S. 37

File With _____

SECTION 131 FORM

Appeal NO: ABP 308210-20 ☐ **Defer Re O/H**

TO:SEO

Having considered the contents of the submission ~~dated~~/ received 29 October 2020 from

Anthony Cohu I recommend that section 131 of the Planning and Development Act, 2000 ~~be~~/not be invoked at this stage for the following reason(s): NO NEW ISSUES

E.O.: Diarmuid Thornton **Date:** 11/11/2020

To EO: _____

Section 131 not to be invoked at this stage. ☐

Section 131 to be invoked – allow 2/4 weeks for reply. ☐

S.E.O.: _____ **Date:** _____

S.A.O: _____ **Date:** _____

M _____

Please prepare BP _____ **- Section 131 notice enclosing a copy of the attached submission**

to: _____ **Task No:** _____

Allow 2/3/4weeks – BP _____

EO: _____ **Date:** _____

AA: _____ **Date:** _____

S. 37

File With _____

CORRESPONDENCE FORM

Appeal No: ABP 308210-20

Ms Kelly

Please treat correspondence received on 29 October 2020 as follows:

1. Update database with new agent for Applicant/Appellant _____

2. Acknowledge with BP 23

3. Keep copy of Board's Letter ☐

1. RETURN TO SENDER with BP _____

2. Keep Envelope: ☐

3. Keep Copy of Board's letter ☐

Amendments/Comments

Response to S131

4. Attach to file

(a) R/S ☐ (d) Screening ☐

(b) GIS Processing ☐ (e) Inspectorate ☐

(c) Processing ☐

RETURN TO EO ☐

	Plans Date Stamped ☐ Date Stamped Filled in ☐
EO: Niamh Thornton	AA: Shirley
Date: 30/10/2020	Date: 2/11/2020

Mark Kielty

From:	Tony Cohu <ajcohu46@zohomail.eu>
Sent:	Thursday 29 October 2020 11:20
To:	Appeals2
Subject:	Case Number: ABP-308210-20
Attachments:	Submission ABP-308210-20.pdf

Dear Niamh Thornton, Executive Officer,

Please find attached my submission in response to your invitation to observe on appeal reference number PL04.248153, dated
13th October 2020.

Please can you acknowledge receipt of this submission.

Yours sincerely,

Anthony Cohu

Anthony Cohu C.Arch,
Derrynafinchin,
Borlin,
Bantry, P75 N220,
Co. Cork, Ireland.

Tel: +353 27 66042

Ecological Planning, Landscaping & Design

Anthony Cohu, C.Arch.

Borlin, Bantry,
Co. Cork
Ireland

Tel: +353-(0)27 66042

An Bord Pleanála,
64 Marlborough Street,
Dublin 1.
D01 V902

28th October 2020

Case Number: ABP-308210-20

Reference: 6 no. wind turbines
Lackareagh and Garranereagh, Lissarda and Barnadivane (Kneeves) Teerelton, Co. Cork

For Attn. of: Ms. Niamh Thornton
Executive Officer

Dear Ms. Thornton,

Thank you for your letter dated 2nd October 2020 inviting me to make a submission on the issue of how the appeal under case number ABP-308210-20 should be further progressed by the Board in the light of the previous decision of the Board under case number PL04.248153 having been quashed by the High Court.

1. Context of this submission

The boundary of your invitation to make a submission appears to be unduly narrow in that it references just one case number, PL04.248153 and the judgement of Mr. Justice McDonald quashing the decision in the judicial review of this case [2019 No. 318 J.R.] delivered on 17th April, 2020.

It is my contention that this case can only be considered as a single entity encompassing all aspects of decisions made with respect to it; my previous submission dated 17th December 2015 to the Board on the appeal had the case number PL04.245824. The decision of the Board in this instance was also quashed by the High Court and reactivated as case number PL04.248153 referred to in your letter.

2. Planning application 14/6760

The proposed development dates back to 19th December 2014 when a planning application was lodged with Cork County Council under Pl. Ref. 14/6760 for a wind farm of 6 no. wind turbines. The level of concern by the local residents concerning the development can be gauged by the fact that a total of 258 submissions were submitted to Cork County Council.

Despite the widespread level of local concern with the local community, Cork County Council granted conditional permission for the development by order dated 3rd November 2015. This decision was then the subject of a third party appeal. One of the requirements of an appealed decision is that An Bord Pleanála carries out a fresh assessment of all issues, which in this case, includes the concerns of the 258 local residents who made submissions to Cork County Council in the first instance.

Anything less is to deprive these citizens of the right to participate in public decision making over issues that have a direct impact on their homes and lives as provided in Article 6 of the UNECE (Aarhus) Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, as ratified by Ireland on 20th June 2012.

Para. 7 of Art. 6 requires that "Procedures for public participation shall allow the public to submit, in writing or, as appropriate, at a public hearing or inquiry with the applicant, any comments, information, analyses or opinions that it considers relevant to the proposed activity" and para. 8 requires that due account is taken of the outcome of the public participation in reaching the decision.

3. Planning appeals

3.1 Appeal case number PL04.245824

Two active third party appeals were lodged with An Bord Pleanála on 30th November 2015 in the names of Jerome Cohalan and Geraldine Hanley in one, and Barna Wind Action Group in the other, with two further appeals ruled out by late lodging. There were also 9 no. observations lodged including my own.

The only reference to the 258 submissions in the An Bord Pleanála Inspector's Report (R245824.pdf) is in Section 7.1 "Submissions" which states that "A large number of submissions were received by the planning authority that objected to the development on grounds similar to those raised in the subsequent appeals and observations to the board".

There is no evidence in this report to suggest that the An Bord Pleanála Inspector verified that the grounds in the submissions were "similar to those raised in the subsequent appeals and observations", or that the subsequent appeals and observations capture all of them.

In fact, the Cork County Council Planner's Primary Report dated 19th February 2015 (see Appendix 1) listed the following 58 no. unique and individual submission issues:

1 Visual impact
2 Noise pollution
3 Concerns over safety (blade failure/fire/collapse of turbines)
4 Shadow flicker impacts
5 Health impacts
6 Impact on natural habitats through laying of cables etc and impacts on wildlife/flora and fauna.
7 Impact on value of property
8 Concern at size of substation and potential for future proposals for further turbines
9 Cumulative impact – impact of this proposal together with impacts of existing wind farm
10 Impact on livestock
11 Lack of public consultation
12 Negative impact on tourism potential of area
13 Concern at potential damage to private property as a result of road improvement proposals.
14 Impact on scenic routes 36, 35, 32, 26
15 Concern at inconsistency with refusals on other sites e.g. 03/6910
16 Excessive concentration of such development
17 2006 guidelines out of date with regard to height of current turbines vis. a vis. minimum distance from dwellings - setback distances have to be increased on basis of increased turbine height
18 Site is within a well populated rural community
19 Concern at excessive height of turbines
20 Alternative renewable energy producers should be considered
21 No community gain from this proposal
22 Idea of removal of turbines and restoration of the site is unlikely

23 Proposal will impact on the hydrology of the River Lee Catchment

24 Impact on ecology

25 Grid connection not included as part of proposal

26 High carbon footprint given entire life cycle of project

27 No evidence of job creation/supporting indigenous industry

28 Need for development in this area?

29 Impacts on the Gearagh

30 Little research on disturbance/noise impacts/shadow flicker on animals and humans

31 Impacts /interference on telecommunications

32 Proposals for decommissioning are incomplete

33 Mitigation measures for shadow flicker are not clear

34 Noise assessment not sufficient

35 Marine environment more suitable for such development

36 Negative impacts on quality of life

37 Poor road network already in the area

38 Efficiency of wind farms being questioned

39 Need for Major National policy review

40 Impact on bats, inadequate bat survey

41 Assertion that renewable energy policies have not been through a proper SEA procedure

42 Concern that this proposal is only phase 1 of a bigger overall plan

43 Concern that proposal could be seen as project splitting (separate application for substation – for grid connection)

44 No detail on proposed grid connection

45 Serious doubts expressed over wind farm efficiency and claims that wind energy is having real benefits in reducing the carbon intensity of electricity generation in EU

46 Questioning whether larger turbines are any more efficient?

47 EIS submitted with application is not complete and not balanced

48 Lack of assessment on potential hydrological impacts of proposal

49 Potential negative impacts on River Bride

50 Negative impacts on archaeology of area

51 Concern that the development will ruin existing walkways

This subsection states that "Individual observations to the planning authority and Board refer to particular houses having clear views to one or more turbines as well as existing development such as pole sets. It is clear that it would be a consequence of the proposed development that particular views from a number of houses would include turbines and / the substation and the ancillary development."

It is not clear that individual observations to the planning authority were fully considered, bearing in mind that the Cork County Council Planner identified 58 no. unique and individual issues within the 258 submissions.

The Board granted permission with revised conditions by order on 2nd April 2019, a decision which was quashed by Judgement of the High Court ([2020] IEHC 177) on 17th April 2020, and reactivated as a new case, PL04.308210, by An Bord Pleanála on 18th September 2020.

4. Government studies

In case CEI-15-0032, the Commissioner for Environmental Information findings issued on 26th October 2016 were that "If disclosure were to lead to a submission being made to either or both Departments which was of such significance that it could not be ignored, such a submission would appear to be highly important and very much in the public interest" (see Appendix 4).

The disclosure referred to includes a report commissioned by SEAI and prepared by the RPS Group in 2015, Section 3.5 "Acoustic Modelling Results" of which sets out that the acoustic model for the candidate turbines were created with variations in turbine hub heights, terrain contours, ground factor and wind speed. The noise level for each combination was calculated in 100m intervals out to a distance of 1km".

Table 3.2 of the report shows that an estimated setback distance of 1209m would be necessary to meet the 40dB absolute noise limit proposed in the 2013 targeted draft revision of WEGD06, and even with a 45dB limit the setback is estimated as 782m. This distance means that, contrary to the claims of the EIS, several of the homes affected by the proposed Barnadivane are within this excessive noise radius.

5. Conclusion

At the date of establishment of this new case, four and a half years have elapsed between the closing date for public submissions to Cork County Council on the proposed development on 2nd February 2015 and the date of inception of PL04.308210.

52 Omission of marsh area for EIS

53 Concern at accuracy of distances of turbines from dwelling houses

54 Lack of detail on proposed borrow pit

55 Potential impacts on Gearagh SAC/SPA and white tailed eagle

56 Concern at borrow pit and potential impacts of same

57 Individual houses have been refused on basis of visual impact/skyline

58 Impacts on water table due to concrete bases

This is a far cry from the issues recorded in Section 8 (Grounds of Appeal) and Section 10 (Observations) of the An Bord Pleanála Inspector's Report (see Appendix 2).

The Board granted permission with revised conditions by order on 8th July 2016, a decision which was quashed by Order Certiorari of the High Court on 27th January 2017, and reactivated as a new case, PL04.248153, by An Bord Pleanála on 13th March 2017.

3.2 Appeal case number PL04.248153

At the date of establishment of the new case, two years had elapsed between the closing date for public submissions to Cork County Council on the proposed development on 2nd February 2015 and the date of inception of PL04.248153.

Section 4.6 of the An Bord Pleanála Inspector's Report on this appeal (R248153.pdf) "Third Party Observations" states that "A large number of third party observations generally opposing the development were received by the planning authority. I am satisfied that the issues raised are common to the matters raised in the appeal and observations. Any specific relevant matters which are not contained in the summaries of the appeal/observations and which are deemed relevant are considered in the assessment section of this report".

The Inspector does not make clear the basis of that satisfaction, which begs the question as to whether the Inspector individually read each of the 258 submissions since the reactivated case is treated as a fresh appeal, and took these into account, or whether the satisfaction arose from a review of previous planning reports.

Further perusal shows that observations by observers on the appeal are reviewed in Sections 7.3.1 to 7.3.19 of this report. However, there is no review of "any specific relevant matters which are not contained in the summaries of the appeal/observations and which are deemed relevant" in this section, and in Section 8 "Assessment", the sole reference is in Sub-Section 8.5.11 (see Appendix 3).

Four and a half years since the 258 concerned local residents were afforded a voice in the public decision making process. Four and a half years, during which conditions on the ground have changed, environmental regulations and processes have changed and wind energy development guidelines have been under critical review. Four and a half years during which time independent research commissioned by the SEAI has shown that the setback distances proposed in the EIS and wind development guidelines are woefully inadequate to protect the health and well-being of the local community.

The only options that remain in the interest of proper public consultation are either:

(1) Post a consolidated version encompassing all of the application and further information documentation on the An Bord Pleanála web site and invite each of the persons who lodged submissions with Cork County Council in 2015 to make further submissions to the Board, or,

(2) Refuse permission for the proposed development outright, for some or all of the stated reasons for Refusal in my original Submission, or,

(3) Advise the Commercial High Court that An Bord Pleanála accepts the quashed decision/s, but not the Referral to resurrect the case/s.

Anything less is to deny the local community the right to participate in the public decision making process, contrary to the provisions of the Aarhus Convention, Planning Law and natural justice.

Yours faithfully,

Anthony Cohu, C.Arch
Borlin,
Bantry,
Co. Cork.

Appendices

A1 Cork County Council Planner's Primary Report dated 19th February 2015

A2 An Bord Pleanála Inspector's Report R245824

A3 An Bord Pleanála Inspector's Report R248153

A4 Decision of the Commissioner for Environmental Information on an appeal made under article 12(5) of the European Communities (Access to Information on the Environment) Regulations 2007 to 2014 (the AIE Regulations) Case CEI/15/0032

APPENDIX 1

PLANNER'S REPORT

PRIMARY

APPLICATION NO.	14/06760
APPLICANT	Barna Wind Energy (BWE) Ltd.
DESCRIPTION	The construction of six wind turbines, with a maximum tip height of up to 131m and associated turbine foundations and hardstanding areas, 1 no. permanent meteorological mast up to 90m in height, upgrade of existing and provision of new site tracks and associated drainage, new access junction and improvements to public road to facilitate turbine delivery, 1 no. borrow pit, underground electrical and communications cables, permanent signage and other associated ancillary infrastructure. This application is intended to replace the development already granted permission under PL04.219620 (05/5907) and subsequently extended under 11/6605. This application is seeking a 10-year planning permission. An Environmental Impact Statement and AA Screening Report have been prepared in respect of the planning application.
LOCATION	Lackareagh and Garranereagh Lissarda and Barnadivane (Kneeves) Teerelton Co Cork
DECISION DUE DATE	23/02/2015

1. Site Notice and Date of Inspection

Site was inspected on 29/01/2015 and 4/02/15 and site notices were correctly displayed at 5 no. locations around the perimeter of the overall site.

2. Site Description and proposed development

This application proposes the construction of six wind turbines, with a maximum tip height of up to 131m and associated turbine foundations and hardstanding areas, 1 no. permanent meteorological mast up to 90m in height, upgrade of existing and provision of new site tracks and associated drainage, new access junction and improvements to public road to facilitate turbine delivery, 1 no. borrow pit, underground electrical and communications cables, permanent signage and other associated ancillary infrastructure. This application is intended to replace the development already granted permission under PL04.219620 (05/5907) and subsequently extended under 11/6605. This application is seeking a 10-year planning permission. An Environmental Impact Statement and AA Screening Report have been prepared in respect of the planning application.

The subject site is located in the townlands of Lackareagh, Garranereagh and Barnadivane (Kneeves) southeast of Terelton and northeast of Cappeen. The subject site is located in an upland area approx. 9km to the south of Macroom. The wider area is locally elevated and exposed in parts. The site is made up of hills and valleys and there are a considerable number of individual rural houses scattered around the surrounding landscape. There is a local road running along the east of the site and a local road transverses the site. It is proposed to locate 3 no. turbines to the north of the local road which runs from east to west through the site and to locate 3 no. turbines south of this local road. There are extensive views from the site in all directions, from various locations on site. The closest settlements are Terelton (approx. 2km to the northwest) and Cappeen (approx. 2km to Southwest). The site has a stated area of 40.16hectares. The majority of the site consists of agricultural grassland (cattle and sheep grazing) with grassland and commercial forestry in the surrounding area, which is characterised by an enclosed pattern of fields. There is a 110kv line passing through the site. There is an existing development of 4 no. wind turbines immediately east of this site.

It is stated in the application that a detailed house survey was conducted in April 2014 and there 35 no. properties within 1km of the proposed turbine locations, of these properties 7 are within the EIS study area boundary and each of these 7 properties is a stakeholder.

Approximate turbine locations

The subject site transverses lands which are in the ownership of Aoiffe O'Leary, Seamus & Bridie O'Leary, Seamus O'Leary, Barry O'Sullivan, Gerard and Mary Grainger, Joe O'Donoghue, David & Nora Murphy and Jeremiah James Murphy.

Site boundary of subject site

3. **History**

<u>On subject site</u>

14/557

Planning permission was very recently granted for the construction of an electricity substation compound, this application is intended to replace the substation already granted permission under PL04.219620 (05/5907) and subsequently extended under 11/6605. The electricity substation layout includes 3 no. control buildings, associated electrical plant and equipment, security fencing and ancillary works for Arran Windfarm Ltd. This application was granted a 10 year planning permission. This decision has been appealed to An Bord Pleanála.

11/6605

Planning permission was granted for an extension of duration of ABP ref. no. PL 04.219620 (Pl. reg. no. 05/5907) i.e. for completion of construction of 14 wind turbines, transformers, a 110 KV substation, 110 KV switch station, 70 metres wind monitoring mast for Barna wind Enery Ltd.

05/5907 & PL 04.219620

Planning permission was granted for 14 no. wind turbines (105metre blade tip height), transformers, a 110kV substation, a 110kV switch station, a wind monitoring mast, the construction and upgrading of site entrances, site tracks and associated works, construction and upgrading of site entrances, site tracks and associated works for Barna wind energy Ltd.

05/7226

Planning permission was granted for retention of 1 no. temporary 52.5metre meteorological mast for Barry O'Sullivan.

03/2365

Planning permission was refused (on appeal) for a windfarm to include 23 no. turbines, 60m meteorological mast, 110kv substation and switch station, entrances,site tracks & associated works for Barna wind energy Ltd.

Other relevant applications

09/4708

Planning permission was granted for relocation of electrical substation (floor area 43 sq.m) forming part of permitted wind farm granted under pl.reg.no.03/2047 and extended by pl.reg.no.08/9783 for 5 no. turbines, control housing and electrical compound, anemometer mast and anemometer, service roadways and associated works for Art Generation Ltd.

08/9783

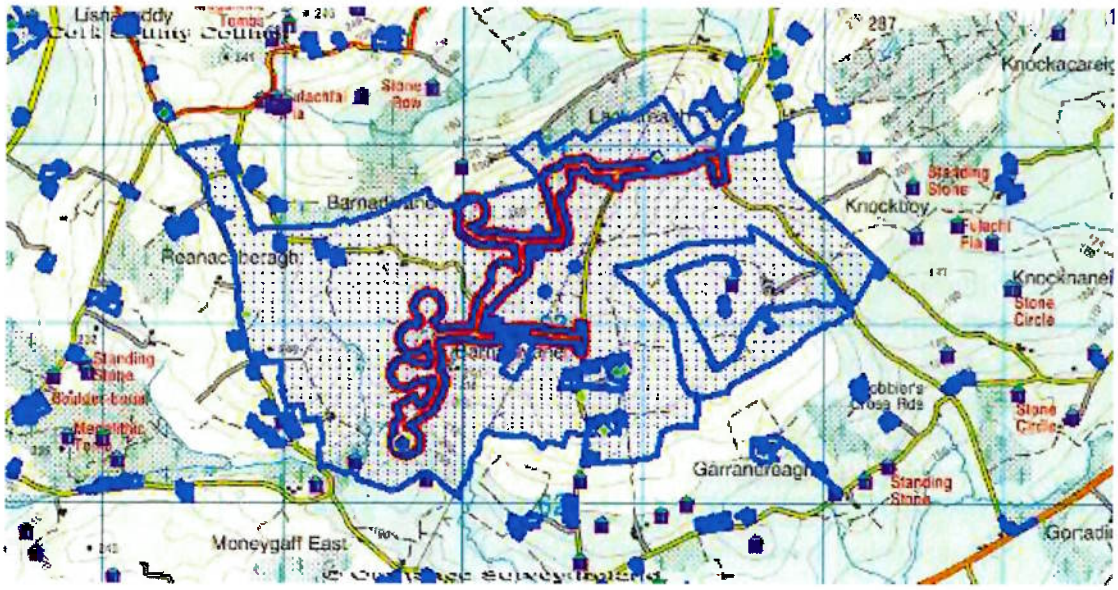
Planning permission granted for an extension of duration of planning permission Pl. Reg. No. 03/2047 i.e. for completion of wind farm to include 5 no. turbines, control housing and electrical compound, anemometer mast, anemometer, service roadways and associated works Art Generation Ltd.

03/2047

Planning permission was granted for wind farm to include 5 no. turbines, control housing and electrical compound anemometer mast, anemometer, service roadways & assoc. Works for Art Generation Ltd.

04/6264

Application withdrawn for the construction of 110 kV electrical substation and 110 kV switch station including control buildings for Joe O'Donoghue.



4. Policy context

EU and National Policy

EU and National Policy Guidelines

EUROPE 2020 Strategy
Kyoto Protocol and Doha Amendment
The EU Climate and Energy Package 2008
EU Directive on the Promotion of the Use of Energy from Renewable Sources (Directive 2009/28/EC) 2009
National Climate Change Strategy 2007-2012
Green Paper on energy Policy in Ireland (2014)
National Energy Efficiency Action Plan 2009-2020
Bioenergy Action Plan
Strategy for Renewable Energy 2012 – 2020
Energy White Paper 2007- The Energy Policy Framework 2007 – 2020. Energy White Paper 2007 "Delivering a Sustainable Energy Future for Ireland" commits to achieving 33% of electricity consumption from renewables by 2020.
National Renewable Energy Action Plan (NREAP) 2010 - The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and concrete measures to deliver on Ireland's target of 16% of the national gross final consumption of energy comprising energy from renewable sources by 2020 (under Directive 2009/28/EC).
National Spatial Strategy 2002-2020
The National Development Plan (2007-2013)
The National Development Plan provides support under the Economic Infrastructure Priority Energy Programme, for the promotion of alternative energy. In this regard, expansion of the use of renewable energy and promotion of the development of technology, which contributes to meeting our international climate change obligations, are prime objectives.
Planning Policy Statement 2015 - Department of the Environment, Community and Local Government
2006 Department of Environment Wind Energy Guidelines
The Department of Environment, Heritage and Local Government launched the Wind Energy Development Guidelines on the 29th of June 2006. These guidelines supersede the 1996 guidelines issued by the Department to planning authorities on wind energy development.
2013 Proposed Revisions to Wind Energy Development Guidelines 2006
2013 Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment

Guidelines on the Information to be contained in Environmental Impact Statements – EPA 2002
Advice Notes on Current Practice in the Preparation of Environmental Impact Statements – EPA 2003
2003 Environmental Impact Assessment (EIA) - Guidance for Consent Authorities regarding Sub-threshold Development - Department of Environment, Heritage and Local Government August 2003
DEHLG has published Guidance on Appropriate Assessment of Plans and Projects – Guidelines for Planning Authorities, 2009.

Landscape and Landscape Assessment Guidelines
The Planning System and Flood Risk Management – Guidelines for Planning Authorities 2009
Regional Planning Guidelines - 2010-2022
Regional Transport and Infrastructure Strategy RTS-09 Energy and Renewable Energy

It is an objective to facilitate the sustainable development of additional electricity generation capacity throughout the region and to support the sustainable expansion of the network. National grid expansion is important in terms of ensuring adequacy of regional connectivity as well as facilitating the development and connectivity of sustainable renewable energy resources.

It is an objective to ensure that future strategies and plans for the promotion of renewable energy development and associated infrastructure development in the Region will promote the development of renewable energy resources in a sustainable manner. In particular, development of wind farms shall be subject to:
- The Wind Energy Planning Guidelines
- Consistency with proper planning and sustainable development
- Criteria such as design and landscape planning, natural heritage, environmental and amenity considerations

It is an objective of the guidelines to promote the sustainable provision of renewable energy from tidal, wave and pumped storage developments together with bioenergy resources, as critical elements of the long-term secure energy supply throughout the region.

Cork County Development Plan 2014.
The lands in question are located in an area designated as 'Rural Area Under Strong Urban Influence' in the Cork County Development Plan 2014 (CDP).

The site is located in an area where wind farms are considered to be acceptable in principle based on the wind energy strategy map (fig. 9.3) contained in the CDP.

The site is within a landscape character type defined as 'Fissured Fertile Middleground' in the Draft Landscape Strategy 2007. It is described as an elevated landscape, which is sequentially fissured by these rivers and their valleys.

The site is not within a Natura 2000 site screening zone.

The site is not within a flood risk zone (as outlined by the OPW).

The closest scenic route S36 is designated to the North of the proposal near the settlement of Terelton.

The relevant policies in the **County Development Plan 2014** are noted. **Chapter 9 (Energy and Digital Media)** sets out the objectives for wind energy.

ED 1-1: Energy
Ensure that through sustainable development County Cork fulfils its optimum role in contributing to the diversity and security of energy supply and to harness the potential of the county to assist in meeting renewable energy targets.

Objective ED 3-1 (National Wind Energy Guidelines) states;
Development of onshore wind shall be designed and developed in line with the 'Planning Guidelines for Wind Farm Development 2006" issued by DoELG and any updates of these guidelines.

Objective ED 3-2: (Wind Energy Projects) states;
Onshore wind energy projects should focus on areas considered 'Acceptable in Principle' and Areas 'Open to Consideration' and generally avoid "Normally Discouraged" areas in this Plan.

Objective ED 3-4 (Acceptable in principle) states;
Commercial wind energy development is normally encouraged in these areas subject to protection of residential amenity particularly in respect of noise, shadow flicker, visual impact and the requirements of the Habitats, Birds, Water Framework, Floods and EIA Directives.'

Objective ED 6-1 (Electricity Network) states;
Facilitate where practical and feasible infrastructure connections to wind farms and other renewable energy sources subject to normal proper planning considerations.

Objective GI 7-1 (General views and prospects) states;
Preserve the character of all important views and prospects, particularly sea views, river or lake views, views of unspoilt mountains, upland or coastal landscapes, views of historical or cultural significance (including buildings and townscapes) and views of natural beauty as recognized in the Draft Landscape Strategy.

Objective GI 7-2 (Scenic Routes) states;
Protect the character of those views and prospects obtainable from scenic routes and in particular stretches of scenic routes that have very special views and prospects identified in this plan. The scenic routes identified in this plan are shown on the scenic amenity maps in the CDP Map Browser and are listed in Volume 2 Chapter 5 Scenic Routes of this plan.

Objective GI 6-1 (Landscape) states;

a) Protect the visual and scenic amenities of County Cork's built and natural environment.
b) Landscape issues will be an important factor in all landuse proposals, ensuring that a proactive view of development is undertaken while maintaining respect for the environment and heritage generally in line with the principle of sustainability.
c) Ensure that new development meets high standards of siting and design.
d) Protect skylines and ridgelines from development.
e) Discourage proposals necessitating the removal of extensive amounts of trees, hedgerows and historic walls or other distinctive boundary treatments.

Objective GI 6-2 (Draft Landscape Strategy) states;
Ensure that the management of development throughout the County will have regard for the value of the landscape, its character, distinctiveness and sensitivity as recognised in the Cork County Draft Landscape Strategy and its recommendations, in order to minimize the visual and environmental impact of development, particularly in areas designated as High Value Landscapes where higher development standards (layout, design, landscaping, materials used) will be required.

Objective HE 3-1 (Protection of Archaeological Sites) states;
a) Safeguard sites and settings, features and objects of archaeological interest generally.
b) Secure the preservation (i.e. preservation in situ or in exceptional cases preservation by record) of all archaeological monuments including the Sites and Monuments Record (SMR) (see www.archeology.ie) and the Record or Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act, 1994, as amended and of sites, features and objects of archaeological and historical interest generally.
In securing such preservation, the planning authority will have regard to the advice and recommendations of the Department of Arts, Heritage and Gaeltacht as outlined in the Frameworks and Principles for the Protection of the Archaeological Heritage.

Objective TO 2-1 (Protection of Natural, Built and Cultural Heritage) states;
Protect and conserve those natural, built and cultural heritage features that form the resources on which the County's tourist industry is based. These features will include areas of important landscape, coastal scenery, areas of important wildlife interest, historic buildings and structures including archaeological sites, cultural sites including battlefields, the Gaeltacht areas, arts and cultural sites and the traditional form and appearance of many built up areas.

Objective WS 5-3 (Surface Water Management) states;
Manage surface water catchments and the use and development of lands adjoining streams, watercourses and rivers in such a way as to minimise damage to property by instances of flooding and with regard to any conservation objectives of European sites within the relevant catchments and floodplains.

Bandon and Macroom EA LAP 2011
The policies and objectives of the LAPs are noted.

5. Pre-Planning

Yes with the Senior Executive planner. July 2014. General principles were discussed together with planning history and proposals for new development.

6. AA Checklist Option

Requirement for Appropriate Assessment has been screened out for this proposed development having regard to the lack of ecological or hydrological connection between the development site and any European Site.

7. Internal Consultants

The Area Engineer notes it is proposed that cranes and turbines will be delivered from the direction of the R-585 from Crookstown towards Coppeen, turn north/right onto the L-6008(2.9km) and then turn west/left onto the L-6007(0.6km) to the site entrance. This will require them to travel along approximately 3.5km of local secondary roads before reaching the main entrance to the site. It is likely that concrete and stone deliveries will take a similar route to those of the turbines and cranes but further information is needed in this regard. A borrow pit is proposed on site for building materials for the road but if more is required it will be sourced locally. If this is the case further information is required as to the delivery route. In terms of surface water it is proposed to dispose of any surface water via existing watercourses. There are likely to be alterations to the current surface water runoff from the site as a result of construction however these alterations will not have negative effects on the surface water runoff from the site. A bond will be attached to any grant of permission for the repair/reinstatement of the L-6008 and L-6007.

The Heritage Unit – Ecology section has assessed the proposal. She notes that the applicants have submitted an EIS, an AA Screening Report and an Outline Construction and Environmental Management Plan in support of the application. The subject site is described as being neither within or adjacent to any site designated or proposed for designation for the protection of habitats or species, nor is it within the hydrological catchment of any such site. Relatively speaking, it is located within an area that is of lower ecological significance than other parts of the county. While this is the case, potential for impacts on designated sites, habitats of ecological value and on annexed, red-listed or strictly protected species must be assessed. It is considered that there are some deficiencies in the habitats and species information which has been provided in the EIS and AA Screening Report, and in the approach to impact assessment contained in these documents, and that further information is required to complete full assessment of the application, as set out below.

