (source DoE 2006)	45	45	45	45	45	45	45	45	46
Within limits by…	14	9	6	4	4	4	4	4	5

Table 2

H3 (southeast of windfarm) daytime	**dB $L_{A90,}$ at various standardised wind speeds**								
Wind speed (m/s)	4	5	6	7	8	9	10	11	12
Modelled noise (source rEIS Table 10-9)	31	33	37	39	40	40	40	40	40
Baseline noise level (NML1 as proxy) (source rEIS Section 10 Appendix A)	28	30	32	35	37	41	44	48	?
Noise limits (source DoE 2006)	40	40	45	45	45	46	49	53	?
Within limits by…	9	7	8	6	5	6	9	13	?

Table 3

H14 (west of windfarm) daytime	**dB $L_{A90,}$ at various standardised wind speeds**								
Wind speed (m/s)	4	5	6	7	8	9	10	11	12
Modelled noise (source rEIS Table 10-9)	30	35	38	40	40	40	40	40	40
Baseline noise level (NML3 as proxy) (source rEIS Section 10 Appendix A)	29	31	32	33	35	36	37	39	41
Noise limits (source DoE 2006)	40	45	45	45	45	45	45	45	46
Within limits by…	10	10	7	5	5	5	5	5	6

Table 4

11.12.9 As can be seen from the analysis above, the modelled noise levels at all locations are compliant with DoE standards at all wind speeds by a margin of not less than 4dB.

11.12.10 It is worth noting that information depicting the background noise, noise limits, and modelled noise levels is presented in a disaggregated manner within the material presented by the applicant, and it is made quite difficult to perform an interrogation of the assertions made by the applicant. Appendix B of Section 10 the revised EIS presents a comparison of this information, but in relation to the Noise Monitoring Locations, and not the Noise Sensitive Locations (houses).

11.12.11 On the question of night time limits, I note that the DoE guidelines recommend an absolute limit of 43dB. Table 10-9 of Appendix 10-1 of the revised EIS shows that these levels would be complied with in all cases. The closest to an infringement is at H1 and H2 above 7m/s wind speed, where 'headroom' of 2dB is still maintained.

11.12.12 Noise – cable route and haul route

11.12.13 Noise impacts from the cable route and haul route are discussed in Appendices 10.2 and 10.3 of the revised EIS. The applicant applies guidelines from the NRA and finds that the predicted noise impacts from the proposed development would be well within recommended limits.

11.12.14 Conclusion on the issue of noise

11.12.15 On the basis of the above revised analysis, and having regard to a revised interpretation of the 2006 Guidelines gleaned during my work on other windfarm cases since my initial inspector's report, I consider the proposed development to be acceptable in terms of noise impacts and I would propose to omit my initial recommended refusal reason.

11.12.16 Additional noise and vibration would arise due to the cabling works and construction access, but again, I do not consider this to be an undue imposition.

11.13 EIA – RESIDENTIAL AMENITY – SHADOW FLICKER (EIS CHAPTER 10 (PART))

11.13.1 My initial report found the proposed development to be compliant with DoE standards on the issue of Shadow Flicker, but noted that modelling for 'minutes per day' should have been provided, alongside 'hours per year'. The board requested further information to this effect, and in response, the applicant submitted Appendix 10.4 as part of the revised EIS.

11.13.2 In the applicant's initial analysis (Fig 10.2 of original EIS), it was found that there would be zero hours of shadow flicker per year at all houses. Appendix 10.4 of the revised EIS finds that in theory, shadow flicker could occur at 5 dwellings.

11.13.3 Appendix A of Appendix 10.4 of the revised EIS consists of an analysis of shadow flicker occurring at H1 (T7), H2 (T7), H14 (T8), H15 (T7), and H16 (T7). All of these are shown with days where between 27 and 29 minutes of shadow flicker could theoretically occur, yet only H16 shows exceedances of the 30 mins per day threshold. I note that in previous information submitted by the applicant, this house was stated as being associated with the Woodhouse windfarm, although there is no mention of this in the revised EIS.

11.13.4 I note that Figure 6 maps exceedances of the 30 hours per year threshold. The only breach of the DoE standard is shown to be at H14 to the west of the site.

11.13.5 I note that much of Appendix 10.4 consists of a discussion of potential 'write downs' for metrological conditions, vegetation, etc. On consideration of the applicable guidelines, and comparable guidelines in other jurisdictions, it is my opinion that these considerations are irrelevant.

11.13.6 The applicant discusses (Section 10.10 of Appendix 10.4 of the revised EIS) the installation of "shadow flicker modules" on the turbines which would ensure that thresholds not be breached. This is not a fully worked out commitment, nor has its effectiveness been quantified. Having regard to the DoECLG's 'Development Management Guidelines', I would not have confidence in granting permission for the proposed development based on this vague mitigation.

11.13.7 In summary, there are modelled exceedances of the 'minutes per day' threshold I respect of H16, arising from T7. However, I consider this impact to be acceptable on the basis that this property has been stated as being associated with the Woodhouse windfarm.

11.13.8 There are also modelled exceedances of the 'hours per year' threshold in respect of H14, arising from T11. I also have concerns regarding this house from a 'minutes per day' perspective, given that Appendix A of Appendix 10.4 of the revised EIS only gives 'minutes per day' figures in respect of T8. Given the pattern of impacts evident in Figure 6, it is clear that shadow flicker also arises from T11. No cumulative impacts in terms of 'minutes per day' has been provided in respect of H14 and the potential combined impacts from T8 and T11. This house would appear to be of relatively recent (post 2005) construction,

and have little in the way of screening – topography or vegetation – between it and the proposed turbines.

11.13.9 One way to address the modelled exceedances of shadow flicker would have been for the applicant to propose a specific, unambiguous, transparent, and binding schedule of days and times when problematic turbines would be switched off. The applicant has not pursued this route, and it is not possible to fashion such a schedule from the information presented, due to the likely impacts on H14 from both T8 and T11, and the fact that modelling in 'minutes per day' has been provided in respect of one of these turbines only.

11.13.10 At this juncture, and in the interests of compliance with applicable standards and residential amenity, I consider that the most straightforward approach would be to recommend the omission of turbine T11, the most south-westerly in the proposed development.

11.13.11 I note the 3rd party submissions on this issue, including commentary following the coming into operation of the Woodhouse windfarm (See Section 10.4 above).

11.14 EIA - LANDSCAPE AND VISUAL (EIS CHAPTER 11)

11.14.1 I note that the construction works to facilitate the proposed development and the grid connection would be temporary, and that the grid connection, being entirely underground, would have no significant visual impact. I note the 3rd party submissions criticising the photomontage methodology.

11.14.2 In my opinion, no additional assessment is necessary on this issue on foot of information submitted to the board since my initial inspector's report.

11.14.3 I consider the proposed development to be acceptable on this topic, both in terms of the additional information relating to the cable route and haul route, and indeed the comprehensive scheme of windfarm plus cable route plus haul route.

11.15 EIA – CULTURAL HERITAGE (EIS CHAPTER 12)

11.15.1 I note that Appendices 12.1 and 12.2 of the revised EIS consist of Cultural Heritage Assessments of the haul route works and grid connection, along with additional mitigation measures. I also note the 3rd party submission son this issue (See Section 10.3 above).

11.15.2 In my opinion, no undue additional impacts arise. No further assessment is necessary on this issue on foot of information submitted to the board since my initial inspector's report.

11.15.3 I consider the proposed development to be acceptable on this topic, both in terms of the additional information relating to the cable route and haul route, and indeed the comprehensive scheme of windfarm plus cable route plus haul route.

11.16 EIA – ECOLOGY (EIS CHAPTER 13)

11.16.1 I note that Appendix 13.7 of the revised EIS consists of an Ecological Impact Assessment of the proposed grid connection. This is a significant body of work, at 63 pages. Potential impacts of the grid connection are detailed in Section 4 of this appendix, and these centre largely on the potential for indirect water quality impacts to the Colligan River and the River Brickey. A range of measures to prevent these impacts are set out in Section 5, and Section 6 discuses residual impacts, which are stated as ranging from 'none' to 'imperceptible'. I would concur with these findings. The construction methodology proposed would adequately address the potential impacts from the grid connection works.

11.16.2 I do not consider that any potential impacts of any significance in relation to ecology would arise on foot of the construction phase in general or the works required to facilitate access for turbine components, construction materials, etc.

11.16.3 I consider the proposed development to be acceptable on this topic, both in terms of the additional information relating to the cable route and haul route, and indeed the comprehensive scheme of windfarm plus cable route plus haul route.

11.17 EIA – GEOTECHNICAL ISSUES, HYDROLOGY AND HYDROGEOLOGY (EIS CHAPTERS 14 AND 15)

11.17.1 I note that Appendices 14.4 and 15.3 consist of a Geotechnical Impact Assessment of the Grid Connection and a Surface Water Impact Assessment of the Grid Connection respectively. No residual significant impacts are predicted.