The primary ecological issues to consider in relation to this application are potential for the proposed development to give rise to impacts on;

1. sites designated or proposed for designation for nature conservation;
2. species of bird of conservation concern;
3. bats;
4. freshwater habitats and species; and
5. terrestrial habitats of conservation value.

Following her assessment of the proposal it is recommended that a decision be deferred for further information. It is considered that there are some deficiencies in the habitats and species information which has been provided in the EIS and AA Screening Report, and in the approach to impact assessment contained in these documents, and that further information is required to complete full assessment of the application.

The Environment Report has been received and recommends deferring a decision for further information with regard to the noise assessment.

8. External Consultants

A submission has been received from Irish Water, standard comments.

9. Public Submissions

A total of 258 no. valid public submissions have been received by Cork County Council. All submissions have been read and considered. The submissions raised a wide range of issues including the following;

- Visual impact
- Noise pollution
- Concerns over safety (blade failure/fire/collapse of turbines)
- Shadow flicker impacts
- Health impacts
- Impact on natural habitats through laying of cables etc and impacts on wildlife/flora and fauna.
- Impact on value of property
- Concern at size of substation and potential for future proposals for further turbines
- Cumulative impact – impact of this proposal together with impacts of existing wind farm
- Impact on livestock
- Lack of public consultation
- Negative impact on tourism potential of area
- Concern at potential damage to private property as a result of road improvement proposals.
- Impact on scenic routes 36, 35, 32, 26
- Concern at inconsistency with refusals on other sites e.g. 03/6910
- Excessive concentration of such development
- 2006 guidelines out of date with regard to height of current turbines vis a vis minimum distance from dwellings - setback distances have to be increased on basis of increased turbine height

- Site is within a well populated rural community
- Concern at excessive height of turbines
- Alternative renewable energy producers should be considered
- No community gain from this proposal
- Idea of removal of turbines and restoration of the site is unlikely
- Proposal will impact on the hydrology of the River Lee Catchment
- Impact on ecology
- Grid connection not included as part of proposal
- High carbon footprint given entire life cycle of project
- No evidence of job creation/supporting indigenous industry
- Need for development in this area?
- Impacts on the Gearagh
- Little research on disturbance/noise impacts/shadow flicker on animals and humans
- Impacts /interference on telecommunications
- Proposals for decommissioning are incomplete
- Mitigation measures for shadow flicker are not clear
- Noise assessment not sufficient
- Marine environment more suitable for such development
- Negative impacts on quality of life
- Poor road network already in the area
- Efficiency of windfarms being questioned
- Need for Major National policy review
- Impact on bats, inadequate bat survey
- Assertion that renewable energy policies have not been through a proper SEA procedure
- Concern that this proposal is only phase 1 of a bigger overall plan
- Concern that proposal could be seen as project splitting (separate application for substation – for grid connection)
- No detail on proposed grid connection
- Serious doubts expressed over wind farm efficiency and claims that wind energy is having real benefits in reducing the carbon intensity of electricity generation across EU
- Questioning whether larger turbines are any more efficient?
- EIS submitted with application is not complete and not balanced
- Lack of assessment on potential hydrological impacts of proposal
- Potential negative impacts on River Bride
- Negative impacts on archaeology of area
- Concern that the development will ruin existing walkways
- Omission of marsh area for EIS
- Concern at accuracy of distances of turbines from dwellinghouses
- Lack of detail on proposed borrow pit
- Potential impacts on Gearagh SAC/SPA and white tailed eagle
- Concern at borrow pit and potential impacts of same
- Individual houses have been refused on basis of visual impact/skyline
- Impacts on watertable due to concrete bases

10. Public Representative Submissions

None received.

11. Assessment

This application seeks planning permission for the construction of six wind turbines, with a maximum tip height of up to 131m and associated turbine foundations and hardstanding areas, 1 no. permanent meteorological mast up

to 90m in height, upgrade of existing and provision of new site tracks and associated drainage, new access junction and improvements to public road to facilitate turbine delivery, 1 no. borrow pit, underground electrical and communications cables, permanent signage and other associated ancillary infrastructure. This application is intended to replace the development already granted permission under PL04.219620 (05/5907) and subsequently extended under 11/6605. This application is seeking a 10-year planning permission. An Environmental Impact Statement and AA Screening Report have been prepared in respect of the planning application

Planning History

As already outlined, Planning permission was refused on a larger area which included the subject site for 17 no. turbines in 2004, by An Bord Pleanala (PL.04.204928), following an appeal against Cork County Council's decision to Grant permission (03/2365). Subsequently planning permission was granted by Cork County Council under 05/5907 for 14 no. turbines and this decision was upheld by the Board following an appeal. Planning permission was granted in February 2007. In 2011 an application was received by cork County Council for an extension of duration of planning permission 05/5907. An extension of duration was granted thereby extending the life of the 2005 application until February 2017.

It is also important to note that there are 4 no. wind turbines in place, immediately east of the subject site. These turbines measure 93metres (blade tip) in height and were granted planning permission under 03/2047.

Pre-planning consultation

A meeting took place between the applicants and the Planning Dept. At this meeting Cork Co. Council's general policy in relation to renewable energy as contained in the Co. Development Plan was discussed.

Policy and legislation issues

The Cork County Development Plan, 2014 has identified a number of suitable areas for sustainable wind energy development. A wind energy strategy map has been developed and identifies an area south of Macroom, including the subject site, which is deemed that commercial wind energy development is "Acceptable in Principle".

Objective ED 3-4 of the CDP states;
Commercial wind energy development is normally encouraged in these areas subject to protection of residential amenity particularly in respect of noise, shadow flicker, visual impact and the requirements of the Habitats, Birds, Water Framework, Floods and EIA Directives.'

Having regard to the sites location within an area deemed 'Acceptable in Principle' for wind energy, the planning history attached to the site i.e.

planning permission granted for 14 no. turbines (105metre base to blade-tip height) and the wider national and international policy on wind energy, it is considered that the principle of the proposed development can be considered at this location.

Landscape and Visual Assessment

A landscape impact assessment and visual assessment for the proposed development has been submitted and this includes Zone of Theoretical Views (ZTVS) and Photomontages. The assessment methodology involved a desktop study, field work and assessment. The assessment included a description of the geographic location and landscape context of the proposed site, a general landscape description taking account of landscape character, landform and drainage, vegetation and land use, centre of population and houses, transport routes, public amenities and facilities, consideration was given to design guidance and landscape designations, an assessment of the predicted landscape impacts and predicted visual impacts was looked at and finally proposed mitigation measures.

This site is located within a landscape character type defined as 'Fissured Fertile Middleground' in the Draft Landscape Strategy 2007. It is described as an elevated landscape, which is sequentially fissured by these rivers and their valleys. This landscape type has a low landscape value rating and low landscape sensitivity which is of local importance (p.73 of Draft Landscape Strategy – 2007). In terms of the DoEHLG Guidelines in wind energy the site is considered to be most characteristic of the 'hilly and flat farmland' landscape type. Siting and design recommendations are set out for this type of landscape under the headings of location, spatial extent, spacing, layout and height. It is noted in this case a clustered/staggered linear layout is appropriate on the ridge/hilltop here.

Overall the landscape impacts were assessed taking account of the landscape character, value and sensitivity, the magnitude of the likely impacts and the significance of the landscape effects.

In terms of assessing the visual impact, a study area of 20km was set in accordance with the requirements of the Wind Energy Guidelines based on the height of the blade tips >100m. It is noted the guidelines advise as follows; "in areas where landscapes of national or international renown are located within 25km of a proposed wind energy development, the ZTV should be extended as far and in the direction of that landscape". In this case it is considered that 20km is sufficient.

Visual impacts were assessed at 14 viewpoints throughout the area and 10metre contour intervals were used for the ZTV map. The ZTV map indicates that from within 5km of the proposal site theoretical visibility is

relatively prevalent. Generally greater visual exposure is evident in the flatter landscape to the north, east and south of the site compared with the much more hilly terrain to the west. 9 of the previously used viewshed Reference Points (VRPs) were used together with 5 new VRPs.

Zone of Theoretical Visibility (ZTV)
Two ZTVs are presented in the EIS figure 8.4 shows the ZTV for the proposed Barnadivane Wind Farm and figure 8.5 shows the cumulative ZTV with the existing Garranereagh and other wind farms within 20km. It is stated that from within 5km of the proposed site theoretical visibility is relatively prevalent throughout. Between 5km and 10km away from the proposed site theoretical views become more sporadic and are limited to higher slopes and ridges. Views are more prevalent to the east of the site. Between 10km to 15km away again theoretical views are limited to slopes and ridges that are high enough and facing the site. The locations of the scenic routes are mentioned however they are not included in the maps forming part of the ZTV. The photomontages include a view of the permitted wind farm (14 turbines) and cumulative wind farms in the vicinity against a view of the proposed wind farm (6 turbines) and cumulative wind farms in the vicinity and a wireframe is included for the proposed.

Viewpoint (VP) 1
This viewpoint is from a scenic route S36 north of the site, in the townland of Knockane.
The view is stated to be from a distance of 1044metres from the nearest turbine (2). All 6 nacelles will be visible. The EIS outlines the magnitude of the visual impact from this VP is medium. 13 of the previously permitted turbines would be visible, although only the blade tips of many of them. The proposed view is considered acceptable.

Viewpoint 2
The viewpoint is looking southwards from the same scenic route as VP1, but a little further west, in the same townland of Knockane. T2 is the nearest turbine to this VP, at a distance of 1420metres. 5 nacelles are visible at this point and only the blade tip of T6 visible in the distance. The proposed wind farm will be seen running along the ridge top; the turbines appear evenly spaced and even in height. The magnitude if the visual impact is described as medium in the EIS. It is difficult to read exactly how many of the permitted turbines are visible although it states in the EIS that 13 are visible.

Viewpoint 3
This viewpoint is taken from the R585 regional road, looking north towards the wind farm site, in the townland of Lackanashinnagh. From this viewpoint the site is screened by existing trees and planting. There are better vantage points along this route where the site is less hidden by screening. All 6 nacelles are visible from VP3 and the nearest turbine is T6 which is

1736metres to the north. The visual impact of the proposed development is quite similar to the previously permitted from the selected vantage point. The EIS describes the magnitude of the visual impact as low.

Viewpoint 4
This viewpoint is from the R585 at Boxer's Cross, which is located east of the wind farm site in the townland of Bengour East. From the VP looking west all 6 nacelles are visible behind the existing 4 no. turbines at Garranereagh. This viewpoint is stated as being 4006metres from the nearest turbine (T1). The magnitude of the visual impact is judged as medium in the EIS. The photomontage does not show much of a difference in terms of visual impact between the proposed development and the permitted from this viewpoint, approx. 4km away.

Viewpoint 5
This viewpoint is from a local road east of kilmurry village. The photomongtaes for this viewpoint are particularly bad in that the sky is the same colour as the turbines making it impossible to assess the impact. From my own photographs the turbines are visible from this viewpoint. The viewpoint is stated as being 5544metres east of the site, in the townland of Cloghmacow. 5 nacelles are stated as being visible at this point. Other wind farms at Coomtallin, Killaveenoge and Derragh are barely visible on the horizon. The magnitude of the visual impact at this point is deemed to be low.

Viewpoint 6
This viewpoint is west of Newcestown, 6327metres from the nearest turbine (T6). 6 no. nacelles are visible in the distance on the ridge line. The quality of the photomontages again makes it difficult to fully assess the visual impact. The EIS states that the magnitude of the visual impact is low. It is stated that the proposed wind farm appears as a modest continuation of the existing wind far at Garranreagh.

Viewpoint 7
This viewpoint is located along the R587 regional route, northeast of Shanalaragh at Glan townland. All 6 nacelles are visible from a distance of 6603metres from the nearest turbine (T6). The visual impact magnitude here is considered to be low/slight.

Viewpoint 8
From the R590 at Carrigeen Cross roads, South of Crookstown in the townland of Carrigeen. This viewpoint is a distance of 9908metres from the closest turbine (T1). All 6 nacelles are visible. The magnitude of the visual impact is considered as low. Existing development is visible in the foreground in the form of existing dwellinghouses and farmsteads.

Viewpoint 9

This viewpoint is located along the S37 Scenic route from Carrigadrohid to Macroom. This viewpoint is 10264metres from the nearest turbine (T1). 5 nacelles are clearly visible on the skyline together with the existing turbines at Garranereagh. They appear is a cluster at this distance. The magnitude of the visual impact from this point is deemed low. This is considered accurate.

Viewpoint 10
This viewpoint is located along a scenic route S35 south of Kilbarry, midway between Toon Bridge and Inchigeelagh northwest of the site. The viewpoint is stated as 7778metres from the nearest turbine (T2). From this viewpoint the turbines will emerge from behind the ridgeline. All 6 nacelles will be visible. It is difficult to draw any distinctions between what was already permitted and what is proposed, given the distance involved and the grey skies in the photomontages. The magnitude of the visual impact at this point is low.

Viewpoint 11
This viewpoint is at a highly elevated location from where there are panoramic views to the south, southeast and southwest. The viewpoint is located at the centre of the wind farm site looking in a south west direction. 3 nacelles are visible at close range from this point (T3 is stated as being the closest but I can't see how T3 would be visible from this point). The turbines should be labelled on the wireframe to allow proper assessment. The three visible turbines are spaced evenly and read of similar height from this viewpoint. The magnitude of the visual impact is medium. It is considered that the proposed development will have less of a visual impact on the landscape than the permitted development would have, from this particular viewpoint. There are two figures included in the photomontage for viewpoint 11, one of which appears to be looking southwest as described and one looking east where none of the proposed turbines will be visible.

Viewpoint 12
There is no photomontage for VP12. There is a description in the EIS of a viewpoint along the S31 scenic route at Grillagh, southwest of Ballineen. 6 nacelles were apparently visible from this point which was 10.9km away from the site. The magnitude of the visual impact was deemed to be low.

Viewpoint 15
This viewpoint is the most remote from the wind farm site, at 15283metres from the nearest turbine (T5). 5 nacelles are barely visible. The magnitude of the visual impact is deemed as low.

Viewpoint 17
This viewpoint is located along the N22 at Carrahaly13836metres from the nearest turbine (T1). All 6 nacelles are stated as being visible though they cannot be seen on the photomontages. From my own photographs from this

location the existing wind farm at Garranereagh is visible. The magnitude of the visual impact is deemed as low.

The proposed permanent meteorological mast is to be located close to T4, towards the centre of the site. The mast is up to 90metres in height and is a typical lattice mast.

On assessing the information submitted, the proposed development, given the scale of the proposed infrastructure, coupled with existing wind farm development in the vicinity would appear to have a low/medium impact on the surrounding landscape. The ZTV states that the extent of the landscape impact is considered to be medium on the basis that the proposed wind farm represents a new and uncharacteristic feature in the landscape. It is considered that the greatest visual impact will be felt when closer to the turbines. It is highlighted in the EIS that the current proposal to replace the permitted wind farm will reduce the landscape and visual impact. The proposed turbines are 26metres taller than those permitted, however the umber proposed to be built is now 6 as opposed to the 14 no. permitted.

It is noted that Figure 8-3 of the EIS is incorrect as it locates the proposed site further west than it actually is. The site is much closer to Scenic Route S36 than it appears. It is considered that the submitted ZTV is not adequate to allow a full and comprehensive visual assessment of the overall development. The ZTV maps do not include the scenic routes or any heritage designations. The scale is too big at 1:80,000, making it difficult to properly assess the detail. The legends are lacking in detail and the colour coding, particularly for visibility '1 to 2' (assuming that means 1 to 2 turbines) is almost impossible to distinguish. Grey skies are prevalent in the photomontages. The scale of the photomontages and wireframe is such that the photographs are too condensed to allow a proper assessment. Viewpoint 12 appears to be missing from the photomontages and two images are submitted for viewpoint 11. Further information will be required to allow a proper assessment of the proposal.

Noise

Chapter 9 of the EIS outlines an assessment of the operation noise impact of the proposed wind farm. Measurements of the existing background noise at 4 locations surrounding the proposed development were undertaken. Predicted turbine noise levels at dwellings neighbouring the proposed development are compared with the noise limits derived in accordance with the DoEHLG guidelines and the cumulative effect of the proposed development operating in combination with the neighbouring wind farm at Garranereagh was considered. The principle sources of noise are from the blades rotating in the air (aerodynamic noise) and from internal machinery (normally the gearbox and possible the generator (mechanical noise).

A table (9.11) showing a full set of worst case predicted noise levels at 10 m/s standardised 10m height wind speed was submitted as part of the EIS. There are 35 no. properties within 1km of the nearest turbines. Of these 8 no. properties are stated as being within 500metres of the nearest turbine and of the 8 no. houses 5 are stated as being derelict and the other 3 no. houses are owned by stakeholders. The closest house to a turbine is 298metres i.e. H36 belonging to a stakeholder. The closest inhabited house to a turbine outside of the stakeholders properties is H55, located 572metres west of T2 and T4. The wind energy guidelines state that noise is unlikely to be a significant problem where the nearest turbine to any noise sensitive property is more than 500m. A map outlining the existing dwellings in the vicinity of the site (fig. 2.2) was submitted and is printed on A4 paper. It is difficult to locate houses on this scale of map. A larger map will be required to allow easier assessment of the detail.

A summary of noise potential impacts was submitted for 7 properties which were considered to be representative of the 159properties identified within a 2km radius of the proposed development. Derelict properties were excluded from the assessment. The properties selected were H1, H28, H31, H34, H36, H48 and H55. This would appear to be a reasonable selection of properties. The potential impact of the proposed development was considered to be significant at properties H34, H36, H48 and was considered not to be significant at H1, H28, H31 and H55. It is noted that the 3 properties where impacts might be significant are all stakeholders and letters consenting to the wind farm from these landowners are attached to the file.

It is concluded that the noise impact is not likely to be significant at any dwelling outside of the of the stakeholders properties. Construction noise and vibration is likely to be below the relevant noise limits and therefore no significant construction impacts are predicted. The hours of construction activity will be limited.

The Environment Section has raised a number of concerns with regard to noise and is seeking further information in this regard.

Human Environment (land use, socio-economic, health and safety, recreation and emtnity, shadow flicker, material assets)

Shadow Flicker

Chapter 10 of the EIS (Human environment) assessed the potential impacts of shadow flicker. The effect known as "shadow flicker" occurs where the rotating blades of a wind turbine cast a moving shadow which, if it passes over a window in a nearby house or other property results in a rapid change or flicker in the incoming sunlight. The effect will occur only for a short period during a given day and only under specific concurrent circumstances, namely when:

- The sun is shining and is at a low angle (after dawn and before sunset), and
- There is sufficient direct sunlight to cause shadows (cloud, mist, fog or air pollution could limit solar energy levels), and
- A turbine is directly between the sun and the affected property, and within a distance that the shadow has not diminished below perceptible levels, and
- There is enough wind energy to ensure that the turbine blades are moving.

A shadow flicker assessment was carried out to predict the level of shadow flicker associated with the proposed wind farm using the software package WindFarm version 4.1.2.3. The Wind energy guidelines 2006 recommend that shadow flicker at neighbouring dwellings within 500metres should not exceed 30hours per year or 30minutes per day and states that at a distance of 10rotor diameters from a turbine the potential for shadow flicker is very low. In this case the rotor diameter is 101metres and therefore the potential impact of shadow flicker on any dwelling within 1010metres should be assessed. 35 no properties were included in the assessment and outside of the stakeholders 9 properties were identified as 'could ,in theory, experience shadow flicker durations greater than 30mins/day and 10 could , in theory, experience shadow flicker durations greater than 30hours/year. When the 40%correction for sunshine was applied it is concluded that there are no properties potentially experiencing shadow flicker greater than 30hours/year. A cumulative assessment taking account of Garranereagh was also included. Mitigation measures are outlined in the EIS for the affected properties. The summary refers to 7 houses impacted.

In terms of the previously permitted layout of 14 turbines it is considered that the development had the potential to affect more properties in terms of shadow flicker given the more sporadic nature of the layout.

The potential impact on landuse is considered to be minimal, with 2.3% of the proposed EIS study area required doe permanent infrastructures. In terms of socio economic the proposal is considered as a small positive impact in terms of employment during and post construction. It is stated that a community gain scheme is proposed to support local environmental improvements in the locality, mitigation measures will be put in place to minimise health and safety impacts.

Ecology

Chapter 5 of the EIS addresses Ecology and outlines mitigation measures which will be implemented during construction. The species and habitats encountered on site are outlined. An ecological impact assessment was carried out. The subject site does not lie within any designated sites. There are

four European sites within a 15km radius of the site, i.e. the Gearagh SAC and SPA, Bandon River SAC and Mullaghanish to Musheramore SPA. An appropriate Assessment Screening report was carried out for the current proposal and concluded that there will be no likely significant impacts on a European Site.

It is stated that a number of measures have been undertaken to reduce impacts on designated sites, flora and fauna through avoidance and design. Larger more efficient turbines are proposed which will minimise the total rotor envelope of the proposed development in comparison to the permitted development (14 turbines). Fewer turbines will mean less habitat loss and less disruption overall. The proposed hard standing area has been kept to a minimum to minimise land take of habitats and flora. Turbines have been placed as close together as possible to minimise the development footprint. All cabling is proposed to be placed underground which will reduce collision risk for birds and sufficient buffers are considered to be in place between wind farm infrastructure and hydrological features in the vicinity.

The detailed report of the Council's Heritage Officer is noted. This includes a review of the EIS, CEMP and AA report. A number of concerns are highlighted in terms of the habitats and species information submitted in the EIS and AA screening report and in the approach to the impact assessment contained in these documents. Further information will be sought with regard to the Gearagh SPA, Mullaghanish to Musheramore SPA and wintering waterbirds in terms of patterns and level of usage of the development site by wintering waterbirds, Hen Harrier and any other species of conservation concern that are known to be vulnerable to impacts from windfarms which were recorded during the winter season. Further information is sought on the white-tailed sea eagle, the barn owl, kestrel and snipe, bats, terrestrial habitats and freshwater habitats and species. It is recommended that the soil stability assessment and material requirements/soil management proposals be reviewed by a competent person on behalf of CCC to verify the conclusions reached in the EIS in relation to soil stability and soil management proposals for the site.

Geology, Hydrogelogy and slope stability,

Chapter 6 of the EIS outlines the onsite characteristics in relation to geology, hydrogeology and slope stability. The assessment states that Devonian 'old red sandstone' underlies the site and the main soil associations with the part of the county are brown podzolics derived from the parent sandstone/mudstone. Small areas of shallow peat topsoil were encountered on site but no areas of active peat formation were observed. Groundwater vulnerability for the area is predominantly high with some area of extreme vulnerability for the site, due to bedrock. Groundwater vulnerability is determined mainly according to the thickness and permeability of the subsoil

that underlies the topsoil as these properties strongly influence the travel times and attenuation processes of contaminants that could be released into the subsurface from below the topsoil. The topography of the site is generally sloping towards the south and locally to the north and west. Groundwater at the site is expected to flow in the general direction of the topography and surface water courses.

Borrow pit
A rock outcrop was identified at the southern end of the site, close to T6 and this area has been selected as a proposed borrow pit. The exposed rock is considered suitable for the excavation of material for the construction of the wind farm access tracks and hard standing areas. The method of extraction of materials proposed will be by excavator and if required by a hydraulic hammer mounted on a hydraulic excavator (rock breaker). It is not proposed to crush rock or screen excavated materials at the borrow pit. Blasting is not expected to be required. Groundwater is not expected to be encountered at the borrow pit. The total surface area of the proposed borrow pit is 3,600sq.m with a maximum volume in the region of 9,600m^3. The maximum depth of the borrow pit is 4metres.

Slope Stability
Small areas of peaty topsoil were observed on site up to 0.3metres thick. It is considered that conditions conducive to peat instability are not present on this site and a peat landslide hazard is considered to be absent. A detailed peat stability assessment is deemed not be required for this proposal. A soil management plan has been submitted as part of the outline construction and environmental management plan.

The potential impacts of the proposed development on geology, hydrogelogy and slope stability are outlined. Mitigation measures for same have been put forward.

Hydrology and Water Quality
Chapter 7 of the EIS assesses the potential impact of the proposed development on the water quality of the local environment. The proposed drainage of the hard standing areas and access tracks are considered taking account of mitigation measures to reduce or eliminate any potential impacts. It is noted that the revised proposal for 6 no, turbines (from 14) results in a reduction in the length of access roads by almost 20%. At present the site mainly drains to the River Bride waterbody and the River Cummer waterbody. A description of the existing hydrological features is given in the EIS. Existing tracks run through the site some of which are agriculture. It is proposed to use existing tracks where possible to access the proposed turbines. These tracks will require strengthening and widening. The existing track drainage consists of 'over the edge' drainage to roadside drains. There

are existing drains on site which drain towards the River Bride to the south and River Cummer to the north.

There are no records of flooding within 2.5km of the site. The River Bride and River Cummer, north and south of the site are indicated as being within the OPWs indicative flooding 1 in 1 100 year event. Water quality is deemed as being most satisfactory in the vicinity of the site.

The potential impacts of the proposed development have been examined, including the impacts during construction, during the operation and maintenance of the wind farm and during decommissioning. Cumulative impacts have also been examined taking account of the existing wind farm to the east.

Proposals for surface water management have been outlined. Details of the proposed drainage arrangements for the site are outlined. Grassed roadside swales will drain the surface water from the new tracks and hard standings. Where slopes are greater than 2% check dams will be required in the swales and interceptor drains to slow down the velocities of the flow and prevent erosion.

Stilling ponds will be required to settle out any suspended solids from the soil. A stilling pond will also be required at the borrow pit location to cater for surface water run-off from this area. Detailed mitigation measures are outlined for the construction phase and operation and maintenance phase.

The EIS states that with mitigation the wind farm is expected to have a negligible impact on the receiving environment in terms of increase in flooding or sedimentation. All mitigation systems will be put in place in advance as construction progresses across the site.

The Area Engineer is satisfied with the proposals outlined.

Traffic and Transportation

Chapter 11 assesses the traffic impact of the additional traffic movements generated both during the construction and operational phases of the development. The construction phase is the more critical period in terms of traffic impacts.

Proposals are outlined for the construction phase and the different stages within that. The greatest impact on traffic and the road network will be during the 6days of the turbine construction when the large wind turbine plant are delivered by extended articulated trucks. The number of proposed turbines has been reduced (from 14 to 6) thereby lessening the traffic impacts at times of delivery in particular.

The Area Engineer is seeking further detail with regard to the proposed routes for any potential concrete and stone deliveries and any additional building materials for the internal roads.

Cultural heritage

The EIS outlines that there are two recorded monuments located within the EIA study area i.e. a Ringfort and an Enclosure. The Ringfort is located north of T2, while the enclosure is located close to T6. An exclusion zone of 100metres is proposed around the recorded monuments during construction works.

The Council Archaeologist is considering the proposal.

Telecommunications and aviation

The proposed wind farm development will not have any negative impact on aviation subject to compliance with the lighting and notification requirement id the Irish Aviation Authority. The proposed wind farm is not expected to affect the telecommunications networks of any of the communication service providers. In addition a protocol has been prepared by RTE which the developer will sign prior to the commencement of development; this sets out the developer's obligation to correct any potential deterioration in TV and radio signal reception in the area.

Air and climate

It is considered that the proposed development will have a negligible impact on climate. There is likely to be a minor and temporary impact on air quality through dust generation during the construction phase which will be reduced through mitigation measures. No mitigation measures are required in respect of air and climate during the operational phase of the wind farm.

Alternatives

Alternative sites were not examined for this application given that the proposal relates to proposed alterations to a previously permitted development. The issue of site selection was previously addressed for the selection of the original site under 05/5907. The previously permitted site was deemed as being suitable. A number of alternative layouts were apparently examined in the wind farm design. It is stated that an initial layout for 8 no. turbines was designed and a constraints assessment was then carried out which resulted in the number of turbines being reduced to 6 no.

Substation and Grid Connection

A separate planning application was lodged for a revised substation, to that previously permitted under 05/5907. Planning permission was recently granted by Cork County Council under 14/557 for an electricity substation compound, which was required to replace a smaller permitted substation

located approx 400m to the north, to serve the permitted or the proposed wind farm for Arran Windfarm Ltd. This decision has been appealed to An Bord Pleanála and is due for decision in June 2015.

In terms of the grid connection it is noted that the overhead 110kv lines are available making connectivity to the grid easily achievable. It is stated in the EIS that a grid connection offer (Grid no. TG44) is in place for the proposed development. Barnadivane is scheduled for a connection to the national grid in 2015. It is stated that a grid connection offer with a capacity of up to 22.5MW is in place.

The recent High Court judgements which relate to wind farm developments are noted. The submissions made are also noted. It is therefore necessary to require the applicants to address any concern that this proposal could be a case of project-splitting.

Having regard to above, the existing history onsite and adjacent, the procedural approaches to the permitted and existing developments onsite and adjacent, and the relevant legislative timelines, following receipt of the further information response, it is considered that legal counsel may be required to be sought, as to whether the current proposal can be further considered at this location.

12. Environmental Impact Assessment Report

Having regard to Schedule 5-7 of the Planning and Development Regulations 2001 (as amended), it is considered that an EIA is required for the proposed development.

The application is accompanied by an EIS, which was submitted with the planning application on 19/12/14. It is presented in four volumes: Volume 1 - a Non Technical Summary, Volume 2 - the main EIS, Volume 3 – Appendices and Volume 4 – ZTVs and Photomontages together with AA screening report and Outline Construction and Environmental Management Plan. The main EIS report is comprised of 15 no. chapters under the following headings:

1. Introduction
2. Description of Proposed Development
3. Policy and legislation
4. EIA scoping, consultation and key issues
5. Ecology
6. Geology, Hydrogeology and slope stability
8. Landscape and Visual Impact
9. Noise and Vibration
10. Human Environment
11. Air Quality and Climate

11. Traffic and Transportation
12. Cultural Heritage
13. Telecommunications and Aviation
14. Air and Climate
15. Interactions of the foregoing.

In accordance with the requirements of Article 3 of the European Directive 85/337/EEC, as amended by Council Directives 97/11/EC and 2003/35/EC and Section 171A of the Planning and Development Act 2000 (as amended), the environmental impact statement submitted by the applicant is required to be assessed by the competent authority, at this stage the Planning Authority. In this assessment the direct and indirect effects of the proposed development need to be identified, described and assessed in an appropriate manner, in accordance with Articles 4 to 11 of the Directive. The following report identifies, describes and assesses the likely significant direct and indirect effects of the project on the environment as well as their interactions. To conclude, a commentary on the adequacy of the EIS will also be provided.