11.17.2 I consider the proposed development to be acceptable on this topic, both in terms of the additional information relating to the cable route and haul route, and indeed the comprehensive scheme of windfarm plus cable route plus haul route.

11.18 EIA – INTERACTIONS OF THE FOREGOING (NO SPECIFIC EIS CHAPTER REFERS)

11.18.1 No additional assessment is necessary on this issue on foot of information submitted to the board since my initial inspector's report.

11.18.2 I consider the proposed development to be acceptable on this topic, both in terms of the additional information relating to the

cable route and haul route, and indeed the comprehensive scheme of windfarm plus cable route plus haul route.

12.0 SCREENING FOR APPROPRIATE ASSESSMENT UNDER THE HABITATS DIRECTIVE

12.1 This section is intended to replace, not supplement, the equivalent section (also Section 12.0) of my initial inspector's report.

12.2 The applicant submitted a Natura Information Statement by way of Appendix 13.7 of their EIS and a revised NIS by way of Appendix 8 of their appeal submission. The revised NIS relates to the 9-turbine proposal. A third iteration "Appropriate Assessment Screening (Stage 1) and Natura Impact Statement (Stage 2)" was submitted by way of Tab 18 of the EIS in the response to the board's further information request. I will draw on the last of these documents in this section; the AA screening / NIS submitted by way of further information to the board.

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 12-turbine windfarm in west Waterford as described in detail in section 3.0 above. The construction and operation of the windfarm will also require an underground connection to the national grid, and the use of a number of haul routes for turbine components and construction material, including some works to roads and junctions in the area.

12.5 Species, habitats, surface drainage patterns, etc. are all described in full in Chapters 13, 14, and 15 of the EIS (and revised 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 (TABLE 1), CONSIDER SOURCE-PATHWAY-RECEPTOR

12.7.1 The S132 AA screening considers 13 sites in the first instance (Table 8 of the AA Screening Document).

12.7.2 There is a hydrological connection between the subject site and the Natura 2000 sites associated with Dungarvan Harbour and the Blackwater River/Estuary. All other sites can be excluded given that there is no logical pathway between the subject proposal and the other sites. As such, I propose only to consider 3 European Sites, as per Section 12.8 below.

12.7.3 I note that the applicant's assessment in the NIS was more extensive in the sites considered. However, I also note the planning authority's heritage officer's report, which also holds with the position that the site is only hydrologically connect with the Blackwater and Dungarvan sites.

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

12.8.1 Table 8 of the AA Screening document also sets out the 'features of interest' [or 'qualifying interests'] for each of the 13 Natura 2000 sites. I note that the 'site specific' conservation objectives are referred to in the NIS, but not included. I note that the review of the NIS submitted in the appeal from the Alen-Buckleys cites the lack of specific conservation objectives. I have used the best available information in this section.

12.8.2 Dungarvan Harbour SPA (Site code 004032, 6km to the east)

12.8.3 Conservation Objectives for this site are published in a document available online, and dated 16th January 2012. They aim to define favourable conservation conditions of species of qualifying as per the targets set out in the document, which in the case of all listed species are as follows:

- Long term population trend stable or increasing
- There should be no significant decrease in the numbers or range of areas used by water bird species, other than that occurring from natural patterns of variation

12.8.4 The species of qualifying interests are

- Great Crested Grebe
- Light-bellied Brent Goose
- Shelduck
- Red-breasted Merganser
- Oystercatcher
- Golden Plover
- Grey Plover
- Lapwing
- Knot
- Dunlin
- Black-tailed Godwit
- Bar-tailed Godwit
- Curlew
- Redshank
- Turnstone

12.8.5 In addition, 'wetlands' is a designed habitat of qualifying interest. The conservation objectives aim to define favourable conservation conditions for this habit as per the following target

- The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,219ha, other than that occurring from natural patterns of variation

12.8.6 Blackwater Estuary SPA (Site code 004028, 10km to the southwest)

12.8.7 Conservation Objectives for this site are published in a document available online, and dated 17th May 2012. They aim to define favourable conservation conditions of species of qualifying as per the targets set out in the document, which in the case of all listed species are as follows:

- Long term population trend stable or increasing
- There should be no significant decrease in the numbers or range of areas used by [species], other than that occurring from natural patterns of variation

12.8.8 The species of qualifying interests are

- Wigeon
- Golden Plover
- Dunlin
- Black-tailed Godwit
- Bar-tailed Godwit
- Curlew
- Redshank

12.8.9 In addition, 'wetlands' is a designed habitat of qualifying interest. The conservation objectives aim to define favourable conservation conditions for this habit as per the following target

- The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 871ha, other than that occurring from natural patterns of variation

12.8.10 Blackwater River SAC (Site code 002170, 4km to the west)

12.8.11 Conservation Objectives for this site are published in a document available online, and dated 31st July 2012. They aim to define favourable conservation conditions of species of qualifying as per the targets set out in the document, which in the case of all listed species are as follows, along with the relevant targets, which are accompanied by attributes, measures, and notes.