As per S171A of the Act, the direct and indirect effects of a proposed development must be assessed in relation to the following: human beings, flora and fauna, soil, water, air, climate and the landscape, material assets and the cultural heritage. In addition the interaction between these factors must also be considered.

1. Identification of the likely significant direct and indirect effects of the project on the environment

It is proposed here to identify the main likely effects as they apply to the development under a range of headings as follows:

Human Beings

- Employment at construction stage and operation phase,
- Impact on tourism and recreational amenity
- Shadow flicker
- Noise
- Visual outlook of local residents
- Traffic and roads

Flora and fauna

- Impacts on onsite/adjacent habitats
- Effects on offsite Special Protection Area & Special Areas of Conservation
- Impacts on birds and species
- Impacts/disturbance on avifauna,
- Impacts on bats

- Impacts from invasive species

Soils and Geology

- Excavation of ground material from borrow pit for roads and hard standings
- Soil disturbance

Water

- Impact on water quality in nearby streams/Rivers during construction phase
- Impacts on groundwater
- Impacts on site drainage/surface water
- Impacts on flooding pattern

Air, Climate, Noise and Vibration

- Climate Change
- Potential for dust during construction phase
- Noise/vibration disturbance

Landscape and Visual Impact

- Landscape and visual impact of height of turbines on landscape
- Scale and extent of visibility
- Impact on landscape character
- Impact on important and /or designated scenic views
- Cumulative impact with other permitted wind farms

Material Assets

- Impact on local road network,
- Interference with telecommunications and aviation equipment

Cultural heritage

- Effects on existing/known archaeology
- Effects on newly discovered archaeology

Interactions (Matrix Table 15.1 of the EIS)
Humans and noise, visual impact, material assets, and tourism
Flora and fauna, air quality, water quality and soils
Hydrology and conservation sites
Landscape and the natural environment
Noise and material assets

2. Description of the likely effects arising from the development are identified

The information provided in the EIS and other documents submitted with the application, does not provide sufficient information which is required to

determine whether a potential effect will be likely, particularly in relation to flora and fauna, and soils & hydrology, landscape character and visual impacts. In the absence of reasonable evidence that an effect is not likely, it is therefore considered that the likely effects arising from the proposed development are anticipated to include the following:

Human Beings

Employment:	Short term local community impact at the construction stage and potential for some maintenance jobs at operational phase
Residents:	Construction activity- noise, traffic disruption (short term); Visual intrusiveness in respect of residential properties, shadow flicker, noise
Tourism/recreational amenity:	Visual and landscape impact on the natural tourism product and recreational amenity
Visual Outlook:	Visual intrusiveness in respect of residential properties, shadow flicker,

Flora and Fauna

SAC	Impacts on watercourses due to drainage and soil disturbance, pollution
Habitat	No designated sites within site although there are habitats present. No. of designated sites in wider vicinity - potential for destruction/removal/loss/fragmenting of habitats on the site through excavation and earthworks; construction of turbines and associated infrastructure including borrow pit and roads
Species	Disturbance of species
Avifauna	Fragmentation and removal of habitat; disturbance, collision risk, displacement

Soils and geology

Extraction of ground material:	Impact on the quantity and quality of ground water; alter established drainage patterns; alter groundwater flow; increase flooding; increase the vulnerability of the aquifer; pollution; soil displacement;
Removal of habitats	Soil removal, creation of access roads, hard standings

Water

Water quality:	Risk of release of suspended solids into watercourses as a result of peat excavation. Risk of water contamination from silt, hydrocarbons, chemicals during construction;
Surface Water:	Alter natural pattern of discharge; intensify flows
Groundwater	Alter groundwater flows; impact on ground water

	dependant habitats

Air, Climate, Noise and Vibration

Climate Change:	Role of renewable energy and climate change
Noise disturbance:	Noise disruption due to increased traffic during construction, mechanical and aerodynamic noise impacts on residents
Air quality	Dust emissions

Landscape and Visual Impact

Scale, height and extent of visibility:	Visual effects at a local level and on the wider area beyond the site
Landscape character:	Distortion of the natural landscape character
Impact on important views	Views into, across and beyond site from scenic routes

Cultural heritage

Archaeology:	Disturbance to or destruction of known and undiscovered onsite archaeology;

Material Assets

Road network	Impact of increased traffic during construction, including transportation of materials, equipment and construction workers; Impact of increased traffic during transportation;
Telecommunications	Electromagnetic interference with telecommunications and television signals and aviation navigation equipment

Interactions

The effects of the interactions between humans and air quality, the visual landscape, flora & fauna and water and soils; and landscape and the natural environment are implicit in the range of preceding issues listed.

3. Assessment of the likely significant effects identified, having regard to the mitigation measures proposed

The assessment in the main body of this report has fully considered the range of relevant likely significant impacts with due regard given to the mitigation measures proposed to be applied with the proposed development proceeding. What follows is a short list of some of the most important mitigation measures proposed to be employed which are considered necessary to address the range of potential significant impacts arising from the proposed development.

Human Beings

Shadow flicker	The EIS concluded that shadow flicker is predicted to

	occur at 7 no. properties, mitigation can be implemented if the need arises – screening vegetation/turbine control
Visual outlook	Separation distances, Planting

Flora & Fauna:

SAC/SPA	Site drainage management plans: pollution and sediment control; Outline Construction and Environmental Management Plan (CEMP); protection of watercourses
Habitats	Site drainage management plans; pollution and erosion control; CEMP; measures to ensure that alien species are not introduced,
Species	CEMP & Drainage management plan; replacement planting, installation of artificial bat roosts
Avifauna	Monitoring surveys and timing of works; CEMP;

Soils and geology

Excavation of subsoils/rock	Site investigations; Stockpiling area and assessment; road construction to be carried out outside of periods of heavy rainfall: CEMP; traffic movements limited to proposed access roads; road construction; drainage construction and layout;
Groundwater	CEMP, reduce run-off to watercourses

Water

Water quality	Site drainage management plan: drainage design and control; sediment and erosion control measures; hydrocarbon and refuelling measures: CEMP; monitoring of works, drainage and drainage works and watercourses

Air, Climate, Noise and Vibration

Noise disturbance	Construction and environmental Management Plan; construction hours; standards; use of appropriate mechanical plant and equipment; Traffic management plan
Climate	Proposed development will contribute to limiting CO2 emissions

Landscape and Visual Impact

Landscape character and important views	Separation distance from public realm, Planting: Limited storage of vehicles; dedicated parking and refuelling areas, buffer zones;

Cultural Heritage

Archaeology	Archaeological monitoring, buffer zones

Material Assets

Local Environment	Construction and Waste Management plan;
Traffic and roads	Relevant consultations; road signage; scheduled traffic movements; TMP
Telecommunications/Aviation	Adherence to protocol

Interaction
There is a distinct interrelationship between a wide range of mitigation measures applied, notably in the relationship between soils, hydrology, and flora and fauna, between residential impacts and noise, and between the natural environment and the visual and landscape impacts. These interactions would have a potentially significant effect, depending on the effectiveness or otherwise to mitigate risk.

Residual Effects
Conclusions regarding the acceptability or otherwise of the likely residual effects identified:
The conclusions regarding the acceptability of the likely main residual effects of this proposal are clearly set out under the various headings of the main assessment. The principle areas of concern in this case relate to landscape and visual impacts as a result of increase in turbine height, ecology, residential amenity and potential for noise impacts.

Adequacy of the Environment Impact Statement
Article 94 and Schedule 6 of the Planning and Development Regulations 2001, as amended, sets out the information to be contained in an EIS and, in my opinion, the document accompanying the application does technically accord with the said details with the subjects to be addressed set out therein.

While I do not consider that shortcoming in the EIS are such that it would render the EIA deficient in legal terms, further information is required in a number of areas, as outlined, in order for a full EIA to be carried out for the proposed development, in accordance with the relevant EIA regulations.

This specifically relates to a cumulative evaluation of the proposed development along with the wind farm developments permitted at this site location.

13. Conclusion

The National Policy with regard to renewable energy strongly encourages the expansion and development of wind farms to meet out our international

climate change obligations. This aim is reflected in the policy objectives detailed in the CDP 2014 with regard to renewable energy production.

Cork County Development Plan, 2014 has identified a number of wind deployment areas for large scale commercial wind energy. The subject site is located in an area where wind energy proposals are deemed to be 'Acceptable in Principle'. Having regard to the development plan policies, the planning history attached to this site and the existing wind farm development nearby it is considered that the principle of the proposed development can be considered at this location.

In light of the previously permitted wind farm development at this site and the visual assessment carried out to date it is felt that the proposed development can be further considered from a visual viewpoint. However, in order that a full visual and landscape character assessment can be carried out, further information will be required.

There are concerns with the development from an ecological and noise viewpoint. The recommendation and comments of the Heritage Unit and Environment Section are noted. In order to fully consider the proposed development further information is required.

14. Recommendation

It is recommended that a decision be DEFERRED for the following further information.

It is considered that the information submitted with this application is not sufficient to enable the Planning Authority to make a decision in this case. Therefore to enable the Planning Authority to give further consideration to your application, please submit the following;

General

1. Submit a revised site layout plan which clearly (in a different colour) outlines the location of the previously permitted 14 no. turbines in the context of the location of the proposed 6 no. turbines.

2. Please submit a larger, more detailed map at A1 scale showing the location of all existing dwellings in the vicinity of the site (within 1km). The location of existing roads should be clearly visible.

Zones of Theoretical Visibility (ZTV's)

3. The ZTV's submitted have been overlaid on 1:80,000 Series map. As detailed in the wind energy guidelines 2006 the ZTV's should be overlaid on the 1:50,000 series Ordnance Survey maps and printed at a

larger scale to ensure that locations theoretically exposed to viewing can be easily identified. The Guidelines also outline that the scale of the maps should be such that the underlying information such as place names and roads are clearly legible. The ZTV's should be revised to address this.

4. The ZTV's should be revised to detail all scenic routes and all relevant landscape designations and types, as outlined in the 2014 CDP.

5. The ZTV for cumulative assessments should be revised to clearly detail adjacent and neighbouring windfarms and turbine locations along with the proposed development.

6. The ZTV should detail appropriate legends and colour coding, particularly for visibility '1 to 2'.

7. The ZTV submitted are limited to a 20km extent. This should be extended to 25km where there are landscapes of national or international renown, in accordance with the guidelines as outlined in the 2006 Wind Energy Development Guidelines (DOEHLG). Applicant should clarify if there are landscapes of national or international renown and revise as applicable.

Photomontages

8. Applicant should clarify if the PM's have been prepared in accordance with relevant preparation criteria as outlined in the WEG 2006. Camera focal lengths used should be outlined and View distances should be clearly stated.

9. The location of viewpoint 12 should be clarified. Viewpoint 12 appears to be missing from the photomontages and two images are submitted for viewpoint 11.

10. Panoramic viewpoints should be enlarged.

11. It is noted that a number of the photomontage's detail overcast weather. The PM's should also be revised to detail clear weather (blue sky) conditions throughout, in order to fully assess the maximum visual impact of the proposed, existing and permitted developments.

12. The proposed and existing individual turbines at this site location should be numbered on wireframes to allow for ease of reference.

Turbine Infrastructure and dimensions

13. Clarify the proposed MW output for the Turbines, individually and in total.

14. The turbine drawings should be revised to include measurements of blades, hub height, and blade tip.

Grid connection

15. The content of the third party submissions raises a number of issues and in particular it is noted that reference is made to a recent judicial review proceedings in O'Grianna v An Bord Pleanala. In this regard you are advised to outline your views on the matter having considered the submissions and considered whether project splitting has occurred.

Wind take

16. Having regard to Section 5.13 of the Wind Development Planning Guidelines, a layout plan detailing the proposed development along with the location of adjacent wind farm turbines should be outlined.

17. The applicant should also clearly outline on a map the distance in metres between the proposed turbines to existing turbines on the Garranereagh site.

18. The applicant should outline if the proposed development will have any impact on the optimal performance of adjacent wind turbines, if applicable.

Ecology

19. **Gearagh SPA, Mullaghanish to Musheramore SPA and on Wintering Waterbirds** - Additional information is required from the applicants to provide a better understanding of patterns and level of usage of the development site by wintering waterbirds, Hen Harrier and any other species of conservation concern that are known to be vulnerable to impacts from windfarms which were recorded during the winter season. Particular attention should be paid to species for which the SPAs and the surrounding wetland pNHAs have been identified to be important, and to raptors. The applicants are requested to provide their records for each timed VP winter watch, and the viewsheds for each VP should be shown on a map which includes the development boundary. Any information has been recorded relating to patterns of movement or behaviour of recorded species, within 500m of the development boundary of the site should be provided. This is in order to establish whether the site is located on a commuting route between wetland or upland sites in the surrounding area, to identify whether there is any connectivity to the above listed SPAs, or to other wetland bird sites, and to identify whether the site itself is of importance for wintering bird species. This assessment of potential for impacts on any of the above listed species identified to be using the area should be made having regard to SNH Guidance (see below), and should have

regard to potential for cumulative impacts having regard to the existing wind farm at Garranereagh. Revision of the AA Screening Report may be required.

20. **White-tailed Sea Eagle** - The Irish Raptor Study Group hold records of movements of White-tailed Sea Eagle within the vicinity of this development site. It is recommended that the applicants be requested to clarify whether regard was had to these records for the purposes of completing assessment in relation to this species. A revised assessment may be required, if additional information relating to the occurrence of this species within the vicinity of the proposed windfarm emerges. This assessment should be made having regard to SNH Guidance (see below) and should take account of potential for cumulative impacts to arise having regard to the existing windfarm at Garranereagh.

21. **Barn Owl** - It is recommended that the applicants be requested to clarify whether regard was had to BirdWatch Ireland records for the purposes of their Barn Owl assessment. A revised assessment may be required, if additional information relating to the occurrence of this species within the vicinity of the proposed windfarm emerges. This assessment should be made having regard to SNH Guidance (see below) and should take account of potential for cumulative impacts to arise having regard to the existing windfarm at Garranereagh.

22. **Kestrel and Snipe** - It is recommended that the applicants be requested to provide additional detail in relation to their records of these species within the site, and that they provide an assessment of the potential for the development to give rise to impacts on these species, and the likely significance of any impacts which are identified. This assessment should be made having regard to SNH Guidance (see below) and should take account of potential for cumulative impacts to arise having regard to the existing windfarm at Garranereagh.

    Assessment of the potential for the proposed windfarm to give rise to impacts on all species of bird referenced above, for which records of occurrence within or near the site exist, should include assessment of potential for impacts relating to habitat loss, displacement and collision risk. Assessing the significance of any identified impacts should be completed in accordance with SNH Guidance -Assessing Significance of Impacts From Onshore Windfarms on Birds Outwith Designated Areas (2006). Regard should be had to the potential for cumulative impacts in the making of these assessments. Where additional mitigation is required to minimise potential for impacts on any bird species on foot of these assessments, this should also be provided.

23. **Bats** – It is recommended that the applicants be requested to provide all results of bat survey work that was completed during the summer of 2014. This should include records of dates, times, locations and species for all bat sightings/recordings, and information relating to size and importance of known roost sites within 10km of the proposed development. All prospective or identified bat commuting routes and hunting areas within and adjacent to the site should be identified on a map. Figure 5.4 in the EIS should include the development site boundary as well as the study boundary and species specific information for bat records.

    It is not entirely clear what mitigation is proposed to minimise impacts on bats. According to table 5.7, no removal of treelines or hedgerows is required, however, the habitat map (no scale provided) which has been provided indicates that a number of turbines including T2, T3 and T6 are all located adjacent to such features, and section 5.7.3 of the EIS suggests that vegetation clearance around turbines will be carried out. In the interest of clarity, locations of all scrub, treelines, hedgerows and stonewalls / banks which are proposed to be removed to minimise risk of impacts on bats should be identified on a map. Locations of new hedgerows or treelines which are proposed to be established within the proposed development site (as per pg 82 of the EIS) to mitigate for any such removal should also be identified on a map, and the details of species to be planted should be provided. It should be demonstrated that featureless buffer areas to be maintained around turbines have been calculated in accordance with Bats and Onshore Wind Turbines (Natural England Technical Information Note TIN051) and can be provided within the red line boundary. Where additional areas outside the development boundary are required to be managed as bat buffer areas, clarification should be provided as to how this can be achieved.

    The assessment of potential for impacts on bats should be extended to include a detailed assessment of potential for the development to give rise to collision and / or barotrauma impacts. Likely significance of identified impacts on individual species of bat at a population level should also be included and should take account of potential for cumulative impacts to arise having regard to the existing windfarm at Garranereagh. Where additional mitigation is required to minimise potential for impacts on bats species on foot of the revised assessment, this should also be provided.

24. **Terrestrial Habitats** - It is recommended that the applicants be requested to provide a revised habitat map with complete legend showing the full extent of the development site as well as the study

boundary (scale 1: 10,560). Please also provide an estimate of the area of each habitat type which will be required to be removed from the site to provide for the development of turbine hardstands, new roads and widening of existing roads/tracks and turning areas, development of borrow pit, temporary compound and all other ancillary infrastructure, and to create buffer zones for bats.

25. **Freshwater Habitats and Species** – No information has been provided in the EIS in relation to the fisheries and ecological value of either the Bride or the Cummer Rivers. It is proposed to discharge surface waters from this proposed development to a new drainage system which links to the Bride River in the south, and to the Cummer River to the north of the site, however, it is stated in the EIS that the increased levels of run-off will be of negligible significance in terms of hydrology, and that there is a negligible risk that this run off will give rise to impacts on water quality having regard to the protection measures which are to be implemented on site during the construction phase. These conclusions should be verified by a competent person. In the event that potential for impacts on hydrology/water quality on are identified, then further information in relation to the ecology and fisheries value of these and potential for impacts on same will be required from the applicants.

Noise and Vibration

26. Full location and descriptive details of the identified and referenced baseline noise monitoring locations should be submitted including the length and duration of monitoring conducted.

    The selection process for such locations should be clearly outlined, explained and demonstrated. All information to support the claim that such locations are representative of noise sensitive locations in the vicinity of the proposed development should be submitted.

    All input data used for the purpose of the selection of the monitoring locations should be submitted as well as details of any documentation, site assessments undertaken etc, to support and verify such input data and the claim that the selected locations are deemed representative of all non-surveyed noise sensitive locations in the vicinity of the proposed development.

    The presence or otherwise of local noise sources noted at the identified locations should also be identified and commented on.

27. All on-site noise field log sheets in addition to all noise monitoring equipment and calibrator calibration results and certifications should be submitted.

28. Details of where wind speed measurements were conducted for the purpose of this assessment should be submitted and fully explained. A scaled map identifying the location of any on site meteorological mast that was used for the purpose of wind speed data collection should be submitted. The location and level of the mast should be clearly identified and plotted relative to the specific locations of the proposed turbines.

    The respective distance of this mast to each proposed turbine and its location relative to same should also be clearly detailed.

29. The applicant should comment on the impact of any site specific wind shear and if the impact of same has been taken into account of in the monitoring data collected and used as part of the assessment.

30. Further assessment, examination and evaluation of existing background noise should be conducted in order to examine and fully quantify the current existing noise climate.

    All monitoring data should be submitted. Such assessments should have due regard to wind speed, wind direction and rainfall over the same time periods. The applicant should clarify the periods of noise data that were excluded from analysis due to periods of rainfall.

    Summary data tables should also be submitted to further illustrate and support the above.

    It is also noted as per Table 9.6 of the submitted E.I.S. that night results for H-48 at winds of 11m/s and 12m/s are elevated above all other results. The applicant should be asked if they have any comment to make or any explanation for this.

31. The rationale in applying the higher assessment noise limit of 40dB LA90 10 min for quiet daytime environments of less than 30 dB LA90 10 min. in the application as opposed to a 35 dB LA90 10 min Should be fully clarified and explained.

    The Derived noise limits as per section 9.4.3 of the submitted Environmental Impact Statement should also be fully explained and a clear trail should be evident between the measured baseline noise

levels, relevant DoEHLG guidance and resultant noise limits subsequently derived.

32. Full details of the model and input data used to produce the predicted noise levels at sensitive locations should be submitted. Any documentation to support and verify such input data should also be submitted. In this regard it is noted that the final make and model of turbine has not been decided to date. The impact the final choice of turbine (if different to the one used in the model) will have on predicted noise levels should be clearly demonstrated and illustrated. An Assessment of tonality with reference to the proposed Wind Turbine Manufactures octave sound power data at all operational speeds and modes of operation should also be undertaken. The impact of the proposed substation on the final predicted noise levels should also be clarified.

33. Full details of the final predicted Turbine Noise levels arising from the proposed development at sensitive receptors should be submitted covering a range of wind speeds. The receiver height of the final predicted noise levels should also be clarified.

    It should be clearly demonstrated how the overall predicted results were arrived at and a clear trail should also be evident between the predictive model used and the final conclusions.

    Any changes in the overall final predicted and cumulative noise levels at noise sensitive locations should be highlighted and commented on with any adjustments undertaken if necessary for the presence or otherwise of tonal/impulsive elements.

34. Construction phase noise impact assessment should be undertaken and submitted.

Transport/traffic

35. It is proposed to utilise a borrow pit on site for road making materials, however if materials have to be sourced from outside the site will the delivery route for these be the same route as highlighted in the planning application? The same query applies to concrete deliveries and all other deliveries other than the cranes and turbines.

36. The proposed route for deliveries in the planning application suggest these routes are for a one way delivery and access system. If this is the case the other routes (exit routes) need to be specified as to allow for calculation of the length of road which will be affected by the construction traffic.

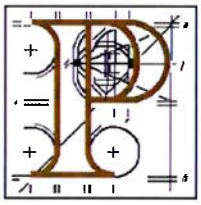
Defer Application

Carol Stack

Carol Stack
Executive Planner
19/02/2015

APPENDIX 2

An Bord Pleanála



Inspector's Report

PL04. 245824

DEVELOPMENT:	A windfarm with 6 turbines
ADDRESS:	Barnadivane and adjacent townlands, Terelton, Co. Cork

PLANNING APPLICATION

Planning Authority:	Cork County Council
Planning Authority Reg. No.:	14/6760
Applicants:	Barna Wind Energy (BWE) Ltd.
Application Type:	Permission
Planning Authority Decision:	Grant permission subject to conditions

APPEAL

Appellants:	1. Jerome Cohalan & Geraldine Hanley 2. Barna Wind Action Group
Type of Appeal:	3rd parties vs. grant

Observers:	1. Michael P. & Mary O'Riordan 2. Michael Allen 3. Anthony Cohu 4. Nigel Fennell 5. Teresa Flynn 6. Patrick Manning 7. Eleanor O'Leary 8. Sarah Hodkinson, Tony Miller & Daphne Babbington 9. Sarah Larkin
DATE OF SITE INSPECTION:	24th and 25th February 2016
INSPECTOR:	Stephen J. O'Sullivan

1.0 INTRODUCTION

1.1 This report deals with 2 third party appeals against a decision of Cork County Council to grant permission for a windfarm.

2.0 SITE

2.1 The site is in an upland area approx. 9km to the south of Macroom. The area is served by a number of regional and local roads linking Macroom town with Bandon to the south-east and Dunmanway to the south-west. The closest settlements are Terelton, (approx. 2km to the north west) and Coppeen (approx. 2km to Southwest) of the site. The site is located within a broad triangular area bordered by the N22 (Crookstown-Macroom), the R584/587 (Macroom to Dunmanway) and the R585 (linking the R587 north of Dunmanway back to Crookstown). The R585 travels in a NE-SW direction to the south of the upland area (through Bealnablath, Copeen and Slieveowen). The appeal site is located just over 1km north of the R585. The site is in the town lands of Barnadivane, Lissarda, Garraneragh, and Lackareagh.

2.2 The site has a stated area of 40ha. It includes a ridge which ranges in elevation from 170m OD in the south to 270m OD in the north. To the north of the site, the topography generally drops to about 70m OD towards the Lee Valley. The land slopes to the south towards the River Bride and there are a number of hills (generally around 250m OD) separated by river valleys to the east of the site, and a further series of hills to the west. The majority of the site consists of primarily agricultural grassland (cattle and sheep grazing) with grassland and commercial forestry in the surrounding area, which is characterised by an enclosed pattern of fields. There is a 110kv line passing through the site and several public roads traverse parts of the site. There is an existing development of 4 turbines 93m high immediately to the east of the site. There are 35 dwellings within 1km of a proposed turbine, of which 7 are stated to be stakeholder properties.

3.0 PROPOSAL

3.1 It proposed to build a windfarm with 6 turbines with a blade tip height of up to 131m, a maximum hub height of 85m and a blade length of 51.5m. The turbines would stand in a line. The most southerly would be at the lowest elevation, with the others on rising land to the north. There would also be a met monitoring mast 90m high. Around 1.96km of new access tracks would be laid, and 2.34km of existing tracks would be upgraded. The minimum width of tracks would be 5m, their maximum gradient 10%. A borrow pit would be

opened on the site to facilitate construction. Connection to the national grid would be via a sub-station which is the subject of a separate application and appeal – PL04. 244439, Reg. Ref. 14/557 – which itself would connect to the 110kV line that crosses the site. Underground cables would be laid to that sub-station from the windfarm proposed in this application– to which underground. The expected lifetime of the windfarm is 25 years. The EIS refers to an intention to establish a community gain fund that would make payment available to local residents, but details of its size or administration were not submitted.

4.0 POLICY

4.1 Directive 2009/28/EC on the promotion on the use of energy from renewable resources sets a target that 16% of the consumption of energy in Ireland be from renewable sources by 2020, and requires the state to make a national renewable energy action plan with targets for the share of energy from renewable sources that would be consumed in transport, electricity generation and heating, taking into account measures relating to energy efficiency on final consumption. Ireland submitted a National Renewable Energy Action Plan under the directive in July 2010. It sets a target that 40% of electricity consumed in 2020 will be from renewable sources.

4.2 The minister issued the Guidelines for Planning Authorities on Wind Farm Development and Wind Energy Development in 2006. Chapter 1 identifies the development of renewable energy sources as a national and European priority on grounds of energy and environmental policy, to be implemented with due regard to the binding requirements of the Habitats and Birds Directives. Chapter 3 states that the assessment of individual proposals for wind energy development must be undertaken on a 'plan-led' basis, which involves the setting out in development plans of areas considered suitable or unsuitable for wind energy development.

4.3 Chapter 5 refers to the environmental implications of wind energy development. Section 5.2.2 states that the potential impacts to birds are disturbance, barriers to movement and degradation of habitats, with collision mortality a low risk. Section 5.6 refers to noise. While is no set-back distance from houses is specified, it is indicated that noise is likely to a problem at less than 500m. A noise limit of 45dB(A) or a maximum increase of 5dB(A) above background levels at noise sensitive locations is considered appropriate., with a fixed limit of 43dB(A) at night. In low noise environments where the background level is less than 30dB(A) an absolute noise limit of 35-40dB(A)LA90, 10mins should be

applied. Noise is unlikely to be a problem where the nearest property is more than 500m away. 5.12 states that the impact at neighbouring offices and dwellings within 500m should not exceed 30 hours per year or 30 minutes per day. It goes on to state that at distances greater than 10 rotor diameters the potential for shadow flicker is very low.

4.4 Chapter 6 refers to aesthetic considerations. It provides indicative and general guidance. It states that particular landscapes of very high sensitivity may not be appropriate for wind energy development. Section 6.9 refers to various landscape types. In hilly and flat farmland, the spatial extent of windfarms can be quite limited in response to the scale of fields and topographic features. Sufficient distance from buildings must be established to avoid dominance by wind energy development. With regard to cumulative impact, it is important that the wind energy development is never perceived to visually dominate, but as these landscapes comprise hedgerows and hills the views across the landscape are likely to be intermittent and the visibility of two or more development is usually acceptable. Section 6.9.4 refers to transitional marginal landscapes. Wind energy developments should avoid adding to the complexity of these landscapes due to the risk of visual confusion and conflict. Developments with a small extent and irregular layout are recommended. The spatial enclosure in such landscapes is likely to preclude the possibility of seeing another development.. Section 6.16 states that the estimation of the likely impact on the landscape depends upon four parts – landscape sensitivity; visual presence of the development; aesthetic impact of the development on its landscape context; and the significance of the impact.

4.5 Chapter 7 refers to conditions that may be placed on grants of permission. Section 7.20 states that planning authorities may grant permission for a duration of longer than 5 years to ensure that permission does not expire before a grid connection is granted.

4.6 The minister published proposals for some revisions to the guidelines in December 2013 which would provide for: a more stringent absolute outdoor noise limit (day and night) of 40 dB for future wind energy developments; a mandatory setback of 500m between a wind turbine and the curtilage of the nearest dwelling for amenity considerations; and a condition to be attached to all future planning permissions for wind farms to ensure that there will be no shadow flicker at any dwelling within 10 rotor diameters of a wind turbine. The guidelines have not been changed to date

4.7 The Cork County Development Plan 2015-2020 applies. Objective CS4-2e of the plan is to strengthen and protect the rural communities of the area by encouraging sustainable growth in population, protecting agricultural infrastructure and productivity so that agriculture remains the principal rural landuse and focussing other employment development in the main towns and key villages. Policy RC1-1 is to strengthen rural communities and counteract declining trends within settlement policy framework while ensuing key assets in rural areas are protected to support quality of life and rural economic activity. The site is in a rural area identified as being under strong urban influence. Section 13.6 of the plan identifies high value landscapes. The Lee valley to the north of the site is one such landscape, but the site is outside the designated area. Policy GI-2 is to protect the character of views and prospects from designated scenic routes. A looped route south of Teerelton and north of the site is one such route: SR 36.

4.8 Section 9.3 of sets out a wind energy strategy for the county. This site is in an area designated as 'acceptable in principle' for wind energy development. Objective ED-4 is that commercial wind energy development is normally encouraged in these areas subject to protection of residential amenity particularly in respect of noise, shadow flicker, visual impact and the requirements of the Birds, Habitats, Flood and Water Framework Directives.

5.0 HISTORY

5.1 PL04. 204928, Reg. Ref. 03/2365 – the board refused permission in March 2004 for a windfarm of 23 turbines up to 100m high on the site as the development would be visually obtrusive and injure the amenities of the area and property in the vicinity. The planning authority had decided to grant permission.

5.2 PL04. 219620, Reg. Ref. 05/5907 – the board granted permission in February 2007 for a windfarm on the current appeal site with 14 turbines each up to 105m high, including a substation and a connection to the 110kV line that crosses the site. The planning authority had decided to grant permission. The inspector had recommended that permission be refused as the development would be visually obtrusive and injure the amenities of the area and property in the vicinity. The appropriate period for this permission was extended by the planning authority to 13th February 2017.