Species	Target
Freshwater Pearl Mussel	Maintain at 161km. See map 8 [shows upper Blackwater, and River Lickey catchments] Restore to 35,000 adult Mussels Restore to least 20% of population no more than 65mm in length; and at least 5% of population no more than 30mm in length No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution Restore suitable habitat in more than 35km (see map 8) and any additional stretches necessary for salmonid spawning Restore water quality macroinvertebrates: EQR greater than 0.90; phytobenthos: EQR greater than 0.93 Restore substratum quality filamentous algae: absent or trace (<5%); macrophytes: absent or trace (<5%) Restore substratum quality, stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment Restore to no more than 20% decline from water column to 5cm depth in substrate Restore appropriate hydrological regimes Maintain sufficient juvenile salmonids to host glochidial larvae
White-clawed Crayfish	No reduction from baseline. See map 9 [shows upper Blackwater catchment] Juveniles and/or females with eggs in at least 50% of positive samples No alien crayfish species No instances of disease At least Q3-4 at all sites sampled by EPA No decline in heterogeneity or habitat quality
Sea Lamprey	Greater than 75% of main stem length of rivers accessible from estuary. See map 10 for recorded distribution

	At least three age/size groups Present Juvenile density at least 1/m² No decline in extent and distribution of spawning beds. See map 10 for recorded Locations More than 50% of sample sites positive. See map 10 for recorded locations
Brook Lamprey AND River Lamprey	Access to all water courses down to first order streams At least three age/size groups of brook/river lamprey present Mean catchment juvenile density of brook/river lamprey at least 2/m² No decline in extent and distribution of spawning beds More than 50% of sample sites positive. See map 10 for recorded locations
Twaite Shad	Greater than 75% of main stem length of rivers accessible from estuary More than one age class Present No decline in extent and distribution of spawning habitats [Water Quality Oxygen Levels] No lower than 5mg/l Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plant) growth
Salmon	100% of river channels down to second order accessible from estuary Conservation Limit (CL) for each system consistently exceeded Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling No significant decline No decline in number and distribution of spawning redds due to anthropogenic causes [Water Quality] At least Q4 at all sites sampled by EPA
Otter	[Distribution] No significant decline [Terrestrial Habitat] No significant decline. Area mapped and calculated as 103ha above high water mark (HWM); 1165.7ha

	along river banks/ around ponds [Marine Habitat] No significant decline. Area mapped and calculated as 647.2ha [river habitat] No significant decline. Length mapped and calculated as 599.54km [lake habitat] No significant decline. Area mapped and calculated as 25.06ha [Couching sites and holts] No significant decline [Barriers to connectivity] No significant increase
Killarney Fern	No decline. Two locations known within the SAC. See map 10 Maintain size and extent of existing colonies, including sporophyte frond counts and number of gametophyte patches No loss of suitable habitat, such as shaded rock crevices, caves or gullies in, or near to, known colonies. No loss of woodland canopy at or near to known locations Maintain hydrological conditions at the locations so that all colonies are in dripping or damp seeping habitats, and water is visible at all locations [Number of desiccated fronds] No increase. Presence of desiccated sporophyte fronds or gametophyte mats indicates conditions are unsuitable No changes due to anthropogenic impacts Absent or under control

Table 5

12.8.12 In addition, the following are designed habitats of qualifying interest. The conservation objectives aim to define favourable conservation conditions for these habitats as per the following targets, which are accompanied by attributes, measures, and notes.