Concurrent applications

The following two applications were made by companies connected to the current applicant, and the three proposals were described by the applicant in this case as a replacement for the wind energy development authorised under PL04. 219620, Reg. Ref. 05/5907

5.3 Reg. Ref. 244439, Reg. Ref. 14/557 – An application is before the board for permission for an electricity substation that would connect the windfarm proposed in this case to the national grid. The planning authority had decided to grant permission.

5.4 Reg. Ref. 14/06803 – The planning authority granted permission on 27th July 2015 for a private road c150m between the R585 and L6008 that would facilitate delivery of components for the windfarm on the current appeal site.

Another application cited by parties

5.5 PL04. 243486. Reg. Ref.13/551 – An appeal is before the board against a decision to grant permission for 12 wind turbines at Shehy More c20km west of the appeal site. The applicant is that case has proposed connecting to the national grid at the sub-station proposed under PL04. 244439, Reg. Ref. 14/557.

6.0 DECISION

6.1 The planning authority decided to grant permission subject to 32 conditions, none of which significantly altered the proposed development. .

6.2 The reason for the decision referred to development plan objectives and the pattern of development in the area, and stated that the proposed would not injure the amenities of the area or be prejudicial to public health.

6.3 Condition no. 1 referred to plans and particulars submitted on the 19th December 2014, the 26th May, 5th June, 20th July and 10th September 2015.

Condition no. 2 stated that the permission would have a duration of 10 years in the interests of clarity and orderly development.

Condition no. 4 required the submission of a Construction Environmental Management Plan (CEMP).

Condition no. 23 sets operational noise limits of 43dB(A)$_{LA90,\ 10min}$ or 5dB(A) above background levels at any sensitive receptor.

Condition no. 30 sets a limit on shadow flicker at any dwelling of 30 minutes per day or 30 hours per year.

7.0 REPORTS TO THE PLANNING AUTHORITY

7.1 Submissions – A large number of submissions were received by the planning authority that objected to the development on grounds similar to those raised in the subsequent appeals and observations to the board.

7.2 Department of Arts, Heritage and the Gaeltacht – Archaeological monitoring should be required by condition.

7.3 Area Engineer – The first report stated that further information is required regarding deliveries. The development is not likely to have a negative impact on surface water runoff. A bond for road repairs would be required. The report on the further information stated that is was satisfactory and recited conditions to be attached to any grant of permission.

7.4 Heritage Officer – The first report stated that the site is of lower ecological significance. There were some deficiencies in the information contained in the AA report and EIS. The report on the further information stated that the potential for significant effects on any cSAC or SPA can be screened out. The site does not have habitats or host species that are of significant ecological interest. No significant impacts on bird species is likely. Subject to the implementation of a CEMP agreed with the planning authority there is no objection to a grant of permission.

7.5 Environment Section - The first report stated that further information was required in respect of noise, as did the report on the further information. The report on the clarification of further information stated that it was acceptable and there was no objection to a grant of permission subject to conditions.

7.6 HSE – Concerns are expressed about the conclusions of the EIS in relation to noise, vibration and shadow flicker.

7.7 Planner's report – The first report stated that the principle of the development was established by the designation of the area under the county's wind energy strategy and the extant permission. Further information is required for a visual assessment, as the ZTV maps do not include heritage designations or scenic routes and the scale is too large. The impact of noise is not likely to be significant except at stakeholder properties. The EIS is technically sufficient, but it was recommended that further information be sought in relation to visual impact; ecology and bird activity; noise assessment; and traffic. The report on the further information stated that adequate information had been submitted with regard to the environment and water quality, and the Heritage Officer is satisfied with the information. Clarification should be sought with regard to noise in line with the report from the Environment Section. The report on the clarification included an EIA of the cumulative impact with the proposed grid connection to the Shehy More windfarm and its connection to the national grid. A grant of permission was recommended..

8.0 GROUNDS OF APPEAL

8.1 The grounds of the appeal from Jerome Cohalan and Geraldine Hanley can be summarised as follows-

- The proposed development would have a negative effect on the value of houses in the area, including the appellants'. A letter from an estate agent was submitted which states that adjacent windfarms make properties less desirable and thus more difficult to sell.

8.2 The grounds of the appeal from the Barna Wind Action Group can be summarised as follows-

- The extent of the local opposition to the proposed development is a material consideration for the board. It has been demonstrated in the large volume of submissions to the planning authority on the application and has been echoed by the elected members of the planning authority.

- While there are public policies to support renewable energy, these must be set against the also national, regional and local policies to strengthen and respect the life of rural communities and families, in particular policy CS4-2E of the development plan. The board needs to make clear in its decision how it reconciles these conflicting objectives.

- Large wind turbines can render homes uninhabitable. Many houses have had to be abandoned due to bad decisions by planning authorities to permit them. The review of the wind energy guidelines shows that the existing ones are not fit for purpose. Noise modelling has been shown to be unrealistic. The area is quiet and is designated for recreation. The baseline monitoring results presented by the applicant are unacceptable.

- The site drains via the Cummer River to the Carrigadrohid Reservoir which is part of the Gearagh SPA and cSAC. It was wrong to state that there were no hydrological connection between the appeal site and the Natura 2000 sites, and proper information has not been submitted to inform an appropriate assessment in accordance with the requirements set out in the Kelly judgment. SPAs have not been properly designated, as shown in the ECJ judgment in case C418/04, and the county's wind energy strategy is not compliant with the requirements of the Bird Directive. Adequate information was not submitted in relation to the White Tailed Sea Eagle which is expected to breed at Gearagh, nor on the impact of the development on Kestrel, snipe or meadow pipit. Hedgerows have been removed from the site since the application and EIS were submitted. This would effect the habitat of bats and requires a re-assessment of the proposed development. The submitted habitats map is inaccurate. The Senior Executive Planner was wrong to state that there were not major watercourses on the site as the Bride River runs along its southern margin. The issue of invasive species along the haul route was not properly considered.

- The proposed sub-station would constitute strategic infrastructure. It is an integral part of the proposed windfarm following the law set down in the O Grianna judgement, which should therefore also be considered as strategic infrastructure. The application form is incorrect to state that there would not be emissions from the development, as noise and dust would occur during construction, as would significant traffic. The application is therefore invalid.

- There is a high concentration of farms and houses near the site. The proposed windfarm would have a permanent visual impact that could not be mitigated. As such it would materially contravene the development plan's provisions to protect scenic routes. It would impinge on waymarked walking trails and tourism in the area. The previous permission on the site does not establish a precedent for the current proposal and should not be

used as the 'do-nothing' scenario against which its environmental are compared. There have been permission on the site for years which has not been implemented. The board's inspector recommended refusal in the previous case on grounds of visual impact. It has been established by the ECJ in the case C09-50 and by the High Court in the Kelly and O Grianna cases that the Irish regime for EIA and AA in force at the time of the previous decisions was defective.

- Adequate information was not submitted regarding construction and traffic and the development would cause traffic hazard.

- Adequate information was not submitted regarding hydrology and the development would threaten was quality.

- There is no justification for a 10 year permission.

- Various documents were appended to the appeal, including the editorial from the British Medical Journal by Hanning and Evans regarding wind turbine noise and sleep; other submissions from Dr Hanning; a clinical review from the Journal of the Royal Society of Medicine on diagnostic criteria for the health effects of wind turbines; a Portuguese report on wind turbine noise and health; an e-mail from the deputy CMO regarding the health effects of wind turbines; and plans of the waymarked walking trails from Coppeen.

9.0 RESPONSES

9.1 The planning authority did not respond to the appeal.

9.2 The applicant's response to the appeal from Jerome Cohalan and Geraldine Hanley referred to studies in the UK and US that did not find a negative relationship between property values and proximity to wind turbines. It stated that the statements in the appeal were speculative, and that wind energy development was already established in the area.

9.3 The applicant's response to the appeal from the Barna Wind Action Group can be summarised as follows-

- The site is close to the N22 national primary road and the R585 regional road and is on a ridge line over the Bride River Valley. The nearest house would be c300m from a turbine and is occupied by a stakeholder. The

nearest of the 4 existing turbines to the east is c800m away. The reasons why three separate planning application were made to supercede the previous permission granted under PL04. 219860 were outlined to the planning authority. Adequate information has been submitted to assess the likely environmental effects of the necessary grid connection. The extant permission remains valid. It was subject to EIA and will be implemented by the applicant if the current applications are not granted. All the current applications were accompanied by AA screening reports which appraised the cumulative impact.

- The type of development proposed is supported by national energy and planning policy. Its location is supported by the provisions of the development plan.

- The current guidelines provide the most useful and practical guide to assessing the impact on wind energy development on residential amenity. The 500m setback which it recommends is generally accepted as adequately dealing with issues of visual dominance. The proposed development maintains this separation distance from houses that are not involved in the scheme. It meets the noise and shadow flicker limits set down in the guidelines.

- The applicant stands over the information and appraisals provided in the EIS. Surveys of bats indicated a paucity of activity on the site which is due to its high wind exposure. The clearing of vegetation around turbines is a mitigation measure to avoid bats using their vicinity as part of the foraging routes.

- The applicant has not determined the precise model of turbine to be used. However it has produced a robust noise model based on a turbine with a rated sound power output of 107.8dB, which the actual turbines will not exceed, that demonstrates that the proposed layout will conform with the limits set down in the guidelines. The Institute of Acoustic's guidance on post-construction monitoring will also be implemented by the developer.

- The AA screening report acknowledges the link between the site, the Cummer River and the Carrigadrohid Reservoir. However the nearest turbines will be setback 600m from the river and the reservoir would be 11.5km further downstream. Also the cSAC is upstream of the point where the river joins the reservoir. So there is no significant possibility that the development could effect water quality in the cSAC.

- Every effort was made to obtain information on the White Tailed Sea Eagle. The council's heritage officer is aware of recorded sightings in the Lee valley. However the area around the appeal site lacks suitable breeding or nesting habitats for eagles. There was no sighting of an eagle during the vantage point surveys that were carried out for the applicant over the winter of 2013/2014 which occurred in accordance with the 2014 guidance from Scottish Heritage over a period of 36 hours. Snipe and kestrel use the area from time to time, but it would not be a significant habitat for those species. As a passerine bird, meadow pippits are not particularly vulnerable to wind turbines.

- The applicant does not control the site and cannot prevent minor alterations to it. The hedgerows that were removed since the making of the application are outside the footprint of the proposed development and would not alter the extent of vegetation clearance required as a mitigation measure for the proposed development. Walkover surveys were used to prepare the habitat map.

- Chapter 7 of the EIS adequately describes hydrology in the around the site. There would be no direct discharge to any watercourse, with all runoff from the windfarm draining to soakaways or vegetated filters. The watercourse along the southern boundary of the site is a tributary of the River Bride. The EIS addressed invasive species such a Japanese knotweed and specifies compliance with the NRA's guidelines on the matter. Liquid wastes were considered in chapter 2 of the EIS.

- An appendix to the response considers the likely cumulative effects on the environment from the proposed windfarm and the concurrently proposed substation and private road. It concludes that they would not be likely to be significant, over and above those that would arise from each element and which are described in the environmental report that accompanied the other applications and the EIS for this application.

10.0 OBSERVATIONS

10.1 The observations objected to the proposed development on various grounds, including those raised in the appeals. The additional grounds can be summarised as follows-

- The cumulative impact of the proposed development with existing and permitted windfarms must be assessed. They would result in a total of 63 turbines within 25km of the site. The proposed substation would serve more than just the current proposal. Related companies have permission for 5 turbines at Carrigarierk under Reg. Ref. 15/370 and 12 turbines are proposed at Shehy More under PL04. 243486. These should all be considered as one project. Effective mitigation measures cannot be implemented at all the sites together. The O Grianna judgement make it unlawful to split projects in the manner proposed by the applicant.

- Inadequate surveys were submitted to allow the impact of the proposed development on the birds of the SPA.

- Inadequate information was provided in respect of bat roosts, including those on observers' properties.

- It is not safe for people or animals to be in the vicinity of turbines due to the risks of fire, collapse and blade throw. The operation would also startle and endanger horses, and vibrations would have a negative impact on them and other animals.

- Adequate details were not submitted to demonstrate the consent of landowners to the application.

- The existing turbines interfere with wireless cameras at the dairy farm of Eleanor O'Leary.

- The policies supporting wind energy development have not been subject to strategic environmental appraisal, and there are better ways to meet the state's obligations and counteract climate change.

- The proposed development would lead to an excessive concentration of existing and permission windfarms in a landscape area beside one designated as of high value by the development plan. It would contravene that plan's objectives to protect views from the scenic route SR36 at Terelton, as well as views from SR26, 32 and 35.

- Inadequate information has been submitted on archaeology.

- Background ambient noise levels of 20dB(A) should be applied for this area. Noise levels in an open rural landscape are impossible to predict.

- The proposed development would give rise to a risk of flooding.

11.0 APPROPRIATE ASSESSMENT

11.1 The appeal site is not within or immediately adjacent to any Natura 2000 site. So the proposed development could not have a direct effect upon any such site. The appeal site lies within two sub-catchment areas which drain to the River Lee and the Carrigadrehid Reservoir below the designated SPA and SAC at the Gearagh. There are no other natura 2000 sites on the River Lee below the inflow from the sub-catchments containing the site until the SPA at the estuarine environment at Cork Harbour. So the proposed development could not have any downstream effect on the quality of waters or habitats or aquatic or terrestrial species in any Natura 2000 site. The SPA at the Gearagh is 6.8km to the north, and upstream, of the site. The species for which it is designated are teal, wigeon, mallard and coot. The habitats on the appeal site are predominantly grassland. They would have not have a significant role in supporting populations of such waterfowl 6.8km away. The results on the vantage point survey carried out by the applicant demonstrated that the site was not adjacent to a commuting route for those species either, with only a single overflight by a mallard recorded after 36 hours' observation. The bird surveys were adequate to allow screening for AA. The proposed development would not give rise to an indirect effect on the SPA due to disturbance or collision of birds of the species for which the SPA is designated, or otherwise. The Mullaghanish to Musheramore Mountains SPA is 14.7km from the appeal site. The species for which it is designated is the hen harrier. The appeal site is farther from the SPA than the distance of 10km from their nest within which hen harriers generally forage. The improved pastoral habitats on the site would not be conducive to that species. It was not recorded as having a significant presence on the site during the vantage point survey, with two observations of only 187 seconds in total, both of males. So the proposed development would not give rise to an indirect effect on that SPA either. As the proposed development would not give rise to direct or indirect effects on any Natura 2000 site, its effects in combination with other projects, including the existing 4 turbines to the east, the proposed sub-station before the board under PL04. 244439, or the proposed 12 turbines wind farm at Shehy More under PL04. 243486 could not be significant. It is therefore reasonable to conclude on the basis of the information available, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on any European site, and in particular the SAC and SPA at the Gearagh, sitecodes 000108 and 004109 respectively, or the SPA at the Mullaghanish to Musheramore Mountains, sitecode 004162, in view of those sites' conservation objectives. An appropriate assessment is therefore not required.

12.0 POLICY ASSESSMENT

12.1 The *Guidelines for Planning Authorities on Wind Energy Development* issued by the minister under section 28 of the planning act set out a policy that favours wind energy development. The type of development proposed in this case is supported by that policy. The guidelines direct planning authorities to set out policies in their development plans regarding the proper location of wind energy development. The current Cork county development plan identifies the area in which the appeal site lies as one where wind energy development is acceptable in principle. The location of the proposed development is supported by that policy. So both the nature and the location of the proposed development have support from explicit planning policies that are material considerations for this application and appeal. The validity or merits of policies adopted by the minister or planning authority are not open to review in the course of a planning application or appeal. The principle of the proposed development is therefore accepted. It does not inevitably follow from this conclusion that the proposed development would be in keeping with the proper planning and sustainable development of the area or that permission should be granted for it. There may be particular aspects of the proposal or the site on which it would stand that meant it would have an unacceptable impact. These matters are considered below.

12.2 One of the appellants cited public policies to strengthen and support rural communities, including policy CS4-2E of the development plan, as grounds to object to the proposed development. Such policies of the government and planning authority are material considerations for planning appeals before the board. However it is not clear that such general and aspirational policies would support a decision to refuse rather than grant permission in this case. If the proposed windfarm was likely to have a negative effect on the inhabitants of the locality, or upon the natural environment, or upon the function and development of the local community, this would in itself justify refusing permission. If not, then the explicit and specific planning policies in favour of wind energy development there should be followed. In either case the general policies in favour of rural development and rural communities could reasonably be cited to support the decision. The same appellant cited the volume and extent of local opposition to the proposed development as a ground of objection, including that from the elected members of the planning authority. However the submissions from parties in planning appeals fall to be judged on the merits of their particular arguments. The proper means whereby the weight of public opinion on a planning matter is given effect is through the policy making process set out

in part 2 of the planning act under which plans and guidelines are made by politicians who answer to the voters. These plans and guidelines then control decisions by officials under part 3 of the act who would not have the democratic mandate to determine the views of the public themselves. Part 2 of the act establishes a due process for the elected members of the planning authority to state policy which would take precedence over other statements by the same persons in other contexts.

13.0 ENVIRONMENTAL IMPACT ASSESSMENT

13.1 The following assessment draws on the environmental impact statement and other submissions made by the applicant, prescribed bodies and members of the public during the course of the application and the appeal. It seeks to identify, describe and assess the direct and indirect effects of the proposed development on the environment in relation to the following factors –

- Human beings, including the impact on human health and the effects of noise and shadow flicker
- Flora and fauna
- Soil
- Water
- Air
- Climate
- The landscape
- Cultural heritage, including archaeological and architectural heritage
- Material assets, including livestock, roads and houses
- The interaction of the foregoing
- Cumulative impacts

The assessment is of the project that is proposed under the application, which is the development of a windfarm of 6 turbines. The assessment has not been qualified or curtailed in deference to the previous grant of permission for another windfarm development on the site or the fact that the appropriate period of that permission was extended oo that it remains capable of implementation at this time. The adequacy of the submitted EIS is also assessed.

Human beings, including the impact on human health and the effects from noise and shadow flicker

Health

13.2 One of the appeals included copies of documents discussing possible effects from windfarms on human health, including an editorial from the British Medical Journal by Prof Evans and Dr Hanning regarding wind turbine noise and sleep. With regard to the topic of human health I would refer the board to the statement in the Dáil by the minister on 25th March 2015 based on the professional advice of the deputy Chief Medical Officer which in turn cites the conclusions of Australia's National Health and Medical Research Council that evidence is absent that wind farms cause adverse health effects for people. The submissions from the appellants and observers would not give reasonable grounds to refute that authoritative statement. The proposed turbines are located at some remove from occupied structures and could not cause a significant risk to human safety due to fire collapse or blade throw. The development proposed in this application would not by likely to have significant effects on human health.

Noise

13.2 Section 9 of the EIS contains an appraisal of the effects of noise from the proposed development. It is founded on baseline noise monitoring at four locations that showed that background noise on the site exceeded 30dB(A) at wind speeds above 5m/s. The baseline information provided on noise is considered to be reasonably accurate and was consistent with the character of the area as observed at the time of inspection. From this the EIS sets out noise limits at table 9.7 that would apply under the wind energy development guidelines, with a fixed limit of 43dB(A) at night, of 40dB(A) during the day for wind speeds up to 5m/s, then of 45dB(A) rising to 48.8dB(A) at wind speeds of 12m/s. Predictions for noise levels after the proposed development at 7 locations are given at table 9.8 at windspeeds between 5m/s and 10m/s, taking into account the noise from the four adjacent turbines that stand at Garranereagh. The predictions followed the Good Practice Guide issued by the UK's Institute of Acoustics and were based on the use of a Nordex N100 2.5MW turbine, although a different model turbine with an equivalent or less sound power output may be installed as part of the proposed development. The predictions indicated that the noise limits derived from the guidelines may be exceeded as several sensitive receptors. However there are either derelict houses or are occupied by persons who have a stake in the proposed

development. The predictions were extrapolated to another 152 houses within 2km of the proposed turbines, where exceedances of the noise limits derived from the guidelines are not predicted. Further details of the data on which these predictions were based is provided in appendix I of the main EIS, and appendix 5 of the further information submitted to the planning authority on 26th May 2015.

13.3 Taken together, the information submitted by the applicant provides adequate information on the existing environment around the site with respect to noise. The prediction of the effects of the proposed development due to noise are based on reasonable assumptions and an accepted methodology laid down in a guidance document issued by a reputable technical institute. It takes proper account of the cumulative effects arising from the existing 4 turbines to the east of the site. Noise modelling is based on the physical characteristics of wind turbines and the environment in which they are placed, and so it has an empirical and scientific basis. It has not been shown to be unrealistic, as asserted by one of the appellants. The noise emissions from a development are capable of precise measurement, and can therefore be properly controlled by a condition on a permission that is readily enforceable by the procedures set out in part XIII of the planning act. The predictions set out in the EIS therefore provide a useful basis on which to conduct an EIA. They indicate that the proposed development would not result in an exceedance of the noise limits specified in the guidelines on wind energy development, save for relatively small breaches at a number of dwellings occupied by those with a connection to the proposed development. The limits set out in the guidelines are a material consideration under the planning act and provide a reasonable benchmark against which to determine the significance or otherwise of noise emitted by a wind energy development. There is no evidential basis on which to conclude that noise within those limits is capable of rendering an area uninhabitable, as asserted by one of the appellants. Neither would the predicted noise levels be likely to have an adverse impact on the recreational use of the surrounding area. This assessment therefore concludes that the proposed development is not likely to have negative significant effects on human beings arising from noise.

Shadow Flicker

13.4 Section 10 of the EIS provides a prediction the casting of shadow flicker from the proposed development on the 35 houses within 1.1km of a proposed turbine, which distance would be 10 times the length of the proposed rotors. The results are set out in table 10.3 of the EIS. They indicate that there is the

potential for the limits established in the guidelines of 30 hours per year or 30 minutes per day to be exceeded at 10 houses as a result of the proposed development. It is unlikely that the annual limits would be exceeded, given the occurrence of could cover. However mitigation would be required in relation to the daily limit. The EIS describes measures to be agreed with a resident that might be effected, including screen planting. However if no agreement is reached then an automated system would be installed to switch off turbines when the limit is reached. Such a measures is practicable and is likely to be effective. Subject to its implementation, the proposed development is not likely to give rise to a significant negative impact due to shadow flicker.

Flora and fauna

13.5 The habitats on the site and its vicinity as described in the EIS are predominantly improved agricultural grassland, interspersed with hedgerows, wet grassland, scrub and conifer plantations. This description is consistent with what was observed at the time of inspection. These habitats are of local significance only. The report of walkover surveys of the site did not record indications of the presence of rare or protected species of flora or fauna. Foxes and rabbits were recorded, and hedgehogs are likely to be present. Bat activity surveys were carried out between June and August 2014. A concentration of bat activity to the south of the site was recorded, as were passes by Leisler's bat, Common pipistrelle, Soprano pipistrelle and Natterer's bat. A roost of a Brown long-eared bat was found in the farm building to the east of the site. Breeding bird surveys were conducted in June and July 2014. Vantage point surveys were carried out in the winter of 2013-2014 from two points for a total of 36 hours. Two hen harrier observations were recorded for a total of 187 seconds, both male. A flock of golden plover were recorded once c2km east of the site. There was a single record of a mallard flying over the site. No Whopper swans or lapwings were observed. Potential impacts on ecology during construction include the siltation of watercourses, and the impact on bats due to the removal of hedgerows. The watercourses downstream of the site are not known to contain populations of freshwater pearl mussels and no effect on that species is likely. The operation of the windfarm would also pose a risk of mortality to bats, particularly Leisler's bat which is a high flying species. The site a considerable distance from the SPAs at the Gearagh and the Mullaghanish to Musheramore Mountains and it does not contain habitats that would play an important role in supporting population of bird species for which those sites are designated, so the development would not be likely to have significant effects upon them. Mitigation measures described in the EIS include standard drainage measures to avoid the release of sediments to

watercourses. Hedgerows that are removed will be replaced with new planting, and a minimum of 10 bat roosts will be installed during construction. Hedgerow and tree removal will occur outside the breeding season for birds, in accordance with the Wildlife Act 1976. A buffer zone will be maintained free of around each turbine to a distance of 50m from blade tip to minimise bat collision mortality during operation. During operation monitoring of bird activity and of bird and bat mortality shall be carried out. Given that the site does not host habitats or species of significant ecological interest, the proposed mitigation measures are considered reasonable and proportionate. In particular the site is not likely to be significant in supporting the White Tailed Eagle, and the proposed development upon it would not be likely to have a significant effect on that or other bird species including kestrel, snipe or meadow pipit. Adequate survey information and mitigation measures were provided with respect to bats. A planning application or appeal is not the appropriate forum to determine allegations that works have been carried out that may breach the planning act or some other legal code. As agricultural land predominates on the site, works to hedgerows upon it are likely to occur in the course of its established agricultural use without giving rise to significant ecological implications. This environmental impact assessment concludes that the proposed development would not be likely to have significant effects on flora or fauna.

Soil

13.6 Mineral soils predominate on the site, so peat instability is not a significant risk from the proposed development. The carrying out of the development, including the excavation of the borrow pit, could lead to increased erosion of soil and the release of sediments from the site. Mitigation measures described in section 6.4 of the EIS include the expeditious backfilling of excavations, which will not be left open overnight. Excavations would also cease during heavy rainfall. Surplus excavated material will be stored in a level area near the borrow pit and will be used to reinstate the pit on completion of works. No stockpiles will be left on site, and no soil will disposed of off-site. A shallow profile on reinstatement will allow natural re-vegetation. These measures are considered proportionate and practicable. They are also adequate to counter any possible impact due to invasive species that might arise in the course of development. Subject to their implementation, the proposed development would not be likely to have significant effects on soil.

Water

13.7 The site drains into two waterbody catchments, north to the River Cummer, and south into the River Bride, both of which drain to the Lee. The operation of the proposed windfarm is not likely to have significant effects on water. It could result in a marginal increase in surface water runoff from the site but thist would not be likely to give rise to a significant risk of flooding. Its construction could effect water quality due to the run off of silt or sediments, or the spillage of pollutants including fuel, lubricants and cement. Mitigation measures are described in section 7.6 of the EIS, including the installation of stilling ponds, swales and cross drains at access tracks, the use of a fuel bowser and bunded storage tanks for oil and ongoing monitoring of water quality during and for a period after construction. The proposed measures are standard techniques for ground works in rural areas whose efficacy is established. If implemented in conjunction with the soil handling measures described above, and in accordance with the an approved construction environmental management plan based on the outline submitted with the EIS, they are likely to avoid any significant effects on water quality arising from the development either individually or in combination with the other projects including the concurrently proposed substation. Adequate information has been submitted in the course of the application and appeal with regard to hydrology to allow the EIA to make this conclusion

Air and climate

13.8 The proposed development would not be likely to have any significant effects on air quality or the climate.

The landscape

13.9 The landscape around the site consists of hilly farmland, according to the schema set out in the guidelines, with a landcover of sloping grassy fields defined by hedgerows, along with stands of conifers and scrub on the lower land between the hills. The site lies towards the head of the Lee Valley. It has clear views to and from the mountains and moors that enclose the valley. The views to the pastures around the site and the lower lands on the valley floor are intermittent due to the vegetation and topography there. It is apparent in the landscape that several other windfarms have been developed in the upper reaches of the valley. They do not dominate the landscape. Nor have they fundamentally altered its character, but they are apprehended as a part of its character. Other windfarms have been permitted in this landscape, as described in table 8.9 and figure 8.5 of the EIS, and more are proposed

including 12 turbines at Shehy More under PL04. 243486, reg. ref. 13/551. The four existing turbines to the east of the site are close to and highly visible from the site. The proposed development would introduce 6 further turbines into this landscape. They would be tall, moving metal structures. Their visual impact could not be mitigated to any significant degree. They would appear as part of the same windfarm as the existing 4 turbines to the east in most views. The EIS and the further information submitted to the planning authority, including the photomontages and the mapping of the zone of theoretical visibility and in particular the cumulative ZTV submitted on the 26th May 2015, provide a useful and sufficient description of the likely visual impact of the proposed development. It would have a slight but perceptible effect on the wider landscape, as it would tend to reinforce an impression of an upland agricultural area where windfarms were present. However the landscape in the area is not unusually sensitive or scenic and it is not designated as one of high value in the development plan. The proposal would not lead to the hilly farmland being dominated by wind energy development. As such its impact on the wider landscape would not contravene the provisions of the guidelines or the development plan, whether considered individually or cumulatively with other permitted and proposed developments, including the designation of an area of high landscape value to the north of the site and scenic routes 26, 32 and 35.

13.10 The visual impact on the immediate vicinity of the site would be more significant and needs to be considered in cumulation with both the existing turbines there and the substation proposed under PL04. 244439, Reg. Ref. 14/557. This local impact would be significant and would change the appearance of the area. In particular it would change the appearance of the landscape viewed from the designated scenic route SR36 where the turbines would be prominent features, although the proposed substation would not be visible. However is not considered that these visual effects would be so adverse as to amount to a material contravention of the policy GI-2 of the development plan regarding scenic routes or to warrant refusing permission for the proposed development given: national and local policies in favour of renewable energy development; the identification of the area as acceptable in principle for wind energy development in the county development plan; and the advice in the guidelines that wind energy development can be accommodated in hilly farmland provided it does not dominate that landscape. However the board should be cognisant of such effects on the local landscape when it considers the application and appeals before it.

Cultural heritage, including archaeological and architectural heritage

13.11 Adequate information on archaeology has been submitted in the course of the application and appeal. The proposed development would not impinge upon any recorded monuments or protected structures. Exclusion zones of 100m radius shall be established around nearby recorded monuments CO083-078 and CO094-036, which are a ringfort and enclosure respectively, as mitigation measures. Archaeological testing and monitoring of ground disturbance is also proposed. These measures are sufficient to render it unlikely that the proposed development would have significant effects on cultural heritage.

Material assets, including domesticated animals and roads

13.11 The operation of the proposed development would not have significant effects on material assets. Turbines do not move in sudden or unpredictable ways and so would not interfere with the keeping of domesticated animals on the surrounding land, including horses and cattle. The construction of the windfarm would generate traffic movements that would effect the road network in the area, including movements by heavy goods vehicles and 42 deliveries of large turbine components by extended articulated trucks. The latter would have the most significant effects. Section 11.5 of the EIS describes the impact of that traffic on a series of junctions from the national primary road network on the N22 to the site, indicating works that will be required at several of them. At the junction of the regional road R585 and the local road LS6008 c150m of new roadway would be required to allow the large loads to negotiate the junction, for which permission was granted under a separate planning application Reg. Ref. 14/6803. The works authorised under that permission are an integral part of the project that is the subject to this EIA and so should be considered by the board. Nevertheless, despite short term disruption to traffic, it is not considered that the construction of the development would have significant negative effects on the road network serving the area, or upon material assets in general. Adequate information has been submitted regarding the traffic that is likely to be generated during construction to allow this conclusion to be made by the EIA, as well as to demonstrate that it should not give rise to undue traffic hazard if managed competently in accordance with the EIS and the outline construction management plan submitted with the application.