Habitat	**Target**
Estuaries	The permanent habitat area is stable or increasing, subject to natural processes. See map 3 Maintain the extent of the Mytilus edulis-dominated community, subject to natural processes. See map 5

	Conserve the high quality of the Mytilus edulis-dominated community, subject to natural processes Conserve the following community types in a natural condition: Intertidal estuarine sandy mud community complex; Subtidal estuarine fine sand with Bathyporeia spp. community complex; Sand and mixed sediment with polychaetes and crustaceans community complex; Coarse sediment community complex. See map 5
Mudflats and sandflats not covered by seawater at low tide	The permanent habitat area is stable or increasing, subject to natural processes. See map 4 Maintain the extent of the Zostera- and Mytilus edulis dominated communities, subject to natural processes. See map 5 Conserve the high quality of the Zostera-dominated community, subject to natural processes Conserve the high quality of the Mytilus edulis-dominated community, subject to natural processes The following community types should be conserved in a natural condition: Intertidal estuarine sandy mud community complex and Sand and mixed sediment with polychaetes and crustaceans community complex. See map 5
Perennial vegetation of stony banks	Area stable or increasing, subject to natural processes, including erosion and succession No decline, or change in habitat distribution, subject to natural processes Maintain the natural circulation of sediment and organic matter, without any physical obstructions Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession Maintain the typical vegetated shingle flora including the range of sub ifferent zones within th Negative indicator species (including non -natives) represent less than 5% cover
Salicornia and other annuals colonising mud and sand	Area stable or increasing, subject to natural processes, including erosion and succession No decline, or change in habitat distribution, subject to

	natural processes Maintain the natural circulation of sediment and organic matter, without any physical obstructions Maintain creek and pan structure, subject to natural processes, including erosion and succession Maintain natural tidal regime Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession Maintain structural variation within sward Maintain more than 90% of area outside creeks vegetated Maintain the presence of species-poor communities with typical species listed in saltmarsh Monitoring Project (McCorry and Ryle, 2009) No significant expansion of common cordgrass (Spartina anglica), with an annual spread of less than 1%
Atlantic salt meadows	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Kinsalebeg - 2.77ha. See map 6 No decline or change in habitat distribution, subject to natural processes. See map 6 for known distribution Maintain natural circulation of sediments and organic matter, without any physical obstructions Maintain creek and pan structure, subject to natural processes, including erosion and succession Maintain natural tidal regime Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession Maintain structural variation within sward Maintain more than 90% of the saltmarsh area vegetated Maintain range of sub- communities with typical species listed in Saltmarsh Monitoring Project (McCorry and Ryle,

	2009) No significant expansion of common cordgrass (Spartina anglica), with an annual spread of less than 1%
Mediterranean salt meadows	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Kinsalebeg: 1.36ha. See map 6 No decline, or change in habitat distribution, subject to natural processes. See map 6 for known distribution Maintain natural circulation of sediments and organic matter, without any physical obstructions Maintain creek and pan structure, subject to natural processes, including erosion and succession Maintain natural tidal regime Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession Maintain structural variation within sward Maintain more than 90% of area outside creeks vegetated Maintain range of sub- communities with typical species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009) No significant expansion of common cordgrass (Spartina anglica), with an annual spread of less than 1%
Water courses of plain to montane levels with the Ranunculion fluitantis and allitricho-Batrachion vegetation	[Habitat distribution] No decline, subject to natural processes Area stable or increasing, subject to natural processes Maintain appropriate hydrological regimes Maintain natural tidal regime The substratum should be dominated by the particle size ranges, appropriate to the habitat sub-type (typically sands, gravels and cobbles) The concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition

	Typical species of the relevant habitat sub-type should be present and in good condition The area of active floodplain at and upstream of the habitat should be maintained
Old sessile oak woods with Ilex and Blechnum in the British Isles	Area stable or increasing, subject to natural processes, at least 263.7ha for sub-sites surveyed. See map 7 [distribution] No decline. Surveyed locations shown on map 7 Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and “small” woods at least 3ha in size Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer Maintain diversity and extent of community types Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy At least 30m³/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter [Woodland structure: veteran trees] No decline [Woodland structure: indicators of local distinctiveness] No decline [Vegetation composition: native tree cover] No decline. Native tree cover not less than 95% Negative indicator species, particularly non-native invasive species, absent or under control
Alluvial forests with Alnus glutinosa and Fraxinus excelsior	Area stable or increasing, subject to natural processes, at least 19.2ha for sites surveyed. See map 7 [distribution] No decline. Surveyed locations shown on map 7 Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and “small” woods at least 3ha in size Diverse structure with a relatively closed canopy containing

	mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer Maintain diversity and extent of community types Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy Appropriate hydrological regime necessary for maintenance of alluvial vegetation [Dead wood] At least 30m³/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter in the case of alder) [veteran trees] No decline [indicators of local distinctiveness] no decline Native tree cover. No decline. not less than 95% A variety of typical native species present, depending on woodland type, including alder (Alnus glutinosa), willows (Salix spp) and, locally, oak (Quercus robur) and ash (Fraxinus excelsior) Negative indicator species, particularly non-native invasive species, absent or under control
Taxus baccata woods of the British Isles	Under this heading, the document states *"The status of Taxus baccata woods of the British Isles as a qualifying Annex I habitat for the Blackwater River (Cork/Waterford) SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this habitat."*

Table 6

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 Section 5.5 of the NIS assessed potential impacts from the proposed development in the first instance. I would concur with this assessment. 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 Section 5.6 of the NIS goes on to assess the significance of these potential impacts with reference to Natura 2000 sites. With reference to this information, I would identify the significance of the potential risks as follows.

	Potential significant impact	**Potential receptor**
Dungarvan Harbour SPA	Run-off from site, grid connection route, haul routes	The Kilmurry Stream skirts the north-eastern boundary of the subject site and drains to Dungarvan harbour. The grid connection and haul routes also run through this catchment.
	Turbine collision	Designated species' flight paths could cross the proposed development.
Blackwater Estuary SPA	Run-off from site, grid connection route, haul routes.	The subject site drains to the Goish River catchment, as do parts of the haul routes.
	Turbine collision	Designated species' flight paths could cross the proposed development.
Blackwater River SAC	Run-off from site, grid connection route, haul routes.	The subject site drains to the Goish River catchment, as do parts of the haul routes.

Table 7

12.9.3 I note that the Alen-Buckleys in their 3rd party appeal present a critique of the NIS, which relates mostly to birds. I note that their 3rd party response makes reference to Whooper Swans. However, this species is not a 'qualifying interest' for any of the relevant Natura 2000 sties.

12.9.4 I note that there is no submission on file from the DoEHLG/NPWS that might contribute to the consideration of AA.

12.10 STEP 4: AS ABOVE, CONSIDERING 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, and those to be implemented in conjunction with the proposed grid connection and haul routes, 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.

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 River Blackwater 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.

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. 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 applicant's approach). I also note that the planning authority proceeded to Stage 2 assessment, and concluded that the proposed development would not adversely affect the integrity of European sites, in light of their conservation objectives.

12.12.3 I note that in Volume 4 of the revised EIS, the applicant provides a screening for the whole project, which proceeds to Stage 2 AA. But under Tab 19 and Tab 20, the applicant provides stand-along screening exercises for the haul route and grid connection. In both instances the applicant 'screens out' for AA, and does not proceed to Stage 2 AA.

12.13 AA/SEA OF PLANS AND PROJECTS

12.13.1 The AA/SEA of the WES and DoE guidelines is raised in 3rd party appeals, and defended by planning authority. I do not consider that there is any scope to consider such matters under the subject appeal.

13.0 CONCLUSION AND RECOMMENDATION

13.1 CONCLUSIONS

13.1.1 I consider that the additional works covered under the rEIS have been adequately described and quantified, and that the further information request has adequately addressed the legal infirmity that arose on foot of the Ó Grianna decision. As such, the board has the latitude to consider the proposed development on its merits, in my opinion.

13.1.2 As per Section 13.17 of my initial report, I consider that the proposed development performs relatively wall across a range of topics. My previous recommendation was that there were two issues precluding a grant of permission. The first related to noise, which I no longer consider an issue, as per my assessment at Section 11.12 above. The second related to EIA and grid connection, which has, in my opinion, been satisfactorily addressed by way of further information.

13.1.3 Nevertheless, the further information on the issue of shadow flicker has raised new concerns on this topic, and there is evidence, in my opinion, of exceedances of DoE standards. While the shadow flicker limits set out in the DoE 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, be likely to generate potential shadow flicker in excess of these limits, both in terms of minutes per day and hours per year.

13.2 RECOMMENDATION

13.2.1 I recommend that permission be granted. The proposed development fits well with county and national policy, being uniquely well placed within the Waterford Wind Energy Strategy. It performs well on environmental grounds, and while it would represent a major visual intervention, it would not have an undue visual impact on the surrounding area.