The interaction of the foregoing

13.12 The impact of the proposed windfarm on human beings interacts with its impact on the material assets comprised of the houses in the vicinity of the site. As this assessment concludes that the project would not have significant

negative effects on human beings, either through noise, shadow flicker or otherwise, it would not have a significant impact on those material assets either. The effects of the construction of the windfarm on soil is closely linked to its effects on water quality, which itself interacts with its impact on aquatic habitats downstream of the site and the species which depend upon them. However as the measures proposed to mitigate effects on soil and water are likely to be effective, they would also avoid downstream effects on flora or fauna.

Cumulative impacts

13.13 Adequate information was presented in the course of the application and appeal for such the cumulative impact of the development in conjunction with other wind energy developments to be properly assessed. The impact of the proposed development on the landscape of the upper Lee Valley has been assessed as part of the cumulative impact of several existing and permitted wind energy developments there as described in the EIS, including that before the board at Shehy More under PL04. 243486, reg. ref. 13/551. The effect on the landscape in the vicinity of the site, which is likely to be significant, has been assessed in cumulation with the effects of the existing turbines to the east of the site and the proposed substation. There is little that could be done to mitigate the visual impact of wind energy developments in such a wider landscape, the question of the implementation or otherwise of such measures is not relevant to the assessment of their impact in this regard. The impact on human beings due to noise and shadow flicker has been assessed in cumulation with the adjacent 4 turbines. The impact on flora, fauna, soil, water and material assets has been assessed in cumulation with the proposed substation. The impact on soil, water and material assets has been assessed in cumulation with the impact of various works to the road network required to facilitate the delivery of turbine components for the proposed development, including that authorised by the planning authority under Reg. Ref. 14/6083. Where likely significant cumulative effects were identified they are cited in the paragraphs above.

Adequacy of the EIS

13.14 The environmental impact statement submitted with the application, as supplemented by the further information submitted to the planning authority in the course of the application, provided an adequate description of: the proposed development; the main alternatives studied by the developer and the reason for this choice; a description of the aspects of the environment likely to

be affected by the proposed development; the likely significant effects of the proposed development on the environment and the forecasting methods used to assess them; the measures designed to mitigate them; a non-technical summary of the foregoing information; and an indication of the difficulties encountered in compiling the information. It provides a sufficient basis on which to conduct an environmental impact assessment of the proposed development following public consultation, including an assessment of its cumulative effects in conjunction with the substation by which it would connect to the national grid and the works to facilitate the delivery of turbine components to it, which are an integral part of the project, as well as the cumulative effects in conjunction with other existing, permitted and proposed wind energy projects in the area. The requirements of section 173 (1C) and (1D) of the planning act have therefore been met.

14.0 ASSESSMENT OF OTHER ISSUES

Property prices

14.1 One of the appeals argued that permission should be refused as the proposed development would have a negative effect on property values, including that of the appellants' house, with letters from an estate agent supporting that proposition. The applicant responded that the argument was speculative, citing studies from the UK and US which indicated that windfarms did not affect property values. As stated in the EIA above, the proposed development would not be likely to have significant adverse effects on people who live in its vicinity, nor would it be likely to have significant adverse effects on the residential function of the material assets that are the houses there. However what price a prospective buyer would pay for such a house would depend on many factors, including the availability of comparable houses, the cost of credit, the level of income in the wider economy, and matters of sentiment. The progress of house prices over recent decades shows that state and its emanations are not capable of them by moderating either booms or busts, even when such moderation was accepted as a necessary social good. In this context it would be futile to try and predict and control property prices in the wider area in the course of a particular planning application and appeal, even if such control were considered to be for the common good. In this context I would advise the board that its decision should be based the policies which the planning act identifies as material considerations for planning applications, with due regard for the likely tangible effects of the development on the surrounding environment, including the people and houses located there, which can be

predicted and assessed through the EIA process. Both of these would support a grant of permission in this case.

Appropriate period

14.2 The applicant is seeking a permission with an appropriate period of 10 years. One of the observers has asserted that there is no justification for such an extended period. I agree. Section 40(3) of the planning act establishes 5 years as the normal period within which to implement a planning permission. An explicit reason should be provided to depart from that statutory provision. Specifying periods for more than 5 years can hinder the proper planning and sustainable development of the area as it can lead to an accumulation of permissions that have not yet been implemented but which were granted under obsolete development plans or when there was a different legal or policy regime was in place. This has occurred on the current site, where a permission for a windfarm has been extant for 9 years already. The wind energy guidelines advise that a period of longer than 5 years may be specified to avoid a permission expiring before a grid connection offer is obtained. However the applicant has not specified whether such an offer is in place or is imminent or has been delayed for some particular reason or specific period in relation to this site that would justify having planning permission for a windfarm in place for a total of 20 years. If the board grants permission, therefore, it should specify an appropriate period of 5 years in line with the planning act.

Telecommunications

14.3 It is unlikely that the proposed windfarm would interfere with wi-f signals on a particular property. Any interference with broadcast or telecommunications signals can be mitigated in accordance with the methods set out in section 7.15 of the guidelines.

Community gain

14.4 Section 2.5 of the EIS refers to the institution of a community gain fund in connection with the proposed development, but details of its amount or disbursement were not submitted. As this is a planning appeal under section 34 of the act, the board does not have the same specific power to impose a condition on the matter as it would on a permission granted for a strategic infrastructure development under section 37G(7)(d) of the act. The matter was

not referred to in the planning authority's decision either, nor was it raised by parties in the course of the appeal.

Validity of the application

14.4 The proposed windfarm would not come within the scope of the 7th schedule of the planning act and would not constitute strategic infrastructure for which an application for permission is to be made directly to the board. The proposed windfarm would be connected to the national grid via the substation currently before the board under PL04. 244439, Reg. Ref. 14/557. Adequate information is before the board to allow an environmental impact assessment of the proposed windfarm together its connection to the national grid to be completed before a consent is granted for the proposed development. A grant of permission could therefore be made without contravening the law set down by the High Court in the Ó Grianna judgement or the requirement to assess the cumulative and indirect environmental effects of all integral parts of the proposed windfarm project. The likely emissions from the construction and operation of the development were adequately described in the various submissions from the applicant. An observation asserted that the consent of landowners to the application has not been properly obtained. However no persuasive evidence was presented that could support such a conclusion against the applicant's assertion to the contrary. The board is therefore advised that the application is valid and it may proceed to consider its decision upon it.

15.0 CONCLUSION

15.1 The proposed development would be in keeping with national policy to promote wind energy development, including that set out in chapter 1 of the *Guidelines for Planning Authorities on Wind Energy Development* . Its location would be in keeping with the wind energy strategy and objective ED-4 of the Cork County Development Plan 2014-2020 which designates wind energy development as acceptable in principle in the area in which the site lies. The proposed development is not likely to have significant effects on any Natura 2000 site, either individually or in combination with other plans or projects. After an environmental impact assessment of the proposed development it has been concluded that it would not be likely to have significant negative effects on the environment with respect to human beings, flora and fauna, soil, water, air, climate, material assets or cultural heritage, either directly or indirectly or in cumulation with other existing, permitted or proposed developments. In particular the proposed development would not give rise to unacceptable

effects on the residential amenities of houses in the vicinity due to noise or shadow flicker or otherwise. It would not give rise to a significant adverse impact on the wider landscape. It would give rise to a significant effect on the landscape in the immediate vicinity of the site in conjunction with the existing windfarm at Garranareagh and the proposed substation at Barandivane to which appeal PL04. 244439, Reg. Ref. 14/557 refers. However this effect would not be so negative or severe as to contravene the provisions of the development plan regarding the protection of high value landscapes and scenic routes. The proposed development would therefore be in keeping with the proper planning and sustainable development of the area.

16.0 RECOMMENDATION

16.1 I recommend that permission be granted subject to the conditions set out below.

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 and the limits set therein for noise and shadow flicker,

(c) the provisions of the Cork County Development Plan 2014-2020, including objective ED-4 and the designation of the area as one where wind energy development is acceptable in principle,

(d) the character of the landscape of the area,

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

(f) 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

(g) the environmental impact statement and further information submitted by the applicant, and

(h) the submissions made in the course of the planning application,

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.

After carrying out a screening exercise in relation to the potential for impacts on nearby Natura 2000 sites and, having regard to the nature and scale of the proposed development, the nature of the receiving environment, the appropriate assessment screening report submitted with the application and the submissions on file in relation to ecological matters, it is not considered that the proposed development would be

likely to have a significant effect individually or in combination with other plans or projects on any European site.

After carrying out an environmental impact assessment of the proposed development, it is considered that it it has been concluded that it would not be likely to have significant negative effects on the environment with respect to human beings, flora and fauna, soil, water, air, climate, material assets or cultural heritage, either directly or indirectly or in cumulation with other existing, permitted or proposed developments. In particular the proposed development would not give rise to unacceptable effects on the residential amenities of houses in the vicinity due to noise or shadow flicker or otherwise. It would not give rise to a significant adverse impact on the wider landscape. It would give rise to a significant effect on the landscape in the immediate vicinity of the site in conjunction with the existing windfarm at Garranareagh and the proposed substation at Barandivane. However this effect would not be so negative or severe as to contravene the provisions of the development plan regarding the protection of high value landscapes and scenic routes. .

The proposed development would, therefore, be in keeping with the proper planning and sustainable development of the area.

CONDITIONS

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the further information received by the planning authority on the 26th day of May 2015 and the clarifications on the 5th day of June, the 20th day of July and the 10th day of September 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. The appropriate period of this permission during which the authorised development may be carried out shall be five years from the date of this order.

Reason: Having regard to the nature and extent of the proposed development, the planning history of the site appropriate period longer than that provided for in section 40(3) of the Planning and Development Acts 2000-2015 would not be justified.

3. The authorised windfarm shall operate for no more than 25 years from the date on which electricity is first exported from it or from date of the expiry of the appropriate period, whichever is the sooner.

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

4. The mitigation measures identified in the environmental impact statement and other particulars submitted with the planning application and as further information, shall be implemented in full by the developer and by the operator of the authorised windfarm, except as may otherwise be required in order to comply with the other conditions of this permission.

Reason: In the interest of clarity and to protect the environment during the construction and operational phases of development.

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. 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 the 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

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. The measures to mitigate the impact of shadow flicker described in the environmental impact statement shall be implemented to ensure that any turbines which might cause an exceedance of this limit are stilled. 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 the commencement of the operation of the authorized windfarm, the developer shall inform the planning authority of the name and address of the person who shall occupy the site as its operator and who shall be responsible for the subsequent decommissioning of the windfarm and compliance with the various other conditions set out hereinunder. The operator shall inform the planning authority if there is any change in these details and provide the name and address of any new operator at least 3 months before the latter person assumes responsibility for the windfarm. There shall only be a single operator of the entire authorised windfarm at any one time.

   Reason: To facilitate the enforcement of the various conditions of this permission that pertain to the operation and decommissioning of the authorised development.

8. Prior to the commencement of development the developer shall submit for the written agreement of 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.

Prior to the 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 in accordance with the details agreed under this condition. The developer shall also enter into an agreement empowering the planning authority to apply such security or part thereof to secure the necessary reinstatement of the site at the end of the period during which the operation windfarm is authorised or before that time if the operation of the windfarm has ceased for at least 12 months and the planning authority does not consider it reasonably likely to resume. 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 the commencement of develoment.

   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 the 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 in 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 the 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

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/m^2/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 3ormally be restricted to between 0700 and 1900 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 the commencement of construction activities the developer shall 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.

14. 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. The contribution shall be paid prior to the 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 the Board to determine the proper application of the terms of the Scheme.

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

Stephen J. O'Sullivan
4th March 2016

APPENDIX 3

An Bord Pleanála

Inspector's Report PL04.248153(245824).

Development	Windfarm of 6 turbines.
Location	Barnadivane, Lackeragh, Garranereagh, Lissarda, Terelton, Co. Cork.
Planning Authority	Cork County Council.
Planning Authority Reg. Ref.	14/6760.
Applicant	
Type of Application	Permission
Planning Authority Decision	Grant.
Type of Appeal	Third Party
Appellants	Jerome Cohalan and Geraldine Hanley. Barna Wind Action Group
Observers	Michael P. and Mary O' Riordan Michael Allen Anthony Cohu Nigel Fennell

	Teresa Flynn Patrick Manning Eleanor O'Leary Sarah Hodkinson, Tony Miller and Daphne Babbington Sarah Larkin
Date of Site Inspection	12th April 2018.
Inspector	Mairead Kenny.

Contents

1.0 Introduction

1.1. These introductory comments refer to 2 no. appeal cases, which were previously considered by the Board and both decisions quashed by order of the High Court on 20th of December 2016.

1.2. PL 04.248153 refers to a proposed 6 turbine windfarm – previously PL04.245824.

1.3. PL 04.248152 refers a proposed substation - previously PL 04.244439.

1.4. The Board on 18th December 2017 issued Directions in relation to the remitted appeals. This included a request for a new report and recommendation to be prepared by an Inspector not previously involved in either case. This report and the concurrent report on the related substation case refers.

1.5. Having regard to the interdependence of the projects subject of the two appeals and to the legal history and the Direction of the Board on 18th December 2017 it is recommend that this report be read in conjunction with the report relating to PL04.248152.

1.6. The Board is also referred to the live appeal which was lodged under ABP301563-18, which relates to a proposed 110kV substation at Carrigarierk wind farm and a 100kV grid connection to Dunmanway substation to serve Carrigarierk and Shehy More wind energy developments to the west. I refer to this as the Carrigarierk Substation and Grid Connection.

2.0 Site Location and Description

2.1. The site is located in a rural agricultural area 9km from Macroom town in central county Cork. The nearest settlements to the site are the small villages of Cappeen, which is 2km to the southwest, Terelton which is 2km to the northwest and also noteworthy is Crookstown, which is situated close to the N72 the Macroom to Killarney Road.

2.2. The site is in the town lands of Barnadivane, Lissarda, Garranereagh, and Lackareagh. The landscape comprises an upland area with pasture being the dominant land use. There are groups and rows of trees in places and the immediate area in which the site is located would be described as enclosed in character.

2.3. The site itself is of stated area of 40 hectares. At its northern end it slopes downwards towards the Lee Valley. The southern side slopes to the River Bride. A 110kV line is evident in the landscape and it crosses the road at a number of locations. There is a wind energy development comprising 4 turbines which are to the east of the site – this is the Garranereagh windfarm.

2.4. The area is characterised by a relatively high residential population, which appears to be related to the farming activities in the area and some of the houses are newly constructed. There are a number of derelict unoccupied buildings some of which would be former houses and which might be described as 'habitable houses'. The road network serving this development, including the constructed wind farm is narrow but in reasonable repair.

2.5. Photographs of the site and the surrounding area which were taken by me at the time of my inspection are attached.

3.0 Proposed Development

3.1. The proposed development is a 6 turbine windfarm, which is stated to be intended to replace a previously permitted development. **Blade tip height of up to 131 m, maximum hub height 85 m and blade length 51.5 m are proposed**. The turbines would be aligned in a row running from south to north. Associated development includes a **monitoring mast of 90 m** height, 1.96 km **of access track** and upgrading of 2.34 km existing track to 5m width minimum. A new access junction and improvements to public roads to facilitate turbine delivery. A 3-4m deep 0.36 hectare **borrow pit** is proposed. Other ancillary development includes foundations and hardstanding, signage and underground cables.

3.2. Grid connection to the wind farm is proposed by way of **an underground cable** to the proposed substation subject of the concurrent appeal, which would connect to the 110 KV electricity line which traverses the study area.

3.3. The application is accompanied by an **Environmental Impact Statement and an AA Screening Report**. A 10 year permission is sought. The duration of the development is 25 years. A community fund is envisaged but no details are provided.

3.4. The **application details** submitted to the planning authority include letters from registered owners of property who are in agreement to the making of the application and who consent to the proximity of the turbines including at distances of less than 2 rotor blades.

3.5. The planning authority issued a **request for further information** including:

- Further details and clearer maps including in relation to the location of houses, ZTVs and photomontage imagery.
- Clarification of the megawatt output for the turbines individually and in total estimate.
- Opinion on project splitting.
- Wind take and the potential for impact on the existing turbines.
- Ecology including wintering waterbirds, other birds, bats, terrestrial and freshwater habitats and species, noise and vibration, transport and traffic.

3.6. The **further information response received on 26th May 2015** and subsequently subject of revised public notices received by the planning authority on 5th June 2015 includes the following:

- Report entitled 'Barnadivane Wind Farm, Co. Cork – Response to Further Information Request
- Copies of revised ZTV, revised cumulative ZTV, revised photomontages
- A digital copy of the documentation.

3.7. By way of an **unsolicited submission received on 20th July 2015 Appendix 5 Noise** Supporting Documentation was lodged.

3.8. A **request for clarification was issued and a response received by the planning authority on 10th September 2015** includes:

- Response to request relating to noise and vibration including a peer review of the noise assessment by AWN Consulting
- Outline CEMP.
- Unsolicited further information comprising a cumulative assessment with proposed Shehy More Wind Farm.

- Various tables and figures.

4.0 Planning Authority Decision

4.1. The planning authority decided to grant permission subject to 32 no. conditions including:

- to be in accordance with the plans and particulars of 19th December 2014, 26th May, 5th June, 20th July and 10th September 2015
- 10 year permission
- planning authority to agree Construction Environmental Management Plan
- operational noise limits of 43dB(A)$L_{A90,\ 10min}$ or 5dB(A) above background levels at any sensitive receptors
- shadow flicker limit on any dwelling of 30 minutes per day or 30 hours per year.

4.2. **Planning Authority Reports**

4.3. **Planning Reports**

4.3.1. The initial report notes that preplanning consultations were undertaken in July 2014 during which general principles were discussed together with planning history and proposals for new development.

4.3.2. The requirements for Appropriate Assessment has been screened out for this development having regard to the **lack of ecological or hydrological connection between the development site and any European site**. Following the report of the Heritage Unit - Ecology section it is considered that there are some **deficiencies in the habitats and species information provided in the EIS and the AA screening** report.

4.3.3. Other reports are noted. **250 public submissions** have been received, read and considered - these are summarised in bullet point format.

4.3.4. The planning history is outlined. There are **4 turbines immediately east of the subject site which measure 93 m blade tip height** and were permitted under reg.

ref. 03/2047. The Wind Energy Strategy Map contained in the 2014 development plan identifies an area south of Macroom including the subject site in which commercial **wind energy is deemed to be acceptable in principle**. The landscape type has a low rating value and low sensitivity. In terms of the national guidance the site is considered to be most characteristic of the **'hilly and flat farmland' landscape type**.

4.3.5. Regarding ecology there are 4 no. European sites within 15 km radius. The proposed **larger more efficient turbines will minimise the total rotor envelope** of the proposed development in comparison to the permitted 14 turbines. Fewer turbines will mean **less habitat loss and less overall disruption**. **All cabling will be underground and there are sufficient buffers in place** between windfarm infrastructure and hydrological features.

4.3.6. The Council's Heritage Officer has reviewed the EIS, CEMP and AA report and identified concerns and **further information will be sought** regarding the SPAs - also on other birds, bats, and terrestrial habitats and freshwater habitats and species. It is also recommended that the soil stability assessment and material requirements/soil management proposals be reviewed by a competent person on behalf of the planning authority to verify the conclusions reached in the EIS in relation to soil stability and soil management proposal. Other specific impacts are discussed including geology, hydrogeology, hydrology traffic and transport, cultural heritage, alternatives and so on.

4.3.7. The permission recently granted for an electricity substation compound to replace the smaller permitted substation at location 400 m away is noted.

4.3.8. Recent High Court judgements relating to windfarm developments and the submissions to the application are noted. It is necessary to require the applicants to address any concerns regarding **project splitting**. Following receipt of the further information response it is considered that legal counsel may be required to be sought as to whether the current proposal can be further considered at this location.

4.3.9. Regarding the adequacy of the EIS while further information is required, the shortcomings in the EIS are such that the **EIS would <u>not</u> be rendered deficient** in legal terms. The **further information required specifically relates to a cumulative evaluation of the proposed development along with windfarm developments**

permitted at this site location. **Connectivity is relatively easily achievable** having regard to proximity to overhead 110 KV lines and a grid connection offer is stated to be in place for the proposed development.

4.3.10. The site is in an **area where the wind energy proposals are deemed to be acceptable** in principle and the principle of development can be accepted at this location. In light of the previously permitted windfarm development and visual assessment carried out to date the development can be further considered from a visual viewpoint - to enable carrying out of a full visual and landscape character assessment further information is required. There are concerns also regarding the development from an ecological and noise viewpoint and the recommendation and comments of the other sections are noted. The decision should be deferred accordingly.

4.3.11. The **final report notes** the submissions made by way of further information which concerns **cumulative assessment** of the 6 turbine windfarm with new and existing tracks, with the proposed substation and proposed private roadway.

4.3.12. The most onerous situation has been assumed namely that the 3 projects will be **concurrently constructed**. **Cumulative impacts** on designated sites, hydrological impacts, cumulative disturbance/displacement and cumulative impacts on habitat, terrestrial mammals, bats birds, Freshwater pearl mussel, geology, noise, visual impact, human, traffic and transport, cultural heritage, cumulative telecommunications assessment, cumulative air and climate, interaction of the foregoing are assessed.

4.3.13. Considers also the cumulative effect of the development and the connection including to the nearby Shehy More wind farm proposal.

4.4. Selected Technical Reports

4.4.1. Area Engineer – There is a requirement for a **bond for road repairs**. The further information response in relation to **deliveries is acceptable**. **Other conditions** recommended.

4.4.2. Engineering report (Sharon Casey) Satisfied that the response to the further information request is acceptable and that potential for significant negative impacts can be ruled out. Subject to agreement of a **CEMP permission can be granted**.

4.4.3. Environment – the final report refers to the **clarification of further information relating to noise, which is acceptable**. No objection to permission subject to conditions.

4.4.4. Heritage Officer- The initial report notes that the site is of **low ecological significance and does not have any habitats or host species of interest**. No significant impacts on birds is deemed likely. Further information reviewed. Potential for **significant effects on Natura sites can be screened out**. No objection subject to implementation of CEMP.

4.5. **Prescribed Bodies**

4.5.1. Department of Arts, Heritage and the Gaeltacht sets out requirements regarding the archaeological monitoring to be addressed by condition.

4.5.2. Inland Fisheries Ireland set out a number of planning conditions/requirements to be adhered to. These are of a general nature and relate to prior consultation in the event of physical interference with water courses, control of suspended solids and hydrocarbons contaminated site run-off and criteria in relation to bridging or culverting of watercourses, timing of such works and consultation with IFI.

4.5.3. HSE – Initial report queries the conclusions of the EIS in relation to noise particularly in relation to H-28 which has a level of exceedance that is similar to H-36, H-34 and H-48 and is not a stake holder in the project. Notes that the guidelines do not say that noise will not be a problem at 500m. Need to acknowledge impact and need for mitigation measures due to noise at non stakeholder dwellings. Also vibration impacts arising from the extraction at the borrow pit and the possibility of blasting and shadow flicker including the need to be proactive in relation to the 8 no. property owners affected. In the subsequent report it is noted that the further information requested did not address issues relating to potential shadow flicker – a mitigation strategy is required.

4.5.4. Irish Water has indicated no objection.

4.6. **Third Party Observations**

A large number of third party observations generally opposing the development were received by the planning authority. I am satisfied that the issues raised are common to the matters raised in the appeal and observations. Any specific relevant matters which are not contained in the summaries of the appeal/observations and which are deemed relevant are considered in the assessment section of this report.

5.0 Planning History

5.1. **On site or in vicinity**

Windfarm

PL04.219620 refers to a proposed development of 14 turbines (105m blade tip height), 110kV substation and a substation for which permission was granted. Subject development is fully described as construction of 18 turbines (modified to 14 turbines), 18 transformers, 110kV substation, 110kV switch station, 70 m wind monitoring mast, construction and upgrading of the site entrances, site tracks and associated works. The Direction of the Board referring to its decision not to accept the Inspector's recommendation to refuse permission noted the planning history of the site and the location of the proposed development within a 'strategic search area'. The Board considered that the scheme by virtue of its revised scale and turbine configuration had addressed to a significant degree concerns in relation to the previous windfarm proposal.

Windfarm – extension of duration Planning reg. ref. 11/6605 refers to an extension of duration of the above permission for 14 turbines was granted (until 13th February 2017).

Delivery Road - Under reg. ref. 14/06803 the planning authority granted permission on 27th July 2015 for a private road of c150m (between the R585 and L6008). The road was to facilitate delivery of components for the windfarm on the current appeal site.

Substation – concurrent appeal - PL04.248152 / PL04.244439 refers to a third party appeal of the decision of the planning authority under reg. ref. 14/557 to grant

permission for development of an electricity substation, which is intended to replace that previously permitted under PL04.219620.

Windfarm PL04. 204928 relates to a previous decision to refuse permission for a windfarm of 23 turbines up to 100m high on the site as the development would be visually obtrusive and injure the amenities of the area and property in the vicinity. In the Board's Direction, it was stated that the Board agreed with the Inspector that a revised proposal might be possible but considered that the impact of the proposed development by reason of the layout, number and size of the turbines would be excessive.

5.2. **Other recent cases in area which are cited in the appeal or within 15km**

1. **Shehy More windfarm - PL04. 243486 (reg. ref. 13/551) – granted – legal challenge - proceedings withdrawn June 2018**

The Board granted permission for a development of 12 wind turbines at Shehy More c20km west of the appeal site. The application was accompanied by a detailed Environmental Impact Statement and EIS addendum in respect of the proposed grid connection and details regarding the route of that connection, which will be entirely by way of an underground 38kV cable. The underground cable will run within the public road corridor between the site of the Shehy More proposal and either the previously permitted substation (Garranereagh) or the currently proposed substation (Barnadivane /Kneeves). The Board's Direction notes that this was concurrently considered with PL88.246915 (grid connection from Shehy More to proposed or permitted substation at Barnadivane or Garranereagh).

2. **Grid connection from Shehy More windfarm to Garranereagh or Barnadivane substations - PL88.246915**

The Board under PL88.246915 upheld the decision of the planning authority to grant permission for development of an underground cable to connect the proposed Shehy More windfarm to the National Grid by way of either the permitted substation at Garranereagh or the proposed substation of Barnadivane. The Inspector noted at the time of lodging the application that the proposed Shehy More windfarm and the proposed substation at Barnadivane were subject of appeals to An Bord Pleanála. The Inspector advised that a concurrent assessment of the grid connection with the

then current case of the Shehy More windfarm and the Barnadivane substation might be considered.

3. Carrigarierk windfarm, substation and Grid Connection to Barnadivane substation - PL04.246353 - High Court upheld decision in November 2017

The appellants refer to this case in the context of the substation appeal. The application under reg. ref. 147/431 for development comprising 5 wind turbines and various ancillary works including an underground grid connection to the permitted / proposed Barnadivane substations. The planning authority decided to refuse permission but the Board granted permission following third and first party appeals.

This decision was subject of judicial review proceedings and the decision of the Board was upheld by ruling of the High Court in November 2017. The Court decided that the Board had conducted EIA and AA as required to do so and that the decision in relation to EIA and AA had been recorded as required in law.

4. Garranure windfarm, 10-15km to the south of the sites

Under PL04.127137 permission was granted for 4 no. turbines of total height of 122m to blade tip.

PL239280 was a subsequent application/ appeal to increase the height of some turbines and erect an additional, bringing the total number to 5 no. At the time of inspection 3 no. turbines were in place. The Board refused permission for the proposed modification and extension.

5. Cleanrath wind farm, 15km to the north-west – judicial review dismissed 30th May 2018

PL04.240801 relates to a proposal for 11 turbines – decision to grant permission was quashed by High Court on 16th June 2016. The subsequent appeal under PL04.246742 for 11 turbines was granted by the Board on 19th May 2017.

6. Live appeal – 301563 – Carrigarierk Substation and Grid Connection

This is an appeal against the decision of the planning authority under reg. ref. 17431. Permission is sought for

(1) A 110kV electricity substation including 2 no. control buildings associated site works at the Carrigarierk Wind Farm (An Bord Pleanála Ref. PL04.246353, Cork County Council Ref. 15/730) in the townland of Carrigdangan;

(2) 110kV underground electricity cabling connecting the proposed substation to the existing Dunmanway ESB substation in the townlands of Carrigdangan, Inchincurka, Kilnadur, Aultaghreagh, Aultagh, Ardcahan, Knockduff, Gurteennasowna and Ballyhalwick;

(3) 33kV underground electricity cabling connecting the proposed substation to the permitted Carrigarierk Wind Farm and the permitted Shehy More Wind Farm (ABP Ref. PL04.243486; Cork County Council Ref. 13/551) and ancillary works and apparatus.

6.0 Policy Context

6.1. National Planning Framework

6.1.1. This identifies National Strategic Outcome 8 as Transition to Sustainable Energy. It refers to the harnessing of considerable onshore and offshore protection from energy sources including wind. Targets include the **delivery of 40%** of our electricity needs from renewable sources by 2020 with the strategic aim to increase renewable deployment in line with EU targets and national policy objectives out to 2030 and beyond.

6.1.2. It contains numerous references to harnessing the potential of wind energy. New energy systems, additional electrical grid strengthening and transmission will be necessary. Development of renewables is critically dependent on the development of enabling infrastructure, including grid investment.

6.2. National Landscape Strategy for Ireland 2015-2025

6.2.1. This will provide a **high level policy framework** to achieve balance between the protection, management and planning of the landscape and recognises the concerns regarding the siting of national infrastructural development within our landscape – the objective of the strategy is to provide the data that will assist the future decision making process regarding our landscapes. To date the data and details envisaged

have not been incorporated into any revised document and the strategy remains at a high level. Objectives include the provision of a policy framework, which will put in place measures at national, sectoral (including energy) and local level.

6.3. National Renewable Energy Action Plan

6.3.1. The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and measures to deliver on Ireland's **overall target to achieve 16% of energy from renewable sources by 2020**. The Government has set a target of 40% electricity consumption from renewable sources by 2020.