13.2.2 By way of a remedy to the issue of shadow flicker, I recommend that Turbine T11 be omitted.

14.0 REASONS AND CONSIDERATIONS

Having regard to –

a) the European and national policies to increase the proportion of energy that is generated from renewable sources including wind set out in the Renewable Energy Directive 2009/28/EC and the National Renewable Energy Action Plan which sets a target that 40% of the electricity generated in Ireland would be from renewable sources by 2020,

b) the Guidelines for Planning Authorities on Wind Energy Development issued by the Department of the Environment, Heritage and Local Government in June, 2006,

c) the provisions of the Kerry County Council's Renewable Energy Strategy 2012,

d) the provisions of the Waterford Development Plan 2011-2017, including Appendix 8 (Wind Energy Strategy), and the designation of the subject site within a 'Strategic Area',

e) the character of the landscape of the area,

f) the distance to dwellings and other sensitive receptors from the proposed development,

g) the separation of the site of the proposed development from sites designated as part of the Natura 2000 network and the nature of the connections between them,

h) the Environmental Impact Statement and further information submitted by the applicant, including information submitted in relation to the grid connection,

i) the submissions made in the course of the planning application, and

j) the initial report of the planning inspector (10th day of April, 2015) and addendum report of the inspector (20th day of September, 2016) following receipt of further information (19th August 2015)

it is considered that the proposed development would be in keeping with national energy policy and with national and local planning policy on wind energy development and the protection of landscapes and scenic routes.

Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the further information received by way of the first party appeal, and the further plans and particulars submitted by way of the first party appeal , received by An Bord Pleanála on the 20th day of October 2014, and by the further plans and particulars received by An Bord Pleanála on the 19th day of August 2015, except as may otherwise be required in order to comply with the following conditions. In particular, the mitigation measures identified in the Environmental Impact Statement and the further information shall be implemented in full by the developer. Where the conditions below require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

   Reason: In the interest of clarity.

2. As per the material submitted by way of the first party appeal and the further information received by the board, Turbines 5, 9, and 12 shall be omitted. Furthermore, Turbine 11, which is problematic in terms of the modelled shadow flicker generated, shall also be omitted.

   Reason: In the interests of clarity, and in the interests of residential amenity at neighbouring residential properties.

3. The appropriate period of this permission during which the authorised development may be carried out shall be ten years from the date of this order.

   Reason: Having regard to the nature and extent of the proposed development and the planning history of the site, the Board considered that ten years was reasonable given the nature and complexity of the development concerned.

4. The authorised windfarm shall operate for no more than 25 years from the date on which electricity is first exported from it.

   Reason: To clarify the nature of authorised development in accordance with the details submitted with the application.

5. Noise levels emanating from the authorised development following commissioning, when measured externally at noise sensitive locations, shall not exceed the greater of 45dB(A)L90, 10 min or 5dB(A) above background levels between the hours of 0700 and 2300, or 43dB(A)L90,

10 min between 2300 and 0700 hours. All noise measurements shall be made in accordance with I.S.O. Recommendations R1996/1 and 2 "Acoustics – Description and measurement of Environmental Noise".

The noise mitigation measures described in the Environmental Impact Statement shall be implemented in full. Prior to commencement of development, the developer shall agree a noise compliance monitoring programme for the operational wind farm with the planning authority. The operator shall maintain and make available for inspection by the planning authority, records of the noise compliance monitoring,

Reason: In the interest of residential amenity.

6. Shadow flicker arising from the proposed development shall not exceed 30 hours per year or 30 minutes per day at existing or permitted dwellings or other sensitive receptors. Prior to the commencement of the export of electricity from the proposed windfarm, the developer shall submit certification from a suitably qualified person who was not previously engaged in the construction of the windfarm that the equipment necessary to implement those measures has been properly installed and is functional.

   Reason: In the interest of residential amenity.

7. Prior to commencement of development, the developer shall submit to and agree in writing with the planning authority, a plan for the decommissioning of the authorised windfarm and the reinstatement of the site which shall provide for the removal of the turbines, towers, meteorological monitoring masts and all plant and equipment and the reinstatement of the turbine bases and hard standing areas, as well as a time frame for the completion of such works which shall not be greater than 12 months from the cessation of the operation of the windfarm.

   Reason: To ensure the satisfactory reinstatement of the site and to prevent an accumulation of obsolete functional structures in the interests of orderly development.

8. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the satisfactory reinstatement of the site upon cessation of the project, coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: To ensure the satisfactory reinstatement of the site and to prevent an accumulation of obsolete functional structures in the interests of orderly development.

9. The construction of the proposed development shall be carried out in accordance with a Construction and Environment Management Plan prepared having regard to CIRIA Guideline C848 which shall set out a construction method statement and timetable for all works and measures that are integral to the proposed development. The plan shall be submitted and agreed in writing with the planning authority prior to commencement of development.