6.3.2. The report was submitted to the EU in 2010. The fourth Progress report of December 2017 indicates that the interim target level of 8.92% average final energy consumption set under the Renewable Energy Directive for 2015-2016 was met. The increased share of electricity from renewables is primarily (84% in 2015) from wind.

6.4. Strategy for Renewable Energy 2012-2020

6.4.1. It is a strategic goal of the strategy to seek progressively more renewable electricity from onshore and offshore wind power for the domestic and export markets.

6.4.2. Key actions include the supporting of the delivery of the 40% target for renewable electricity through the existing GATE processes.

6.5. Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure, 2012

6.5.1. Ireland needs to deliver a world class electricity transmission system in all the regions which meets the needs of Ireland in the 21st century which will, inter alia, enable Ireland to meet its renewable energy targets and reducing the country's dependence on imported gas and oil and reduce CO2 emissions.

6.6. Adapting to Climate Change and Low Carbon Act 2015

6.6.1. This sets a statutory framework for the adoption of plans to ensure compliance with Ireland's commitments to European and international agreements on climate change.

6.7. **White Paper – Transition to a Low Carbon Energy Future for Ireland 2015-2030**

6.7.1. The aim of this document is to set out strategies for the state to adapt to a low carbon future and to provide for Ireland meeting its international and E.U. commitments on greenhouse gas reductions.

6.7.2. This sets out 5 strategic targets Department of Communications, Energy and Natural Resources - Strategy for Renewable Energy 2012-2020 including:

6.7.3. Strategic Goal 1 – progressively more renewable electricity from onshore and offshore wind power for the domestic and export markets.

6.8. **Department of Environment Wind Energy Guidelines 2006**

6.8.1. These are Ministerial Guidance issued under section 28 and the Board shall have regard to them.

6.8.2. The Guidelines call for a **plan-led approach** involving identification of areas which are considered suitable or unsuitable for wind energy development.

6.8.3. The Guidelines refer to various **standards relating to noise, shadow flicker, electromagnetic interference**. The Guidelines set out requirements for a plan-led approach to wind energy development. Specific environmental impacts including on birds, habitats and human beings are presented in Chapter 5. Noteworthy provisions include comments that at a **setback distance of less than 500 m noise is likely to be a problem**. There are specific noise limits set including **special provisions for night-time levels and low noise environments**. Regarding potential impact of shadow flicker there **are identified locations where the potential for shadow flicker is deemed to be very low**. Landscape and visual impacts are addressed in Chapter 6 of the document.

6.9. **Forthcoming Guidance**

6.9.1. The Draft Strategic Environmental Assessment Scoping Report for Renewable Electricity Policy and Development Framework and the draft 2016 Framework Report, remain at draft stage at the time of writing.

6.9.2. Department of Housing, Planning, Community and Local Government (DHPCLG) and the Department of Communications, Climate Action and Environment (DCCAE)

presented in June 2017 an emerging "preferred draft approach" to the Review of the 2006 Wind Energy Development Guidelines. This includes specific measures relating to noise, shadow flicker and other impacts. It was intended to provide an update on progress made.

6.9.3. It is intended that on completion of a SEA process draft revised guidelines will be prepared which will incorporate the key elements of the preferred draft approach. An indicative timeline for the adoption of the revised guidance was Q1 2018.

6.10. Cork County Development Plan 2015-2020

6.10.1. I consider that the most relevant provisions of the current development plan include:

- The identification of the site within **the 'Area Likely to be Most Suitable'** under Figure 9.2 and 'Acceptable in Principle' under Figure 9.3. Only two relatively small parts of the county are so designated. These are the **optimal areas for wind farm development without significant environmental impacts with viable wind speeds and access to grid**.
- Policy ED 1-1 is to ensure that through sustainable development the Council fulfils its optimum role in contributing to the diversity and security of energy supply and to harness the potential of the county to assist in meeting renewable energy targets.
- Policy ED 3-4 states that in areas designated as 'Acceptable in Principle' commercial wind energy development is normally encouraged subject to protection of residential amenity particularly in respect of noise, shadow flicker, visual impact and the requirements of the Habitats, Birds, Water Framework, Floods and EIA Directives.
- ED 6-1 refers to the Electricity Network. Policy is to support and facilitate the **sustainable development, upgrade and expansion of the electricity transmission grid,** facilitate where practical and feasible infrastructure connections to wind farms and other renewable energy sources subject to normal planning considerations. Proposals will only be approved if it can be ascertained, by means of an Appropriate Assessment or other ecological

assessment, that the integrity of nature conservation sites will not be adversely affected.

- ED 6-2 refers to the Transmission Network and the need to consider undergrounding or alternative routes for new network proposals especially in landscape character areas of high sensitivity.
- The landscape in which the site is located is designated as Landscape Character Type 10a – Fissured Fertile Middleground. This has a **Landscape Value of 'Low', a Landscape Sensitivity of 'Low' and Landscape Importance of 'Local'.**
- The Lee valley to the north of the site is identified as **a 'High Value Landscape'**. Policy GI-2 is to protect the character of views and prospects from designated scenic routes.
- A looped route south of Terelton and north of the site is designated under **SR 36 – this is the nearest scenic route.**
- GI 4-1 is to support the **diversification of the rural economy** through the development of the recreational potential of the countryside in accordance with the National Countryside Recreational Strategy. Under section 8.7.3 there is a need to **identify more dedicated cycle and walking routes across the county**. Objective TO 7-1 to **promote the development of walking** and cycling routes throughout the county refers.
- Policy RC1-1 is to **strengthen rural communities** and counteract declining trends within settlement policy framework while ensuring key assets in rural areas are protected.
- Objective CS 4-2e of the plan is to strengthen and protect the rural communities and agricultural infrastructure and productivity. Support of quality of life is identified.
- The Map Browser does not identify any further objectives of relevance.

6.11. West Cork Municipal District Local Area Plan 2017 / Blarney Macroom Municipal District Local Area Plan 2017

6.11.1. The area of interest straddles two Local Area Plan districts.

6.11.2. West Cork Municipal District Plan.

6.11.3. The plan contains few specific references to renewable energies and none relevant to the subject proposals. The need to establish mechanisms between the key stakeholders in order to deliver critical infrastructure (including energy) is noted in section 7.1.8. Some specific references to promotion of walking routes are provided but none are relevant to the subject locality.

6.11.4. Blarney / Macroom Municipal District Local Area Plan 2017

6.11.5. The plan contains few specific references to renewable energies and none which are relevant to the subject proposals. The need to establish mechanisms between the key stakeholders in order to deliver critical infrastructure (including energy) is noted in section 6.1.8. Some specific references to promotion of walking routes are provided but none are relevant to the subject locality.

6.11.6. The Map Browser does not identify any specific objectives in the vicinity of the sites.

6.12. Natural Heritage Designations

The nearest European sites are:

- The Gearagh SAC to the north
- The Gearagh SPA
- Bandon River SAC to the south-west
- Mullaghanish to Musheramore Mountains SPA to the north-west.

7.0 The Appeal

7.1. Grounds of Appeal

7.1.1. Jerome Cohalan and Geraldine Hanley

7.1.2. The appeal of Jerome Cohalan and Geraldine Hanley relates primarily to property value, which it is stated will be reduced by the proposed development. The appeal is supported by an estate agent's valuation which indicates that the property value will be reduced.

7.1.3. Barna Wind Action Group

The appeal of the Barna Wind Action Group includes a range of documents including legal submissions and submissions to the planning authority. The Board is requested to take all of these into account.

7.1.4. Appeal letter of Newman Linehan Carroll Coffey Solicitors states:

- In Cork, Limerick and Roscommon **homes have been abandoned** as a result of windfarms, which were permitted based on **decisions which were not proven to be sufficiently robust**.
- The review of the 2006 guidelines including noise and shadow flicker requirements is an acknowledgement that they are **not now fit for purpose**. Our submission to that review is a key component of this appeal. It is a matter of logic and best practice that **no permission should be granted on the basis of those elements of the guidelines**.

7.1.5. The enclosed submission of Michael O'Donovan is wide ranging and is considered below under relevant headings.

7.1.6. In relation to **ecology –**

- There is a connection by way of the Cummer River between the proposed development and the Gearagh cSAC and SPA. The Kelly judgement requires very stringent comprehensive analysis and careful recording throughout the stages of AA. In the absence of information in relation to the hydrology of the lake reservoir with regard to lake water balance, geochemical processes, siltation and sedimentation and so on the Board should re-evaluate the decision of the planning authority to screen out requirement for NIS.
- The judgement C418/04 as updated in July 2015 is referenced in testament to the poor record of Ireland with regard to the Birds and Habitats directives.

- Regarding Hen Harrier there is an overlap between the SPAs and the strategic search area for wind energy.
- White tailed sea eagle, kestrel and snipe, together with specific named habitats and invasive species have not been adequately considered.
- Land alteration has taken place including at riverbanks. This included field boundaries, which were important as flight path for bats. Map is enclosed.
- Further, new drainage ditches have altered the rate of water flow in the area. The stated number of bat roosts in the area is erroneous. The River Bride is not 1.5 km from the site but is in fact within the site. It needs to be considered along with the ecologically important Marsh. Invasive species need to be considered including in relation to the haul route.

7.1.7. Regarding the substation and the nature and extent of the development:

- The substation will be taken over by Eirgrid, who will be free to make connections and extensions as required – there will be further connections including Shehy More wind farm and therefore the substation qualifies as a transmission generator strategic infrastructure development.

7.1.8. Regarding the **visual impact**:

- The visual impact of the development would affect protected scenery and impinge on waymarked walks and tourism. The permanent visual impact could not be mitigated.

7.1.9. On matters related to proper planning and procedures:

- The development is contrary to objectives designed to protect people and the environment and is not proper or sustainable development. The permitted substation does not meet current standards and did not set a precedent and the permitted 14 turbines cannot be built without the new substation.
- The EIS document is legally deficient and the entire planning application invalid. The Board's Inspector under reference PL04.219620 recommended refusal of permission referring to the intimate nature of the landscape, the pattern of residential development and that the development would be excessively dominant visually obtrusive. The planning authority did not give

due weight to policies in the CDP including in relation to scenic routes, which will be dramatically affected. The regime for AA and EIA in place at the time of permission being granted for 14 turbines was deficient.

7.1.10. On the issue of **noise**:

- The further information request for determination of true background noise levels has not been responded to in a satisfactory manner. This is a crucial issue. As it stands the windfarm is only barely within allowable noise threshold as per the windfarm guidelines. Issues regarding turbine make and model and methodology of noise modelling are unresolved. Conditions 22 and 23 of the decision of the planning authority imply potential to exceed allowable thresholds. Implementation and monitoring are queried.

7.1.11. **Other matters** of note which are referenced are:

- Construction traffic and effects on roads and surface water run-off, health and safety not adequately considered.
- 19th-century field boundaries which were to be subject of archaeological testing and recording have been removed in the interim.
- Regarding hydrology the potential for contamination related to minerals from concrete bases is potentially significant and is not addressed.

7.1.12. The main enclosures presented with the appeal are:

- Observation of 9th July 2015 to the planning authority
- Observation of 2nd February 2015 to the planning authority
- Legal judgements including O'Grianna
- Submissions of NLCC to the planning authority in response to the proposed substation application
- Submission of NLCC to the Department regarding draft noise guidelines
- Submissions of Dr Christopher Hanning to the Australian Senate elected committee on wind turbines and to an oral hearing under PL05B.240166 on behalf of Glenties wind information group

- Document relating to wind turbines installed in Portugal and relating to infra-sound and low frequency noise
- An article published by the Royal Society of Medicine in relation to diagnostic criteria for adverse health effects in the environs of turbines.

7.2. Applicant's Responses

7.2.1. The applicant in a response submission received by the Board on 6th January 2016 comments in reply to the third party appeal by NLCC Solicitors on behalf of Denis Buckley and others (Barna Wind Action Group):

- The making of separate applications for the turbines, substation and haul route together with all information relevant to assessment of cumulative impacts have already provided in significant detail in the windfarm planning application, response to the further information of May 2015 and the clarification of further information of September 2015.
- Regarding the O'Grianna judgement impact of the development overall has been considered.
- The extant permission remains valid. Both the permitted and proposed development are subject to EIA and there has been a comprehensive review of all aspects of the site of the proposed development.
- Each of the separate applications was also accompanied by separate AA screening reports and the cumulative impact of windfarm along with other developments including the substation and public road modifications were fully appraised.
- Criteria for noise, shadow flicker and proximity as described in the 2006 guidelines are used in this application. Separation distances of 500m are provided for between the turbines and the nearest non-involved residents.
- Inappropriate to appraise the application on any limits other than the current (2006 guideline) limits.
- Published reports suggest that the presence of wind farms does not devalue residential property.

- The surveys undertaken did not show significant bat activity within the immediate vicinity of the proposed turbines with the possible exception of turbine 6. Comments are made on studies undertaken. No evidence of mortality of bats on similar scale in Ireland.
- Replacement data presented in the further information response based on the appropriate selection of wind speed data are generally lower than the results in a single 10 minute instantaneous wind data presented in the EIS.
- The incomplete further information submission was rectified by the additional submission of July 20th.
- Regarding the Scotish look-back study the re-modelling of noise levels at 10 no. wind farms showed that 5 were under-predicted, 3 no. were over-predicted and the remaining 2 no. had limited differences – the study concluded in support of the IOA GPG, which was the basis for the EIS predictions.
- The noise appraisal is robust and accurate. The standard methodology published by the IOA as a supplementary guidance note in July 2014 for post-completion monitoring will be employed by the applicant to demonstrated compliance in a transparent and co-operative manner with the local authority.

7.2.2. In response to the appeal of Jerome Cohalan and Geraldine Hanley:

- Views of the auctioneers are speculative in nature and their report is not peer-reviewed or published. Published reports to date suggest that the presence of wind farms does not devalue residential property. Three particular studies are cited and summarised. The reports suggest that there is not devaluation and also identify areas for further research
- The appellants' houses are shown as location A and B on the attached map and the Cohalan property is H71 in the EIS. Both houses are closer to the operational Garranereagh wind farm than the current proposal.

7.3. Observations

7.3.1. Michael P. and Mary O' Riordain (Clashbredane)

7.3.2. The objection is related to aesthetic factors, pollution and health impacts and financial factors. We previously objected regarding the Clashavoon-Dunmanway power line (VA0010) which has been built over our farm. The **view from our kitchen window will include an ugly pylon and 3 sets of poles** and we do not need more turbines on the horizon.

7.3.3. Anthony Cohu of Borlin, Bantry

7.3.4. Raises points related to principal and specific points relating to visual impact.

7.3.5. In relation to **matters of principle** it is stated:

- European and national renewable energy policies and programmes not subject of proper SEA with full public participation and should therefore be deemed invalid or refused as premature.
- Proposed development **does not conform to the guidelines** including those in the development plan.
- **Premature pending comprehensive sustainable energy policy** for the county.
- Taken in conjunction with existing and permitted windfarms in the area also will create an **excessive concentration of** such developments. A grant of permission would be inconsistent with other refusals.
- Proposal is a material contravention of CDP 2014 as it is located adjacent to a high-value landscape area. Location is prominently visible from scenic route SR 36 near Terelton and will be **obtrusively visible from SR 35 near Kilbarry and noticeable from SR 32 near Inchigeelagh and SR 26 near Renaniree**. Would therefore be a **material contravention of the CDP 2014 policy relating to views from scenic routes**.
- The submission elaborates on these points and contains a critique of guidance and policy. The current development plan requires to be interpreted by An Bord Pleanála in terms of the principle of proportionality and having regard to visual impact and protected areas.

- In the absence of the local authority preparing its own EIA the planning authority must be confident that the work in the submitted EIS is prepared with due diligence and that the conditions are complied with and enforceable.

7.3.6. Patrick Manning, Barnadivane

7.3.7. One of the **turbines is to be within 600 m of my home and within 500 m of an old farmhouse**, which is a site which my nephew plans to develop. Significant opposition in the area. Would detract significantly from the community and devalue property.

7.3.8. Nigel Fennell

7.3.9. Reports the **effect on animals** who are more agitated since the existing turbines were erected. Despite a 2 mile distance from the turbines I noticed an increase noise recently especially when the wind is blowing. The development would ruin many people's homes and lives. Would devastate tourism in the area. Revenue will go abroad. Other forms of alternative energy should be promoted.

7.3.10. Teresa Flynn, Farranmareen

7.3.11. Resides 2 miles from existing windfarm. Disputes the assessment of visual impact and the description low level impact which appears to be used in all sorts of situations. Very noticeable impact from the existing wind farm together with the proposed substation have not been adequately considered. On occasion existing windfarm sounds like noise from an airport runway. Cumulative impact of noise is required.

7.3.12. Michael Allen

7.3.13. Noise and visual impact not properly considered by the planning authority. Noise did not exist in area prior to wind turbines. Existing wind turbines can be seen for wide distance.

7.3.14. Stephanie Larkin

7.3.15. Information presented under PL 04.243486 (Shehy More windfarm) and PL 04.244439 (Barnadivane substation) indicates that a further 12 wind turbines and a further 5 (the planned Keel energy proposal) are to connect to Barnadivane substation. These projects are commercially connected and should be treated as one project for the purposes of the application to enable assessment by residents.

My land, which is 100m from the nearest wind turbine is used for keeping a race horse, which will not be possible. Potential for run-off to the river Bride. Bat roosts in the area which are known to exist not been properly surveyed. Impact on White tailed Sea Eagle, which has been seen in the area.

7.3.16. Tony Miller, Sarah Hodkinson and Daphne Babington (Toureen, Moneylea)

7.3.17. The main points of the submission include:

- Visual impact over extensive area including from an area of high landscape value and from walking trails and R585, which is an important route for tourists. Enclosed map shows existing and proposed 63 turbines within 25 km of Barnadivane. These separate applications for windfarms and the substation all disguise the overall cumulative impact of a large-scale project. Proposal constitutes project splitting.
- The Lee Valley and the Gearagh are especially important for migratory birds especially waterfowl and raptors, which are noted in the windfarm guidelines to be susceptible to collision. Cumulative effects on bird populations.
- Water Framework Directive requirements demand no reduction in water quality whatsoever. Baseline data including maximum daily rainfall figures is entirely absent. How then can the **functioning of stilling ponds for example be assessed**. The potential for the **proposed mitigation measures to be overwhelmed by an extreme rainfall event** is considerable. ABP is not in possession of necessary data to complete an appropriate assessment.
- Mr Dick Bowdler (adviser to the British government on turbine noise) found that the **assessment for the Shehy More windfarms were not fit for purpose**, which is likely to be the case again. Residents close to the existing 4 no. turbines at Garranereagh have reported intolerable levels of noise impacting residents and livestock.
- Concerns relating to safety include those highlighted in the regulations for the Vestas V90, which advise against staying within a radius of 400 m of the turbine and ensuring that children do not stay by or play nearby the turbine. We assume that safety considerations are similar for all models. **Potential fire hazard** as witnessed at a nearby turbine, which involved dislodging of 2

of the 3 rotor blades which were thrown 250 m away and resulting in forest fire. **Turbine collapses** have also occurred. Windfarm developers and the wind energy guidelines are blasé about the risks associated with wind turbines.

7.3.18. Eleanor O'Leary

7.3.19. Resides 1.6 km from existing windfarm at Garranereagh. Since operation we experience noise pollution levels ranging from mild to extreme and noise is especially bad when wind is from the south or south-west direction. One of the proposed turbines will be less than 1 km from our house. Further noise impacts will occur. Interference also with our wireless calving camera. Irreversible impact on area from a visual perspective. Negative impact on property valuation.

7.4. Further First and Third Party Submissions – subsequent to the Board's Direction of July 10th 2017

7.4.1. This section lists the comments relating to the period after the decision was quashed, following which observers and appellants were circulated the first party response to an appeal and the parties and observers also invited at that time to make any general comments on the application having regard to the passage of time – the Board's Direction of July 10th 2017 refers.

7.4.2. First Party

7.4.3. The applicant indicated no further comments to the circulated documents. This submission includes a copy of the quashed order.

7.4.4. Third Party

7.4.5. Response of **NLCC Solicitors** received on 2nd August 2017 on behalf of **Stephanie Larkin and Michael O'Donovan**, who authored / compiled the bulk of the material presented.

7.4.6. The additional observations of NLCC Solicitors are:

- The **clients continue to rely on the grounds advanced in the Judicial Review** proceedings, which were not dealt with when the proceedings were compromised by agreement.

- The latest proposal by the applicant and related companies includes the proposed construction of a substation next to the proposed Carrigarierk wind farm (reg. ref. 17/431) to which the proposed 6 no. turbines may be connected and **the Barnadivane substation may never be constructed**.
- The Board needs to be able to identify and describe on the record just what 'the project' is for the purposes of discharging its obligations under EIA and AA.
- The enclosed working paper contains a detailed study evidencing the effect of **wind turbines on the value of nearby properties**. If the Board remains in any doubt on this important issue it is required to solicit competent expert valuation advice before coming to a conclusion.
- In its decision on the **Ardglass case** (PL04. 246824) permission was refused on the basis that the local noise environment would be significantly changed – the predicted increase in ambient noise levels ranged from six to eleven times the present ambient levels – at least that level of increase would be seen at our clients properties.
- **Amplitude Modulation (AM)** has been recognised as an adverse impact of noise from turbines of this scale and there is an unanswerable case for assessing this impact.
- The three enclosed reports refer to the matter of AM at industrial turbines. The **matter is not addressed by the conditions normally imposed by the Board** – it is requested to be addressed specifically in its conclusion on the noise issue in these cases and the result of that assessment must be recorded into its decision.

7.4.7. The enclosed submission of Stephanie Larkin and Michael O'Donovan, whose residence is 609m from the nearest turbine includes the following comments:

- Under PA0046 the Inspector noted that the 'overriding consideration is that the assessor should be able to reasonably justify that there are no other suitable noise sensitive locations in the vicinity of the proposed development and close to a dwelling where background noise levels would be expected to

be consistently lower than at the selected position'. Selected locations are inappropriate. Inadequate consideration of altitude.

- The outright **refusal to carry out further surveys** and the lack of a detailed account from the planning authority and ABP as to why this was acceptable is a game changer with regard to the completeness and validity of the EIS and is strong grounds for judicial review.
- Extracts provided from **research papers on noise** – pending the new noise guidelines being put into place and local authorities being equipped with means to accurately monitor the Board is urged to set aside this application.
- The signposted walkway along the south-western boundary and the walk which bisects the site on the road which goes between T3 and T4 – these are regularly used – a noise sensitive location should have been selected as per the Guidelines.
- If completed the development would result in residents situated between two wind farms of different size turbine creating **an inharmonious and very visible industrial feature on the landscape in contravention of the Guidelines** – would permission be granted for a single development comprising different height turbines.
- The applicant should be allowed to fall back on their 'do nothing scenario' and to build the **permitted 14 turbines – these were chosen to blend in** with the Garranereagh wind farm.
- The Guidelines state that 'wind energy developments within relatively close proximity to one another may be so close as to be in the same visual unit and, therefore**, should involve the same siting and design approach'**
- The Guidelines also say that the creation of a 'visual stacking' effect from a sensitive viewpoint should be avoided.
- We note the recommendation under PA0046 that the **effect on two-storey houses should be modelled** – that should be done to ensure that the effect of shadow flicker is not underestimated –revised Guidelines includes strengthened provisions for shadow flicker.

- We would like to see the co-relation of meteorological conditions with predicted shadow flicker results – we are not satisfied with the results.
- A further **100 submissions were added to the original 259** made to the planning authority – all are opposed – inadequate consideration of stakeholders.
- There is a functional interdependence between the windfarm and substation and project splitting has been facilitated by the planning authority and the Board.
- We have notified the applicant, the planning authority and the Board of the **bat roost in our attic but it has not been taken into account** – if the Board does not ensure that a **robust and reliable bat survey** is carried out as part of the EIS the matter will be taken to the European Court
- Similarly I refer to the information previously submitted on breeding and wintering birds – as usual there are **multiple pairs of snipe on site** and other species which do not appear in the EIS and which lead us as ornithologist to conclude the EIS is inadequate.
- The EIS incorrectly states that there is no recreational amenity uses in this area, which is used by **local hunting groups** on an annual basis.
- The Inspector's rejection of the application and proposed development of the Barnadivane substation was resounding and the **Board failed to provide a reasoned and coherent process as to how it arrived at its decision to grant permission**. Unless clarified we will seek recourse to judicial review.
- **Need for a 60 MW substation has not been provided** – we have asked for evidence to be provided from Eirgrid as to the rationale – this has not materialised and the Board appears to have ignored the request.
- Evidence for and the nature of a **grid connection** at Barnadivane and of the newly proposed Carrigarierk substation is also required to properly access the full implications and extent of the Barnadivane windfarm project.
- The planting plan lodged by the applicant is inadequate and pointless.

- The Inspector or the Board made no reference to the planting plan or my submission.
- We therefore ask the Board to engage a competent person to assess the planting plan and to have those findings published for public comment.

7.4.8. The enclosed submissions are the FCN working paper number 3/2012 which assesses the impact of windfarms on property values, a paper by Mike Stigwood and others relating to audible amplitude modulation and the paper by the same author reporting on the results of a long-term study of community impact from windfarm noise monitoring on a continuous period.

7.4.9. Eleanor O'Leary

7.4.10. In a further submission received by the Board on 8th August 2017 the observer reiterates points previously made and also comments on the negative and irreversible impact on the amenities of the area. The main points of the submission includes concerns relating to physical and mental well-being related to noise and in particular the impact on her youngest child who has a hearing impairment.

7.4.11. Tony Miller, Sarah Hodkinson and Daphne Babington in a further submission received by the Board on 4th of August 2017 includes the following comments:

- The planning authority has not properly carried out its duty in its acceptance of the findings of the peer review by AWN and the decision to revoke part of its own further information requiring additional noise monitoring.
- AWN's comments relating to the lack of need for further noise survey works is unscientific and it is a major flaw that the planning authority accepted this conclusion –strong grounds for judicial review.
- We respectfully ask the Board to reactivate Cork planning authority's request for further noise monitoring.
- The Board considers that it can reach a balanced decision because it had the windfarm and substation before it - however part of the project, a road, is without EIS and is not before the Board – it is therefore queried how the EIA may be concluded by the Board.

- Project splitting resulted in additional costs and does not facilitate proper participation.
- The hydrological connection to the Gearagh SAC is now accepted – the contention that the Cummer River enters the reservoir downstream of the Gearagh is merely semantics as many of the aquatic organisms within the reservoir migrate within the entire reservoir as do many of the birds for which the Gearagh SPA was created. The area in which the Cummer River enters was is highly important to birdlife.
- A turbine collapse, spillage or other scenarios would have very serious consequences.
- IFI should be notified in view of the importance of the reservoir for **Lamprey**.
- The worst-case scenario as required by the Habitats Directive has not been demonstrated.
- There has been a failure to assess the environmental implications of the project at the earliest possible stage under the EIA Directive and to comply with the Aarhus Convention.
- There has **not been a comprehensive demonstration of the overall cumulative effects**. Instead the applicant has cobbled together a patchwork quilt of extant EIS document and presented this to the Board as a legitimate cumulative impact assessment – if the Board has assessed the overall environmental effects of windfarms in the upper Lee Valley we have not seen evidence for it.

7.4.12. For all of the above reasons we request that permission be refused.

7.5. Further circulation of documents

7.5.1. By Direction dated 31st of August 2017 the Board decided that the applicant and the planning authority should be entitled to comment on the observations received from Eleanor O'Leary, Sarah Hodkinson and others and NLCC / Barna Wind Action Group.

7.5.2. The further response of NLCC (Barna Wind Action Group) received on 6th and 9th October was also circulated to the planning authority and the applicant. The applicant responded.

7.5.3. **NLCC/ Barna Wind Action Group** response of 6th and 9th October 2017 includes:

- Serious noise nuisance is being experienced in multiple sites due to windfarms which claim to be complying with conditions and Councils are having **difficulty taking effective action** due to badly drafted conditions.
- The Ministers have detailed that current guidelines are unfit for purpose yet the Board continues to rely on unreliable computer predictions and unfit guidance, which does not even address the recognised nuisance proposed by excess Amplitude Modulation.
- Enclosed are a number of submissions.
- Patrick Manning submission identifies an investment property 400m from T4 – refers to the 500m minimum distance and the proposed 1000m limit suggested under the proposed Wind Turbine Regulation Bill 2016.
- Both of my properties labelled 54 and 55 respectively the subject to noise levels in excess of 43 dBA, the allowable night time limit.
- A submission by Denis Buckley, Michael O'Donovan and Stephanie Larkin - the 14 turbine windfarm permission has lapsed - re-assessment needed.
- The separation distances between a number of houses is also provided.
- A submission by KMS auctioneers refers to the properties of Geraldine Hanley, Jerome Cohalan, Dan and Tessie Galvin and Paddy and Noelle Sheehan for which a **valuation of properties are provided** and comments of the report indicate that the erection of **a wind turbine creates apprehension** in the general public which diminishes the prices.

7.5.4. Further Applicant response:

7.5.5. The further response of the applicant to the third party submissions was received on 16th November 2017. The main points are:

- Compared with the previously permitted scheme there is a reduction in the length of access roads, hardstands and ancillary infrastructure.

- The background including in relation to the judicial review is outlined and this submission responds to 5 no. listed submissions received from and on behalf of third parties in August and October 2017.
- The policy context is reiterated and updated to include reference to the **National Mitigation Plan 2017** which notes in relation to wind energy that if the 40% target is to be achieved that there is **a further 780MW to 1,180MW required to be installed by 2020**.
- An enclosed table provides a summary of the submissions collected and the relevant sub-headings.
- **Hayes McKenzie provides a detailed response to the noise issues raised and deals with the combined issues**. The assessment of the case by the planning inspector under PL04. 245824 (page 20 of 39) refers and an extract from the report is presented.
- Regarding the potential **effect on wireless equipment it is acknowledged** that it will be possible that some houses in the immediate vicinity may require some remedial measures and this matter will be addressed individually as the need arises. Prior to construction baseline survey of telecommunication systems will be carried out and **if post construction additional impacts are experienced a qualified expert will be deployed to address the technological issues**. Section 13.3 of the EIS refers. The assessment of the Inspector on page 28 also refers.
- Regarding the matter of undertaking environmental impact assessment the reason for the separate planning applications along with detailed information in respect of potential cumulative impacts has been outlined in detail and we again refer to the Inspector's report on this case.
- The recent permission for a 150m road is referenced. 2 no. further applications are pending in proximity to the site namely the Shehy More grid connection application and the **Carrigarierk substation application** which were lodged subsequent to the development of the subject application but which both considered the subject proposal cumulatively. **The Board undertook an EIA of the entire project. The Barnadivane windfarm application as presented can be built and operated independent of the**

Shehy More grid connection and the Carrigarierk substation consents. Cumulative impacts were considered. The main cumulative impacts identified are associated with short-term slightly negative construction impacts. The current proposal before the Board is **a stand-alone project** and can be developed on its own right.

- Since 2011 Eirgrid requires layout and size allow for potential future expansion. Barna are contracted to provide 60 MW of electricity.
- Highly unlikely that any silt laden run-off or pollutants that may arise during construction would enter the upper reaches of the Cummer River let alone the Carrigadrohid reservoir and then in turn meet with the upstream waters at the Gearagh cSAC.
- The cumulative visual impact of the proposed windfarm in conjunction with the Garranereagh windfarm are addressed in section 8.3.1 of the EIS which concludes the **additional cumulative visual impact is low and is less than would result from the permitted Barnadivane windfarm**.
- Response to the 3rd party appeal to the Board in January 2016. This notes that a **500 m separation distance would generally be considered to satisfy issues of visual dominance**. Use of the existing 2006 guidelines is appropriate. The assessment of residential amenity is a matter of professional judgement and relevant to the development plan and section 38 Guidelines. The assessment of the Planning Inspector refers.
- Regarding the use of the lands by hunting groups none have made a submission - nor have walking groups. There are **no formally marked routes** on the Discovery Series.
- No requirement for shadow flicker assessment on two- storey houses to be modelled. Shadow flicker limits as per the current guidelines policy are complied with. The applicant is committed to carrying out a shadow flicker compliance check within the 1st year of operation and controls can be put in place if necessary.
- A number of published reports on **property values** are referenced in detail. In the absence of Irish based studies there is no option but to rely on peer-

reviewed studies from other countries. The particular study noted by NLCC is not peer reviewed and it also concludes that further investigation is needed to derive general conclusions and reliable recommendations. The valuations presented relates to 3 no. houses and the method valuation is not shown.

- There is no entry for H38 which is 400m from T4 in the Eircode 2017 dataset, indicating it is **not an occupied dwelling** and hence no requirement for assessment of noise impact under the WEG.
- The location of the known bat roosts within a 10km boundary of the site are not identified at the request of BCI but has been used to inform Bat Impact Assessment. RFI states that there are 28 bat roosts within 10km of the proposal. Activity is low except around T6 and close to T1 and T2.
- To compensate for hedgerow removal **bat boxes are to be installed**. **Clearance of vegetation around turbines** is to be undertaken to ensure that bats are not drawn to the turbines and this is to be undertaken in accordance with UK guidance on buffer zones.
- The study by Cryan is not deemed relevant. Evidence from Europe of bat collisions relates to migratory routes where large numbers are involved.
- **Woodcock are not known from datasets or surveys. Snipe were recorded** (few and sporadic observations) and suitable habitat is acknowledged and the species is likely to use the site from time to time. Various sections of the EIS (5.6.1, 5.6.2, 5.6.4, 5.7.5) and the further information (23.1) refer. The report of the Council's Heritage Officer refers. **No significant impact on bird species apply and no change to the assessment** is required.
- The primary objective of the planting plan was to maintain the connection between hedgerows for bats.

7.5.6. The **Hayes McKenzie acoustic consultant's report** enclosed as Appendix 1 may be summarised as follows:

- Extensive experience in the wind energy section all around the world. Currently acting Chair of IoA working group on Amplitude Modulation.

- The statement made in the NLCC cover letter regarding Ardglass is at odds with the Inspector's report and the decision under PL04.246824.
- It is not correct to state that the proposed development would result in 6 to 11 times increase of the present ambient levels of property.
- The IOA working group lead to publication of *Method for Rating Amplitude Modulation in Wind Turbine Noise* (August 2016) for the identification of the occurrence and level of AM, but this does not set out how the determined level of MD should be applied to a planning condition in the form of any character correction that may be required. Agreement with the planning authority is recommended.
- Regarding concerns of Stephanie Larkin and Michael O'Donovan measurements at or near the tops of hills are often quieter than Valley locations during low speed wind conditions due to the absence of noise associated with the flow of water.
- The **selection of locations for the monitoring of background noise was complicated by the existing wind energy development**. This is a very different circumstance to that described by the Inspector relating to PA0046.
- Levels presented in table 2 in the report attached are indicative of the noise environment found in rural Ireland during the daytime – comparable to other measured sites.
- Australian environment which is basis for one paper is very different – the issues raised however are addressed generally in the **IoA GPG which has been followed undertaken noise predictions for the site** including separation of background noise data into daytime and night-time, allowance **for wind turbine source noise uncertainty and inclusion of a correction for the valley affect – all of these matters have been taken into account**.
- Comments on individual houses are enclosed.
- The matters raised have already been addressed. The assessed impacts are representative and to meet the intent of the current 2006 guidelines.

7.6. **Further submissions from parties and observers**

7.6.1. Based on the Board's Direction dated 18th of December 2017 the applicant's submission summarised above was circulated to all parties and observers.

7.6.2. Responses were received from:

- Planning Authority
- Eleanor O'Leary
- Barna Wind Action Group.

7.6.3. The planning authority indicates no further comments.

7.6.4. The submission of Eleanor O'Leary largely re-iterates points previously made in relation to concerns over noise and particular concerns due to the hearing impairment suffered by a daughter. She also notes the prohibition in the UK on onshore wind energy. The proposal to address telecommunications difficulties if they arise is not acceptable. The UK study on property valuation is not sufficient and an Irish parallel should have been sought.

7.6.5. The submission on behalf **of Barna Wind Action Group** includes:

- Letter of NLCC Solicitors
- Letter of Denis Buckley
- Letter of Patrick Manning
- Submission of Barna Wind Action Group
- Report of Mr Dick Bowdler, Acoustic Consultant, supported by a number of supporting studies and reference material including:
- Appeal decision – RES Developments Ltd - West Devon
- Decision on wind farm – near Swinford
- University of Salford – Research into AM – final report – July 2007
- Wind Turbine AM Review report – Parsons Brinckerhoff - August 2016
- Inspector's report PL04.243630
- Acoustics Bulletin article – A Planning Condition for wind turbines

- Examination of Significance of Noise – commissioned by SEAI – Marshall Day Acoustics - Nov 2013
- ETSU–R–97.

7.6.6. The letter of NLCC Solicitors states:

- Continue to rely on the substantial grounds advanced in the Judicial Review.
- Error in relation to increase of 6-11 times ambient levels is acknowledged. Basic point however is that in the Ardglass case the Board agreed with the Inspector that a **6-11 dB increase over ambient levels is an unacceptable interference with residential amenity**. Same approach should be followed.
- The numbering of Mr Manning's three properties is clarified.
- **We ask that the Board set out its assessment of the expert views presented** including the advice of Mr Dick Bowdler.
- None of the permissions granted by the Board has a condition limiting AM in specific terms although it is now recognised as a source of complaint and should be capable of being addressed by condition as Mr Bowdler discusses.
- The **Board should reject the type of open-ended condition described in section 3.13 of the Hayes McKenzie response** – it is vague, has multiple contingencies and a complete lack of specific metrics and further relies on a methodology published by a trade association for the energy industry.

7.6.7. Letter of Denis Buckley – this indicates that the wind from the north-east on 1st and 2nd January at a location 2km from the existing Garranereagh turbines caused great **distress to his horses** requiring them to be moved on advice of the vet. The proposed development will force me to sell my property due to interference with my farming and horses.

7.6.8. Letter of Patrick Manning – refers to his **investment property H38** and the failure to undertake a noise assessment which he considers unacceptable noting the 400m separation from T4. There is a requirement for 524m separation. The EPA recommendation for quiet areas is 27dB for nigh-time and several studies have suggested separation distances of up to 2400m

7.6.9. Submission of Barna Wind Action Group - the proposed substation is not justified. There is **no valid reason for the new substation**. The developer wishes to increase the capacity to facilitate other developments, which contradicts what he said explicitly in the application previously and elsewhere. We are pursuing further information requests as to date efforts have been unsatisfactory.

7.6.10. It is due inadequate surveys that recreational activity has not been recognised.

7.6.11. The matter of property valuations is evidenced by the **259 local objections**.

7.6.12. We disagree that Aarhus requirements are complied with.

7.6.13. **Woefully inadequate bird surveys**. It would be advisable that the Board request fieldwork to be carried out shortly. Spotted flycatchers are also in the area but not recorded in the EIS. The species which are breeding at the site and are not recorded in the EIS are listed: Snipe, Mallard, Reed bunting, Sparrowhawk, Kestrel, Long eared owl, Grasshopper Warbler, Spotted flycatchers and Buzzard.

7.6.14. The report of **Mr Dick** Bowdler **responds to the Hayes McKenzie submission** of 16th November 2017 and includes the following points:

- The background to this matter includes a recommendation in 2006 by the UK Department of Trade and Industry and the established working party to consider AM which both he and Mr Hayes were members. The final minutes differed from the draft and said that 'it was agreed that a greater understanding of the effects and causes relating to AM were required to ensure that this phenomenon can be managed'. The group recommended a study, which was never carried out – instead the Salford report was published, which set out the nature of complaints to date half of which suggest AM.
- Following a 2013 publication planning conditions began to be attached including one by the Secretary of State - a suspensive condition. The IoA report of August 2016 identified a **need to define a robust procedure for measuring and assessing AM and for addressing the matter in planning conditions**. The October 2016 Wind Turbine AM Review had one single recommendation, which was that excessive AM be controlled by planning condition relating to periods of complaint which periods should be identified by measurement using the metric proposed by work undertaken by the IoA. No

model condition was set out. **Conditions which have been used** are summarised in the paper published under Acoustics Bulletin November – December 2017, which is attached. There remain **concerns that the penalty graph needs to be re-visited but it would be better to proceed on this basis than not to address the matter at all.**

- There have been a number of successful schemes to mitigate AM, which in my experience is at least a part of the reason for complaints about wind turbine noise in most cases. The industry have not shared the mitigation measures.
- ETSU-R-97 on page 68 refers to blade swish only in terms of the effects that can be measured near reflective surfaces and suggests that no significant blade swish is included in the noise limits – Mr Hayes and EIS claim that it is.
- AM was not envisaged at the time of adoption of ETSU-R-9 or the WEG.
- Mr Hayes response suggests a suspensive condition and as implied earlier there is a condition available and no reason why it should not now be used.
- It is not merely a question of whether a condition can be applied but whether AM should be taken into account in the assessment. Given the growing evidence the risk of **AM should be taken into account in any assessment.**
- Regarding the **monitoring locations selected I can only comment to a limited extent** as I have not seen the site. Regarding the criticism of H40 the Hayes response makes no specific comment. The assessment is based on background levels at **H40 and needs to be robust.**
- Section 5 deals with noise limits. The WEG state that in quiet rural areas where the underlying background noise level is under 30dB an absolute lower noise level of turbine noise during the day should be set at between 35db and 40dB but that otherwise the level should be 5dB above background. The EIS interprets this in a somewhat bizarre way as seen in Tables 9.6 and 9.6. The report of the Inspector under PL04.243630 takes a different approach (which I agree with) to the Inspector in the Ardglass case PL.246824.
- The position here is similar to the case set out by the Inspector under PL04.243630. The **lower limit of 35dB or 40dB should be followed by a**

limit of 5dB above background noise. There is no jump to 45dB as can be seen from Figure 3 of ETSU-R-97 which is the basis for the WEG. In terms of the WEG if a location has underlying background noise less than 30dB on a still day then it should never be given the 45dB limit.

- The **lower limit should be 35dB and no justification is provided for using 40dB**. This would still result in noise limits in excess of 5dB above background and so 35dB should be the highest acceptable limit.
- The DoEHLG commissioned MDA report recommended a flat noise limit at all wind speeds of 40dB. In Europe they are usually lower.
- In conclusion the predicted turbine noise level without any AM penalty is very close in many cases to the proposed EIS limits. There is a **significant risk that the nearest houses will suffer from AM** and in this case any penalty will cause a breach of the limits. If realistic limits are applied to comply with the WEG then there will be a **breach of those limits** by a considerable margin. Any AM penalty will increase that breach further to the extent that it may be impossible to mitigate turbine noise sufficiently.

8.0 ASSESSMENT

The remainder of this report is considered under the headings:

- Principle
- Environmental Impact Assessment
- Appropriate Assessment.

8.1. PRINCIPLE

8.1.1. Policy context

8.1.2. The proposal comprises development under the wind energy sector, which is supported under a suite of policy provisions at European, national, regional and local levels. The national policy support is widespread as outlined in the relevant section of this report above and most recently includes support under the National Planning Framework. Further support is contained in the RPGs and the CCDP. Under the

adopted development plan this area is described as optimum in terms of its suitability and one in which wind energy proposals are deemed to be acceptable in principle.

8.1.3. In principle the general location of the site for the proposed wind energy development is acceptable in that context. Development of a substation to facilitate this development is a necessary requirement and I have considered in detail in the concurrent report the scale of the facility proposed and the policy context prevailing.

8.1.4. It is appropriate to consider notwithstanding the policy support for wind energy development whether there are conflicting objectives in the development plan in particular, which would militate against favourable consideration of the proposed development. I note that the submissions of third parties request that the policies set out, which relate to the support of local communities and local enterprise need to be balanced against the needs of the renewable energy sector and that the Board should demonstrate that an appropriate balance is achieved. I consider that this matter should be considered and that puts an onus on the Board in its decision making to be satisfied that the impacts on the local community do not undermine rural activities. In considering this issue I refer the Board to the landscape and visual impacts, to noise and shadow flicker impacts and to consideration of material assets in a wide context including property values, agricultural production and tourist and recreation amenities. It is appropriate that while accepting the designation of this area as being suitable in principle for the wind energy sector, the Board is also satisfied that the development complies with relevant policy and guidance. In that manner the Board can be satisfied that the wind energy development would be balanced with the protection and strengthening of local communities.

8.1.5. Regarding the level of opposition to the proposed development, I acknowledge that it is substantial as evidenced by the third party observations to the planning authority, which number about 350 submissions. This is a considerable number in a rural area. I note also the comments made by NLCC relating to concern on the part of the elected representatives in relation to the wind energy sector. I concur with the comments in the Inspector's report under PL04.245824, which identifies the role of the elected representatives in policy formulation and the need for the Board to adhere to the adopted policy in the making of a decision in this case. The substance of the third party submissions is also part of the information context for decision making purposes.

8.1.6. On a final matter of the policy context the Board is referred to the following.

1. The area in which the sites are located are not designated as being of high landscape sensitivity. This is an area which is specifically designated as acceptable in principle and suitable for wind energy development. Landscape and visual impacts on the Lee Valley to the north are considered below as are the surface water and ecological impacts.
2. Regarding the tourist potential of the area based on heritage and / or walking routes there is no specific development plan support for these activities in this particular area and no national trails or features of nationwide heritage interest are present. The area already contains wind energy infrastructure and there is no evidence to support any claim that further wind energy development would significantly adversely impact on recreational or tourist development.
3. The substantive national guidance for the Board to consider shall be the Wind Energy Guidance 2006 (WEG) pending the adoption of any subsequent Guidance. I refer below under the noise section to the emerging policy issues which are subject of much of the third party comment in this appeal.

8.1.7. In conclusion I consider that notwithstanding its purpose the development is of a type which is acceptable in principle in this locality having regard to the designated for wind energy. Nothing in national or local policy supports any other conclusion in my opinion.

8.1.8. **Whether the development might be described as Strategic Infrastructure**

8.1.9. A relevant matter raised by third parties relates to whether the proposed development would constitute Strategic Infrastructure Development, which application would therefore be appropriately made to the Board in the first instance. The basis for this argument relates to the alleged commercial and the future physical connections between the subject proposal, the Barnadivane substation and the Carrigarierk and Shehy More windfarms, substations and grid connections. The cumulative number of turbines in these facilities would clearly exceed the threshold for Strategic Infrastructure. However, these developments are distant and subject of separate applications for consent. The subject development before the Board does not constitute Strategic Infrastructure being less than the threshold set in the

Seventh Schedule and having regard to the determination by the Board in relation to the substation.

The definition of the project for the purposes of Environmental Impact Assessment is a matter for consideration in terms of cumulative impacts.

8.2. ENVIRONMENTAL IMPACT ASSESSMENT

8.2.1. The development is one which falls under statutory requirements for Environmental Impact Assessment and an Environmental Impact Statement has been submitted. In the preparation of this report as part of the basis for the Board in undertaking of an EIA I have had regard to the totality of the information presented including the EIS, the supplementary information presented by the applicant, the reports of the planning authority and prescribed bodies and the third party comments to the planning authority and An Bord Pleanála.

8.2.2. It is necessary that the EIA undertaken address direct, indirect and cumulative impacts. Having regard to the issues arising in this case I structure the assessment under the following headings, while noting the significant overlaps between the sections:

8.2.3. Air and Climate including:

- Noise
- Vibration
- Air quality including dust
- Climate.

8.2.4. Human beings including:

- Socio-economic impacts
- Shadow flicker
- Health and safety
- Community gain.

8.2.5. Landscape

8.2.6. Material Assets including:

- Cultural heritage
- Land use, tourism and recreation
- Property valuation
- Roads and Traffic
- Telecommunications.

8.2.7. Soils and Geology

8.2.8. Water

8.2.9. Flora and fauna

8.2.10. Alternatives

8.2.11. The interaction of the foregoing

8.2.12. Cumulative impacts.

8.2.13. I refer to the recent Circular 05/2018. This states that categories of applications which fall to be dealt with under the pre-existing Directive 2011/92/EU, before amendment by Directive 2014/52/EU include applications accompanied by an EIS made before 16 May 2017.

8.3. Air and Climate

Noise

8.3.1. In view of the emphasis on this matter in the appeal and observation submissions I propose to assess the data presented relating to the baseline environment and the results of modelling undertaken and consider it is also worthwhile to include some discussion on relevant guidance and standards, which in effect is at the heart of matters arising in many of the submissions on this issue. This section is therefore structured as follows:

- Baseline environment, modelled results and the WEG standards.
- Guidance and standards.
- Conclusions.

Baseline environment and modelling

8.3.2. The information presented in the EIS was supplement by first party submissions by way of further information and clarification of further information including a peer review of the survey and modelling work by AWN and most recently by the response presented by Hayes McKenzie to the appeal and observations. The decision of the planning authority also had regard to the comments of the HSE and the reports of the Environment Section.

8.3.3. The adequacy of the noise surveys is questioned by the third parties and was subject of detailed investigation by the planning authority. Notwithstanding the peer review by AWN of the work of Hayes McKenzie the third parties are of the opinion that an expert from abroad should be brought in for assessment and it is also suggested that the Board should have its own study undertaken. I accept both the expertise of Hayes McKenzie and the independence of AWN, whose assessment included a refinement of the daytime noise criteria curve and undertakes a worst case assessment. Based on my assessment of this matter, which is set out below, I consider that the input by noise experts and the resulting information is adequate for the Board to conclude an EIA in this case.

8.3.4. The third parties concerns relating to the noise assessment relates in no small part to the **method of the determination of background noise levels**, which it is stated is a crucial matter, which was not properly addressed in the further information response or subsequently. The third parties state that the overriding consideration given for noise measuring locations was security of equipment and that the majority of non-stakeholder houses were scoped out and the remaining locations are not representative.

8.3.5. The assessment of noise in this case is complicated by the existing Garranereagh turbines. It is a requirement under the WEG that noise from existing turbines be excluded. ETSU-R-97 identifies various means by which background noise levels from existing turbines can be derived. In the absence of any control over these turbines (and unable to have them switched off) the applicant selected a location away from this windfarm and adopted the lowest noise levels including by undertaking a correction for the existing wind farm.

8.3.6. Regarding the third party submission I find that there is little technical support for the call for more surveys based on inadequate or unsuitable baseline locations. The EIS

and the further information describe the 4 no. selected locations and the process of selection. It is incorrect to state that the selection was mainly related to security, although it is clear that such matters have to be taken into account and this is acknowledged by the first party. The applicant states that the selection process included establishment of locations which were representative and with a view to covering most affected properties. Hayes McKenzie in submission to the Board reiterates its opinion that the baseline figures are representative.

8.3.7. Of the 4 no. survey points in the EIS, H40 was selected as the most representative point for the purpose of the baseline conditions. H40 is described by third parties as a bizarre location for baseline assessment because of its distance from T4, T5 and T6 and because of the high altitude, although conceding that it may have validity for T1, T2 and T3. Mr Bowdler (acoustic expert for third parties) in his recently submitted report however does not follow this line of argument. He acknowledges that he could comment only to a limited extent on the baseline locations as he has not seen the site. In referring to the need for robust selection of locations he notes that the Hayes McKenzie response does not refer to H40. However, the selection of H40 as the background level representative for all locations was addressed in the submission to the planning authority received on 10th September 2015 and is addressed in the peer review of AWN. The selection of the baseline location close to a cluster of houses at H40 and at a remove from the existing windfarm was deemed suitable by the applicant's consultants and I concur with this assessment. Further the submissions on behalf of the applicant are stated to correspond well with survey results from other rural areas.

8.3.8. I note the comment of AWN that the approach to dealing with the existing wind farm is robust in the circumstances, which include an absence of suitable monitoring data from Garraneragh windfarm. The approach also appears to me to constitute a conservative approach. AWN reviewed the further assessment which took into account the measured baseline levels at the 4 no. survey points and the predicted levels for the existing Garranereagh site. The latter were logarithmically subtracted from the measured baseline levels to give a worst case approach. I am satisfied that it is demonstrated that the conclusion that the **estimated baseline levels presented are representative of the quieter positions in the study area**. As such they are an appropriate basis for the modelling undertaken.

8.3.9. The **modelled results** presented show that for wind speed between 4 and 10 m/s the estimated baseline levels are between 25.8 $dBL_{A90,10min}$ and 38.5 $dBL_{A90,10min}$.

8.3.10. In terms of **applicable standards**, WEGs sets a general lower fixed limit of 45dBA (or a maximum increase of 5dBA), although in very quiet areas the use of a margin of 5dBA above background may unduly restrict the industry. Therefore in areas with background levels of less than 30dBA the daytime level of $dBL_{A90,10min}$ should be limited to 35-40dBA.

8.3.11. In line with the above the applicant has selected $40dBL_{A90,10min}$ as the relevant daytime criterion for locations which have low baseline and $45dBL_{A90,10min}$ elsewhere. The AWN assessment reworked the information and presented an updated set of criterion, adjusting them downwards for the purposes of assessment of the noise impact; the adjusted figures did not alter the assessment for most locations, notwithstanding the small changes in some of the predicted levels.

8.3.12. The results of either technical assessment (AWN or Hayes McKenzie) is essentially the same. In this regard I refer the Board to the more conservative of the two, which is that presented in section 5 of the report of AWN, which was received by the planning authority on 10th September 2015. The baseline information is characterised for 141 locations and based on the stricter daytime criterion adopted by AWN there is a predicted exceedance of the criterion at 14 locations of which 10 no. are stakeholders or derelict properties. Page 15 of the AWN report refers.

8.3.13. A salient point to note is that all of the properties at which there are exceedances of the adopted criteria are also influenced by the Garranereagh site. It is relevant to note also that the existing wind energy turbines have been described as giving rise from time to time to high levels of disturbance to animals and human beings.

8.3.14. At 3 no. of these properties (at which the AWN adopted criteria are exceeded) the problem is not evident at lower wind speeds but arises at wind speeds of over 8m/s. The breach of adopted criterion is of less than 0.5dB, which is not significant and in my opinion can be largely discounted. At the fourth property H28, the noise impact on this house was queried by the HSE, who also noted that the Guidelines do not say that at 500m noise will not be a problem. Regarding H28 the owner/occupants are stakeholders in the Garranereagh windfarm, which it is stated is and will remain the dominant source of noise at the property. The information presented is that there

is a difference of only 0.1dB between the cumulative (Barnadivane and Garranereagh) noise levels and that of Garranereagh alone at that receptor. I consider that the applicant has satisfactorily addressed this matter and that the conclusions drawn are reasonable.

8.3.15. The failure to assess unoccupied houses is reasonable in my opinion in view of the WEGs, which specifically state that a noise sensitive location is 'any occupied house ...and may include areas of particular scenic quality or special recreational amenity importance'. I do not consider that the recreational uses in this area including cycling or walking routes would fall under this category. There is a waymarked trail to the south of the wind energy proposal but at such distance that noise impacts can be discounted and no assessment of noise effects would be warranted. There is reference to regular use of the road between T3 and T4 for walking but this is not a formal route or part of the national network. I consider that the decision in the EIS and in the review by AWN the focus on the impact on the 4 no. non-stakeholders is reasonable.

8.3.16. The Board can therefore conclude that notwithstanding the high level of noise on a cumulative basis at some locations, the predicted levels are not in fact significantly different to the existing situation. At many of the sensitive receptors the proposed windfarm would not contribute significantly. Increased values predicted, which are considered to be an over-estimation are in the order of 0.2dB at most at H28 for example. The existing turbines would have most influence at that location.

8.3.17. I consider that the third party submissions have not provided any strong evidence in opposing the baseline surveys or the predicted noise impacts and I reject the argument that the selection was biased. Regarding the specific objection to H48 as a monitoring location I note that it was not the main focus of assessment and that unusual noise records can be selected out during interpretation. Having regard to all of the evidence presented, I accept the approach undertaken by the applicant and the findings of the assessment, which demonstrate that noise as a result of the development on its own and when taken in conjunction with the existing windfarm would be within the spirit of the WEG as the applicant states. **I conclude that the assessment of baseline and modelled impacts undertaken on behalf of the applicant are robust and compliant with the WEGs.**

8.3.18. Regarding the selection of a **particular type of turbine** submissions on behalf of the applicant indicate that this would give rise to commercial difficulties. I accept this point. The exact turbine need not be specified provided its likely significant impacts are described and can be assessed. In terms of the proper planning and development of the area and the specific impacts for the purpose of EIA, I note that the applicant has specified the sound power rating and relevant dimensions of the turbines. I note the submission of the applicant that the modelling of the predicted sound pressure levels constitutes a worst-case scenario based on the commitment that the sound power rating of the specific turbine will comply with the limits set in the planning conditions. I consider that there is sufficient information available on the turbine type.

Guidance and standards

8.3.19. Since the making of the decision by the Board under PL04.245824 the arguments on both sides have been consolidated in two specialist reports (Dick Bowdler for the third parties and Hayes McKenzie for the first party). Although there is a myriad of references and documents presented by the parties, it is my opinion that these two reports set out the remaining substantive issues in relation to many of the matters of concern to third parties. I also refer to the evidence of Dr Hanning.

Third party Case

8.3.20. The original appeal submission presented on behalf of Barna Wind Energy refers to the evidence of Dr Christopher Hanning including his evidence in the case of a wind energy proposal at Glenties. Dr Hanning's submission referred to the low frequency noise component which can arise from wind turbines and to the adverse effects that can have on sleep and consequently on public health. The paper presented includes a detailed critique of the Irish and UK noise guidance and a literature review of papers from all over the world. Dr Hanning's conclusion is that large-scale turbines undermine the quality of sleep experienced by persons within 1.5km and that this sleep disturbance has unacceptable effects on health. The author also states that both NG3 and ETSU-R-97 are technically inadequate and erroneous and there is good evidence that receptors within 1.5km of a turbine are at significant risk of sleep disturbance.

8.3.21. Dick Bowdler's position on Amplitude Modulation addresses the 'blade swish' (AM) noise, which is considered by the parties to warrant particular assessment and to be inadequately addressed in guidance. His report was presented on behalf of third parties in response to the Hayes McKenzie submission of 16th November 2017. The Bowdler report specifically refers to aspects of the proposed development and the assessment undertaken by the applicant including in the EIS.

8.3.22. Regarding the general reports on file I consider that the Board should not put undue reliance on these documents, which in many cases will have been considered and debated by acoustic experts engaged in formulating policy and will or will not have been incorporated in that policy. In other cases the context of the information is unclear. It is worth referencing that in common with the Hayes McKenzie personnel, Mr Bowdler's expertise is clearly demonstrated to be at the highest levels.

8.3.23. On the matter of Amplitude Modification Mr Bowdler states that there have been a number of successful schemes to mitigate AM, which is at least a part of the reason for complaints about wind turbine noise in most cases. The industry have not shared the mitigation measures. In the absence of an agreed approach planning conditions have been attached in the UK including so called 'suspensive' conditions. The October 2016 Wind Turbine AM Review had one single recommendation which was that excessive AM be controlled by planning condition relating to periods of complaint, which periods should be identified by measurement using the metric proposed by work undertaken by the IoA. Conditions which have been used are summarised in the paper published under Acoustics Bulletin November – December 2017. Mr Bowdler and Mr Hayes are listed as contributors to this paper. There remains concern that the penalty graph included needs to be re-visited but it would be better to proceed on this basis than not to address the matter at all, according to Mr Bowdler.

Applicant Position

8.3.24. Hayes McKenzie acknowledge the phenomenon of AM but considers that it is addressed under ETSU-R-97, which is the basis for the WEGs, which allowed for the presence of this character with the assumption that it will not normally exceed a level of 3dB in a free-field noise environment. The response to the appeal identifies OAM (Other Amplitude Modulation) as the particular concern where in a free-field

environment the 'normal' 3dB modulation depth has exceed the 3dB criterion at times by a significant level, perhaps as a result of a stall of the wind blade. Referring to the IoA *method for rating amplitude modulation in wind turbine noise* (August 2016), there is no certainty with respect to the method by which a penalty scheme for the presence of OAM might be applied. For that reason if it is deemed appropriate a scheme to be agreed with the planning authority might be appropriate. A wording is set out.

Assessment and possible conditions

8.3.25. I consider that there is some level of agreement between the experts that in certain circumstances there may be issues with OAM. That is not to say that windfarms are by their nature prone to this phenomenon. It is also evident that the attachment of such a condition including a 'suspensive' condition is a highly technical matter. Critically, according to Mr Bowdler there has been success at industry level with mitigation but methods are unknown. I consider that this is a very significant statement made by an established acoustic expert, working on behalf of the third parties. This gives comfort that the industry is capable of resolving issues, if they arise.

8.3.26. While I have set out the various arguments made by the parties in relation to guidance I now revert to the simple conclusion that the national guidance prevails and that it would be unacceptable for the Board to pursue any alternative. Having regard to Mr Bowdler's comments relating to the specialist knowledge available at industry level, I do not consider that special conditions are warranted.