   The Construction and Environment Management Plan shall include a comprehensive Construction-Stage Drainage Report and Management Plan with -

   a. Details of the proposed water monitoring protocol and drainage inspection regime.

   b. Full details of measures for the control of drainage during and after construction (including tree-felling prior to construction), including the use of settlement ponds, swales and silt traps, and measures for the control of run-off from temporary spoil storage areas.

   c. Details of the nature of all materials used in constructing access tracks to the turbines.

   d. Full details of storage proposals for hazardous materials, cement leachate, hydrocarbons and other materials to be used during construction.

   e. Details of all aspects of the management of excess spoil, such that slope stability measures and prevention of water pollution are fully implemented. Soil, rock, peat and sand/gravel excavated during construction shall not be left stockpiled on site following completion of works.

   Reason: In the interest of environmental protection and orderly development.

10. Prior to commencement of development, the following details shall be submitted and agreed in writing with the planning authority –

    i. a Transport Management Plan, including details of the road network/haulage routes and the vehicle types to be used to transport materials and parts on and off site,

    ii. a condition survey of the roads and bridges along the haul routes to be carried out at the developer's expense by a qualified engineer both

before and after construction of the wind farm development. This survey shall include a schedule of required works to enable the haul routes and, in particular, regional and local roads to cater for construction-related traffic. The extent and scope of the survey and the schedule of works shall be agreed with the planning authority prior to commencement of development,

iii. detailed arrangements whereby the rectification of any construction damage which arises shall be completed to the satisfaction of the planning authority,

iv. detailed arrangements for temporary traffic arrangements/controls on roads,

v. a programme indicating the timescale within which it is intended to use each public route to facilitate construction of the development.

All works arising from the aforementioned arrangements shall be completed at the developer's expense, within 12 months of the cessation of each road's use as a haul route for the proposed development.

Reason: To protect the public road network and to clarify the extent of the permission in the interest of traffic safety and orderly development.

11. Prior to commencement of development, the developer shall lodge with the planning authority, a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the reinstatement of public roads which may be damaged by the transport of materials to the site, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory reinstatement of the public road. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

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

12. The construction of the development shall not give rise to emissions of dust that exceed 350mg/m2/day, or emissions of noise that result in recorded levels at the facades of houses above 65dB(A)LAeq 1hour. The hours of work shall normally be restricted to between 0700 and 1900 hours Monday to Saturday and not at all on Sundays or public holidays, unless the prior written agreement of the planning authority has been obtained. Prior to commencement of construction activities, the developer shall submit to and agree, in writing, with the planning authority a plan to control such emissions for the duration of the construction works. The plan shall include details of the method and locations dust monitoring,

measures to be implemented to reduce emissions and actions to be taken in the event of complaints.

Reason: In the interest of environmental protection and orderly development

13. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the site. In this regard, the developer shall:

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

    b. employ a suitably-qualified archaeologist who shall monitor all site investigations and other excavation works, and prepare a report on the results of such monitoring to be submitted to the planning authority and to the Department of Arts, Heritage and the Gaeltacht,

    c. provide arrangements, acceptable to the planning authority, for the recording and removal of any archaeological material which the authority considers appropriate to remove. In particular, archaeological excavation shall be carried out at Areas of Archaeological Potential identified in the environmental impact statement submitted,

    A comprehensive report on the completed archaeological excavation shall be prepared and submitted to the planning authority and to the National Monuments Service within a period of six months or within such extended period as may be agreed with the planning authority.

    Reason: In order to conserve the archaeological heritage of the site, it is considered reasonable that the developer should facilitate the preservation and protection or the preservation by record of any archaeological features or materials which may exist within it.

14. Cables within the site shall be laid underground. The wind turbines shall be geared to ensure that the blades rotate in the same direction. The colour and finishes of the turbines shall comply with the requirements of the planning authority.

    Reason: In the interest of visual amenity.

15. Prior to commencement of development, details of aeronautical requirements shall be submitted to, and agreed in writing with, the planning authority. Subsequently, the developer shall inform the planning authority and the Irish Aviation Authority of the coordinates of the 'as constructed' turbines and the highest point of the turbines.

Reason: In the interest of air traffic safety.

16. In the event that the proposed development causes interference with telecommunications signals in the area effective measures shall be implemented to minimise such interference. Details of these measures, which shall be at the developer's expense, shall be submitted to, and agreed in writing with, the planning authority prior to commissioning of the turbines, and following consultation with the relevant authorities.

    Reason: In the interest of orderly planning and residential amenity.

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

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

_____

G. Ryan
Planning Inspector
20th September 2016