Conclusions

8.3.27. I consider that it is reasonable to conclude that the approach to mitigation presented by the applicant is sufficient to address any excessive noise impacts and consequences for human beings. In making a recommendation on this matter it is necessary to set out planning conditions, which are be in accordance with the *Development Management Guidelines* as well as the WEGs and which would adequately address impacts on human beings. I note that the OAM is not claimed by either party to be a highly likely consequence of the wind energy development if permitted. I consider that the issue is capable of being addressed by condition and that there is no basis whatsoever for refusal of permission for this reason or for

omitting a turbine or more. Instead, I refer the Board to condition 8 attached in the recent Shehy More decision (243486), which I consider adequately addresses any concerns relating to operation of the development as proposed. Therefore, I reject the claim made on behalf of the third parties that 'if realistic limits are applied to comply with the WEG then there will be a breach of those limits by a considerable margin. Any AM penalty will increase that breach further to the extent that it may be impossible to mitigate turbine noise sufficiently'. If that was to emerge as the case then the development would not be capable of being operated from time to time.

8.3.28. The applicant's mitigation proposals refer. In particular the applicant will agree a methodology for demonstrating compliance and for ongoing monitoring if that is required – condition 8 of 243486 would cover this. Based on the applicant's submission and the report of Mr Bowdler for the third parties and his reference to the fact that the industry has expertise in addressing any issues with OAM, I am satisfied that the recommended conditions below would be capable of implementation.

8.3.29. I therefore conclude that the development would be acceptable in terms of noise impacts. The Board can conclude for the purposes of EIA that subject to mitigation and the conditions below, the proposed development would not be likely to result in increased noise levels which would give rise to significant adverse effects on livestock or on human beings, including on human health and residential amenity.

Vibration

8.3.30. The primarily potential sources of vibration which could result in temporary impacts on the residential amenities of the area would be related to the passage of heavy plant and delivery vehicles in the construction periods and to the borrow pit. Regarding use of plant and HGV traffic the methods of working, control of speeds and other measures could be agreed with the planning authority as part of the Construction and Environmental Management Plan. I consider that the Outline CEMP, which is part of the application documentation is a reasonable starting point in this regard and can be finalised in agreement with the planning authority in the event of a grant of permission. Regarding the proposed borrow pit, the location of which is identified, this is an area with rock which is close to the surface and is deemed to be suitable for use without crushing. The likelihood of any requirement for blasting is discounted.

8.3.31. Based on the above I consider that any construction phase impacts relating to vibration can be mitigated and that no significant adverse impacts are likely.

8.3.32. Separately, I also accept the information presented by the applicant which demonstrate no significant risks due to peat instability or ground subsidence.

8.3.33. I note that the Council's Heritage Officer refers to the need for a competent person to verify the conclusions in relation to soil stability and soil management. The Council's engineering staff support the conclusions of the EIS and this matter is adequately addressed in my opinion.

Air quality and climate

8.3.34. Dust emissions are likely to be the most significant construction phase emission under the heading of air quality impacts. Impacts would be short-term and be highly localised. While there is potential to impact local residents, agricultural production, ecology and visitors to the area by reason of dust impacts this is unlikely to constitute a significant environmental impact and is capable of mitigation.

8.3.35. Other air impacts which warrant comment and consideration are emissions from vehicles and plant on the working site and along the road. Again, in view of the limited duration of the construction phase and the low traffic levels in the operational phase this is not a significant matter and there is no likelihood of significant impacts subject to implementation of the mitigation measures presented in section 14.3.1 of the EIS.

8.3.36. While there are many means of providing alterative energies in response to climate change concerns, the generation of power through wind energy is seen as one of the primary means suitable to Ireland. The applicant has referred to the gap in provision in this regard. Third party comments relating to alternatives are noted but must be dismissed in the context of the effectiveness and potential of wind energy and the strong policy support at local and national level. Effects on climate would be negligible in scale. However, the development would be described as having positive indirect effects through contributing to the increase in renewable energy on a national level and reducing reliance on fossil fuels.

8.3.37. In conclusion following consideration of the likely significant effects which fall under the broad heading of Air and Climate, the development is acceptable.

8.4. **Human beings**

8.4.1. At the outset I refer to the obvious overlap between this section of this report and that above. I have concluded above that the proposed development would not breach air quality and noise standards. The purpose of the limits of such standards includes the protection of human health and amenity. As such I consider that it can be concluded that the proposed development would not give rise to significant adverse impacts on human beings including by way of human health and residential amenity impacts due to noise and dust and other air emissions.

8.4.2. In my opinion the remaining significant matters relevant to undertaking of EIA under the heading of human health falls to consideration of the following: socio-economic impacts, shadow flicker, health and safety and community gain. There are matters which are considered under 'Material Assets' which are also relevant to 'Human Beings'.

Socio-economic impacts

8.4.3. The EIS briefly addresses the matter of economic impacts on a wide range of scales and across different sectors including the national benefits in terms of balance of payments and the addition to local funding by way of rates and local benefits mainly in terms of the 15 people likely to be employed in the construction phase and the spin-off to other businesses in the construction and operation phases. The benefit to stakeholders in the development, which includes local people is likely to be significant through provision of a supplementary income. It can be concluded that the economic impacts would be described as positive, although some are of short duration and limited to benefiting only a few persons.

8.4.4. I will further address the issues raised by the third parties in relation to the development of the recreational assets of the area under the 'Material Assets' section below. The character of the area as a rural location and the various community activities, enterprises and values appears to be highly diverse. I am not convinced that there is any evidence overall that the development would undermine the strength of the local community by reason of population loss or dilution of its attractiveness for recreation. The existing wind energy proposal does not appear to me to have undermined the vibrancy of the area, notwithstanding that there is a level of objection on noise grounds and a high degree of opposition to further proposals of

this nature. I consider that there is simply no evidence presented in the hundreds of objections lodged to support any conclusion that the proposed development would significantly undermine the socio-economic functions which are the foundation of the community including in terms of residential and agricultural activities.

8.4.5. When considered at a national or regional level the development is in accordance with the adopted policy provisions and with the national objectives in relation to renewable energies and can only be considered to contribute positively to socio-economic benefits at that level.

Shadow flicker

8.4.6. The potential for adverse impacts arising due to shadow flicker is amongst the most significant concerns set out by third parties. As with the comments in relation to noise assessment, it is submitted that the guidelines are outdated as indicated by the decision to review them and that the assessment for the purposes of the application is deficient.

8.4.7. I have already referred the Board to the need to comply with the relevant adopted WEGs. The WEGs indicate that at distances of over 10 rotor diameters there is very low potential for shadow flicker. In this case that would equate to a distance of over just over 1km in this case. There is also a requirement to address cumulative impacts.

8.4.8. The EIS follows this guidance, which I consider is appropriate and it derives modelled predictions for the houses within 1.01km of the turbines using industry recognised software. The first party submission is that in terms of the impact of the Barnadivane windfarm proposal in isolation the results of the modelling indicate that the effect on non-stakeholder occupied residential property is likely to breach the recommendation of no more than 30 minutes daily shadow flicker. Following refinement it is predicted that none of these houses would be affected by shadow flicker for over 30 minutes per day.

8.4.9. A cumulative assessment was undertaken to incorporate any effects arising from the Garranereagh windfarm. The EIS identifies that 23 no. third party houses are relevant for assessment of shadow flicker and that a total of 9 no. of these properties could in theory experience shadow flicker levels in excess of the guideline limits of 30 minutes per day as a result of the proposed development taking in conjunction

with the existing turbines. In view of the potential for cloud cover and following application of a correction it is concluded that none of the houses would be subject to excessive duration of shadow flicker.

8.4.10. The EIS also addresses the matter of the guideline annual limit which is stated to be unlikely to be exceeded and I accept this. I am satisfied that the relevant section of the EIS has been prepared based on recognised methodology and following the WEGs as is appropriate. In the event that mitigation is required at an individual property, the developer would aim to address the matter through agreement and by implementing measures such as planting of screening vegetation and / or fitting of blinds or curtains. The further provision set out in the event that agreement cannot be reached would be the installation of an automated switch off and in this regard the EIS describes how this would work and in Table 10.5 identifies the houses which might be affected. The applicant is committed to carrying out a shadow flicker compliance check within the first year of operation and controls can be put in place if necessary.

8.4.11. Regarding the suggestion that the shadow flicker effect on two-storey houses should be modelled to ensure that the effect is not under-estimated I note that the there is no such requirement in the WEGs. Regarding the request that presentation be made of the co-relation of meteorological conditions and the predicted results I note that the predictions are based on an unrealistic assumption of 100% sunshine and the applicant has applied a 40% correction to address cloud cover. This appears to me to be reasonable and I do not consider that further data is required.

8.4.12. I conclude that the applicant's assessment of potential shadow flicker is sufficient and that effects are for short duration at a small number of houses and are capable of mitigation.

8.4.13. I recommend that the Board address this by way of a standard condition.

Health and safety

8.4.14. The requirements to be addressed in terms of health and safety would relate primarily to the construction phase and are subject of national legislation. In the EIS it is confirmed that the development will be designed, constructed, operated and decommissioned in accordance with relevant regulations. The potential health and safety issues which are likely to be encountered relate to aspects of the construction

process which will be covered by a Safety and Health Plan and to matters relevant to the external and operational environment. The latter includes a range of potential hazards to workers related to working at height, working with electricity and general construction hazard. Control of access to the public would also be appropriate at certain locations and during certain phases. I accept that these risks are amenable to mitigation as proposed.

8.4.15. Although it is not indicated as a major concern the possible health and safety concerns which are raised by appellants and observers include that of blade throw, turbine stability and related matters including fires. In particular there is reference to the location of a number of houses within 1 km radius and the safety of occupants of these houses. While such incidents have occurred, I consider that they are highly unlikely and I note the commitment given that the design, construction and commissioning of turbines will be subject to rigorous safety checks. I note in addition that it is intended that the site will be free to access other than for the presence of cattle fencing. I concur with the case presented by the applicant that the site in the operation phase does not pose risks to human beings in terms of health and safety.

8.4.16. I conclude that following mitigation through the application of relevant procedures and regulations and the Safety and Health Plan, there is no significant residual risk.

Community gain.

8.4.17. A community gain proposal has been made by the applicant. While details are not fleshed out other than in section 10.3.2 of the EIS, it is stated to be likely to comprise payment to a Community Gain Fund which would be administered by a local committee. The means by which local residents could benefit could include annual payments towards electricity costs, funding for home upgrades, local road upgrades and minor works to local properties during the construction period.

8.4.18. In the event of a grant of permission the above commitment would apply. In this circumstance and having regard to the general approach of the Board not to attach specific conditions except in the case of Strategic Infrastructure applications, I do not recommend a specific condition.

8.5. **Landscape and visual assessment**

8.5.1. I have concluded above that having regard to the policy provisions relating particularly to this location that a wind energy development would be considered to be generally acceptable in principle. I refer herein to the landscape and visual impact of the proposed development.

8.5.2. I commend the quality of the photographic images prepared on behalf of the applicant which were received by the planning authority on 26th May 2015. Taken together with the written submission including the individual viewpoint descriptions in the EIS, the information available is of good standard. A cumulative ZVT provides a means of determining the number of turbines visible from any vantage point. I am satisfied that this information together with primary EIS documentation and submissions on file provide the Board with sufficient information for the determination of the EIA in this case.

8.5.3. At the time making a decision under PL04.245824 there was an extant permission for 14 no. turbines of smaller scale. That permission has now lapsed but it is referenced in the submissions of the third and first party. The images show the combined existing and the proposed turbines in other representations which allows for consideration of cumulative impacts and also show the previously permitted scheme.

8.5.4. The scale and nature of the proposed turbines together with the proposed substation subject of the concurrent appeal and the road works which are part of this appeal in conjunction with the previously permitted 150m road scheme will result in a significant cumulative impact. That is without doubt. There is no possible screening or further mitigation which would reduce the visual impact of the substantive element of the development, which is the turbines.

8.5.5. The visibility of the proposed turbines will be high in particular from the wider distance including from elevated lands where other wind energy proposals are in existence or are permitted. The detailed planning history above together with the application submissions refer. This is an area where the wind energy sector is established as part of the landscape and the proposed development has to be considered in that context. Significantly however the immediate lands containing residential development and proximate scenic routes are more sensitive receptors.

The third parties also make specific reference to scenic views, to the Lee Valley to the north and to walking routes.

8.5.6. On inspection I noted that the hilly farmland topography and vegetation results in the views to the existing wind turbines at Garranereagh frequently being obscured from view. The screening effect will be a factor in the experience of viewing the proposed development also and views to the turbines will be intermittent, particularly in terms of the majority of views from short distances. Notwithstanding the increase in turbine numbers from the existing 4 no. turbines to 10 no. turbines, if this development is permitted, I consider that the apparent scale of the windfarm when viewed from the immediate area would not be such as to dominate the landscape or to be considered unacceptable in visual terms when viewed from short distances. In deciding whether the development is acceptable in this regard I refer the Board to the references by third parties to recreational routes and to the scenic route to the north-west. In view of the scale of the turbines they would be visible from these features but I do not consider that they would be dominant or intrusive or militate against the enjoyment of the landscape including for active and passive recreation. Regarding the regional road to the south which is described as being important for tourists, I note that it is not designated for protection in the immediate vicinity of the site and in addition I consider that views to the windfarm would be intermittent. The turbines would be visible in the changing views as one travels through the area. In the same manner as the existing turbines are part of the landscape character, this feature would be reinforced but there is in my opinion no evidence to suggest that they would be unacceptable in landscape and visual terms.

8.5.7. In terms of the wider landscape context and views to the proposed development it would be situated in the context of the existing Garranereagh turbines. Views to the proposed wind energy development would position the development in the wider landscape setting and in my opinion it would not be dominant as shown on the images. The wider area includes permitted windfarms notably at Carrigarierk and Shehy More and there will be inter-visibility between these sites. The scale of all of the individual wind farms is relatively small e.g. the proposed Shehy More would have 12 turbines and the sites are all separated from each other by distances of 10km or more typically.

8.5.8. Regarding the distant scenic views from which the windfarm would be visible, which are identified in the EIS I refer the Board to the description of viewpoints VRP12 and VRP15 on pages 176 and 177 of the EIS. I agree with the conclusion that the overall magnitude of visual impact would be low. There would not in my opinion be any significant adverse visual impacts arising from the proposed development when considered in conjunction with the other planned and existing windfarms within 20km of the site.

8.5.9. The other relevant cumulative landscape and visual impact relates to the Barnadivane substation proposal, which will be seen together with the proposed turbines in views from the south including from some residential property but will not be visible from the scenic route to the north-west due to its low height and the topography. This is a large development in terms of the extent of the site and the ground contouring required and there will be clear views to the development including from the local road and other lands to the proposed development. There will be a permanent landscape change and the visual impact will be adversely altered even after mitigation as the existing open view across the fields will be interrupted and (for a temporary period) the overtly industrial character of the site will be dominant. This would be described as a permanent landscape impact, but after mitigation would not be described as a negative visual impact.

8.5.10. I have referred in the concurrent report to the acceptability in principle of the proposed approach to screening the substation development. The assessment of the cumulative impacts of the proposed 6 no. turbines, existing 4 no. turbines, the proposed Barnadivane substation have all been considered from the outset in the applicant's submissions. The efforts have concentrated, correctly in my opinion, on the assessment of the existing and proposed turbines. The cumulative landscape and visual impacts of the substation and the turbines can be determined from the images and description of viewpoint 11 and the significance of visual impact is determined to be 'moderate', which is relatively high.

8.5.11. Individual observations to the planning authority and Board refer to particular houses having clear views to one or more turbines as well as existing development such as pole sets. It is clear that it would be a consequence of the proposed development that particular views from a number of houses would include turbines and / the substation and the ancillary development. The EIS accordingly focuses on the views

in the immediate vicinity of the proposed development. Whether a particular occupant perceives this altered view to be negative may depend on whether or not they are a benefiting landowner and no doubt there will be residents who consider that their residential amenity would be significantly and adversely affected. Having regard to the character and designation of this landscape I do not consider that the magnitude of such impacts would warrant a refusal of permission or omission of any particular turbine or element of the overall development.

8.5.12. In terms of cumulative visual impacts I note in particular the proximity of houses to the substation (as close as 250m) which together with the proposed turbines would give rise to additional visual impact, which due to the nature of the substation prior to mitigation by landscaping would be described as being out of character with the rural area. It is noted however, that in the main any such cumulative effects, which would be perceived as deriving from an inherently industrial form of development would relate to the substation, which in itself is partly an indirect effect of the proposed development. The other permitted development in the immediate area would not give rise to landscape and visual impacts except in terms of the wider landscape, which are considered acceptable. After mitigation by landscaping of the substation site, I consider that the combined development would be acceptable and would not materially detract from the views from residential receptors or scenic routes. I disagree that the different sized turbines between the Garranereagh and Barnadivane windfarms would constitute a dis-jointed or visually discordant arrangement and in this regard I note that in many of the near views not all of the turbines would be seen at any time.

8.5.13. In the wider context while there would be some level of inter-visibility there would also be mitigation due to distance and due to the separation between the different windfarms. Thus while some of the third parties comment on adverse impacts on the Lee Valley and other places including Inchigeelagh, I would not conclude taking into account the relatively small scale and the separation between the individual energy proposals that there would be significant cumulative impacts.

8.5.14. I consider that the Board should conclude that the proposed development would not materially contravene the policies relating to scenic views and landscapes. I also conclude that the development is acceptable in terms of direct, indirect and cumulative landscape and visual impacts.

8.6. **Material Assets**

Cultural heritage

8.6.1. The archaeological impact assessment presented is based on a desktop and field surveys. The cultural heritage assets within the study area (276 hectares) for the purposes of the EIS contains two recorded archaeological monuments, a ringfort and an enclosure. No predicted direct impacts are identified. As part of the construction phase mitigation 100m exclusion zones are recommended around the known monuments.

8.6.2. The EIS describes the fact that the layout of all of the components of the wind farm have been designed to minimise impacts on known archaeological sites. In view of the scale of the site there is always potential that previously unidentified archaeological monuments or artefacts would be discovered during the course of construction. Such provisions could arise in relation to the grid connection and other infrastructure. The grid connection has already been assessed under a separate consent. Use of existing tracks where possible minimises potential archaeological impact but the development will involve construction of significant lengths of 5m wide access tracks as well as road improvements, which may uncover features of interest and give rise to a requirement for mitigation by excavation and recording. Mitigation presented in the EIS includes the requirement for stopping works if necessary.

8.6.3. The assessment undertaken is comprehensive and includes a description of the likely visibility of the proposed turbines from the sites. There are likely to be indirect effects on the ringfort as blades of one turbine over 280m away are likely to be visible. The wider area within 2km of the site but outside the study area contains additional monuments the views from which is likely to include 5-6 turbines in relation to which no mitigation can be secured. I agree with the conclusion of the EIS that the distance minimises the visual impact.

8.6.4. Regarding the recently removed hedgerow which was to have been subject to archaeological monitoring, this action was not undertaken as part of the proposed development and is not relevant to the cultural heritage assessment.

8.6.5. Regarding architectural heritage there are no protected structures or NIAH listed structures within the study area and no structures of architectural heritage interest were discovered during field work.

8.6.6. I conclude based on primarily on the EIS that the development following mitigation would be likely to have low residual impacts on the cultural heritage resources of the area.

Land use, tourism and recreation

8.6.7. The dominant land use in the area is defined by the presence of pasture signifying the importance of agriculture. While there is reference in observations to potential effects on horses and other animals as a result of noise I am not convinced that this is demonstrated to comprise a likely significant effect on agricultural activities in the area. I note the positive economic effects which will benefit local farmers and others.

8.6.8. In my opinion having regard to the submissions and the EIS and my inspection, the actual material assets in this area are not particularly defined by tourism and recreation although such are the focus of the third party comments. I note the presence of some signposted routes and a community resource based around recreational walking and related pursuits. The applicant's submissions refer to the maintenance of access in the wind energy proposals and indicates that this approach will be pursued in this case. The impact on recreation and tourist amenity is not likely to be significant in my opinion as there is limited developed resources. I note that the third parties state that the resources have not been identified due to inadequate surveys and they point to a shooting club for instance. Taking in its totality I consider that there is a relatively low level of recreational use in the area. The use of windfarm roads may open up access but in the context of a quiet rural road network it would not be of particular value in my opinion. The existence of the wind farm could discourage interest parties from developing walking, recreation and tourism in this area and in this manner the value of material assets would be frozen.

8.6.9. On balance I agree with the applicant's submissions that there is no requirement for mitigation as a result of impacts on land use, recreation and tourism, as it is reasonable to conclude that the impacts would not be negative.

Property Valuations

8.6.10. It is a major concern of persons opposing the development that there will be a decline in property values, which matter appears to be focused on houses rather than on land values. In other sections of this report I have commented upon how the development would not give rise to unacceptable impacts on the residential

amenities of this area including by way of noise, shadow flicker and visual impacts and in this context I conclude that it is reasonable to infer that material assets in the form of houses would not be significantly adversely affected.

8.6.11. I note the considerable comment on the file relating to this matter, the submission of various reports and valuations and the advice that the Board should obtain specialist independent expertise on this matter. I do not consider that there are particular issues arising in this case which would warrant engagement of specialist expertise. The types of issues arising in this respect are common to many of the cases which the Board considers and the issues are familiar.

Roads and Traffic

8.6.12. The EIS includes the haul route from the N22 to the north of the wider area through which large loads would be transported. There is a high level of detail of the likely traffic movements involved including in relation to general construction deliveries in the peak construction phase, the requirement for extended articulated trucks for transport of the turbine nacells, blades and towers and the junctions along the route. Regarding the movement of long vehicles details are provided of the works at junctions. The requirement for a 150m road, which has been authorised under a separate application also refers.

8.6.13. Regarding the peak impact on the local road network, the period of pouring of concrete foundations is identified as having most impact on surrounding road networks, including a 55% increase on a local road. Traffic management measures which are addressed at a preliminary level in the EIS can be further agreed to ensure appropriate mitigation.

8.6.14. Having regard to the above and taking into account the mitigation measures the residual effects would be slight at most, except in the short period when foundations are being poured when the residual impacts are described as moderate.

Telecommunications.

8.6.15. In general, there is unlikely to be significant interference with telecommunications signals and such interference can be mitigated in accordance with the WEGs.

8.6.16. An observer refers to ongoing interference with a wire-free calving system, which in the opinion of the technician is due to the interference with the existing wind energy

development. Installation of a wired system will be costly and troublesome but may be required it is stated. In effect the observation sets out the required mitigation and the applicant appears not unwilling to remedy any interference.

8.6.17. Subject to mitigation as set out above, the impact on material assets related to telecommunications can be satisfactorily mitigated and no significant residual impact is likely.

8.7. Soils and Geology

8.7.1. Having regard to the geology of the area there is no significant risk related to peat or slope stability. The likely risks which would be encountered as a result of the proposed development involve increased erosion of soil, with resulting potential for sedimentation and to risks related to the borrow pit. The mitigation measures to which the applicant has committed relate to timing and manner of excavation, location of stockpiling and reinstatement techniques. Such construction techniques are readily capable of implementation and are set out in sufficient detail in the EIS and additional submissions. The impact on soils and geology would not be significant having regard to the small area of the borrow pit and the measures on the overall site to excavate, store and reinstate soils. For the purposes of environmental impact assessment including the possible indirect effects, I consider that the mitigation set out in the EIS would result in acceptable residual impacts.

8.8. Water

8.8.1. Related to the above is the potential for impacts on surface water and groundwater. The EIS identifies potential impacts on groundwater as including localised dewatering as a result of construction of additional drainage channels, increased vulnerability of aquifer due to removal of subsoil and rock and potential for chemical pollution as a result of leakage and run-off. Some of these impacts could arise in the operational period in addition.

8.8.2. The potential for surface water impacts on the catchment of the River Cummer and the Bride refers. Both are tributaries of the Lee. Surface water quality protection measures are related to soil and sub soil handling as well as to good practice measures to ensure risk of spillages is minimised and proper separation of working

areas from surface waters are in place. An increase in run-off in the order of 1.3% of the catchment area is predicted.

8.8.3. The applicant's proposals include a range of measures to mitigate the potential effects. Mitigation measures for hydrogeology, hydrology and water quality are set out and include development of detailed CEMP, measures related to avoidance of spillage and contamination reaching the water table, measures to reduce run-off and sedimentation of water courses, to restore the borrow pit and a suite of general good practice construction phase measures including use of soil bunding and silt fences. Regarding the knowledge of baseline conditions which is queried by the third parties including in relation to rainfall and the design of drainage measures, I consider that it is sufficient. I refer to section 7 of the EIS which presents data based on high quality publically available information, including OPW and WFD sourced information. The applicant's submission also demonstrate a high level of knowledge of the local drainage patterns.

8.8.4. Regarding the protection of groundwater / surface water one of the issues raised by an appellant concerns leachate of $CaCO_3$ and other mineral from the bases of turbines. Such measures are stated to be deemed necessary in order to protect the River Bride, River Cummer and associated wetlands. I accept that the handling of wet concrete could give rise to water quality concerns, but is not proposed at this site in locations within or close to watercourses. I do not consider that the risk which is stated to be posed as a result of concrete being in situ is significant and having regard to the separation between the location of the works and the natural watercourses I consider that there are no particular circumstances in this case to warrant further investigation of this matter.

8.8.5. The applicant's proposals also referred to water quality monitoring and the location of monitoring locations are identified as part of the outline CEMP. Included also are proposals relating to emergency silt control and spillage response. Operational phases are included in the water quality monitoring plan.

8.8.6. Regarding the disposal of liquid wastes I agree with the submission of the applicant that this matter is adequately considered in Section 2 of the EIS, which refers to waste disposal and the preparation of method statements and safe disposal for all stages of the development from construction to decommissioning.

8.8.7. Subject to the above and having regard to the submissions on file, it may be concluded that the measures proposed will avoid significant impacts on groundwater and surface water bodies in the construction and operation phases.

8.9. Flora and fauna

8.9.1. The dominant habitat type in the study area comprises habitats which would be deemed to be of local value only including grassland, boundary hedgerows, wet grassland and scrub and woodland plantation. Surveys undertaken for the purposes of the EIS including field study and research of data sources did not reveal any species of flora or fauna which would be described as rare or protected. The development, while extensive in terms of land cover will not therefore result in significant adverse direct impacts.

8.9.2. Third party observations have identified a number of areas of study of baseline conditions, which they consider to be deficient. Third parties refer for example to bats in the attics of their own houses, which it is stated are not addressed in the EIS and that the bat survey deficiency would warrant a review of any decision to grant permission. Regarding the applicant's knowledge of bat roosts I note that this matter was addressed to the satisfaction of the Council's Heritage Officer. Field surveys undertaken confirm the presence of six bat species and the applicant acknowledges that others are expected to occur on occasion. Confirmed and potential commuting routes are demonstrated. Most bat activity was restricted to the area around T6. The EIS is based on survey as well as information on all known bat sites as identified by BCI, which includes 28 bat roosts within 10 km of the proposed windfarm the location of which is described as sensitive and for that reason data is not provided. I consider that this is a reasonable approach. Further, I have no reason to doubt the expertise or methodology of persons involved in the preparation of the EIS and consider that the statements made are credible.

8.9.3. The removal of a hedgerow in recent times as part of a land alteration project is presented by objectors as something which has adversely impacted flightpaths for bats. The response to the appeal presented accepts that the removal of these hedgerows since preparation of the EIS and response to further information does constitute habitat loss but that the findings of the impacts on bats are not altered as the habitat loss occurred outside the footprint of the proposed development. The

calculations which are presented in the application submissions in relation to vegetation clearance and replanting accordingly are not altered. In any event I note the applicant's proposal to mitigate hedgerow removal through installation of bat boxes and planting at appropriate locations. The proposal is to replant 1.5 times the amount of vegetation which would be lost.

8.9.4. Furthermore, in relation to the potential impact on bats I note that the applicant has responded to objectors concerns relating to potential collision studies including on the basis that there is no evidence of this matter being of significance in this country. Nevertheless, in accordance with international guidance, it is proposed to maintain clear areas around turbines to minimise potential for bat collision and to undertake monitoring of bat collisions.

8.9.5. Having regard to the various arguments presented, I consider that the development is acceptable and would not be likely to result in significant adverse impact on bats in the area. I also consider that there is sufficient information available based on the surveys undertaken.

8.9.6. Regarding the information presented by the applicant on birds, which is also deemed by third parties to be deficient I note that breeding bird surveys were conducted in June and July 2014 and Vantage Point surveys in the winter of 2013-2014 from two points for 36 hours. Furthermore all relevant data for a 10 km grid square was assessed for the purposes of preparing the EIS.

8.9.7. The third parties (which include an ornithologist resident in the area) make various detailed comments in relation to the bird species which visit the area and on the basis of their own knowledge the baseline data is considered to be inadequate. I respond below to what I consider to be some of the more significant outstanding issues.

8.9.8. Regarding the presence of White Tailed Sea Eagle, this has been seen in the area according to third parties and is stated to have been inadequately considered. This is a highly mobile species particularly when young and is likely to be found from time to time throughout the south-west of the country. Regarding the sourcing of information I note that the applicant has following consultation with the relevant expert in the NPWS and in accordance with the Scottish Natural Heritage guidance carried out a winter bird vantage point survey. The applicant consulted also with the relevant

official in the local authority. Regarding the WTSE in particular the proposed development site lacks suitable breeding territory and nesting habitat according to the first party submissions, which note the absence of large mature trees. I consider that the statement that the applicant made every effort to obtain information on WTSE and other birds of breeding conservation should be accepted. None of the submissions by prescribed bodies or officials of the planning authority present information to the contrary. I consider that is not likely that the proposed development would be in conflict with the species in view of its rarity in the area.

8.9.9. There are comments made in relation to other bird species including Woodcock and Grasshopper Warbler. These were not identified during survey and are not known from the datasets according to the applicant. The applicant however acknowledges that the site has some habitat which can be used by Snipe and the species are likely to use the site from site to site and indeed were recorded in surveys. Kestrel are also known as indicated in the response to further information. The same would apply to other birds. The impact on Meadow Pipet was raised in an appeal also. The species were recorded in the winter VP survey and also on breeding bird transects. The applicant's submission is that the species is considered (along with other passerine species) not to be especially susceptible to impacts from windfarms according to Scotish National Heritage guidance.

8.9.10. Obviously the experience of full-time residents in an area will provide different opportunities to witness birds who may be present for short times only. However, it is not in my opinion necessary or likely as the basis for an EIS survey that all birds in an area be identified. I consider that the surveys are undertaken over two seasons and included vantage point surveys are acceptable. I also note that the third party objections are incorrect in stating that certain species were not identified, when in fact they are listed in the EIS or supplementary submissions, which are also relevant for the undertaking of EIA. In terms of the adequacy of the surveys presented I consider that they can be relied upon for the purposes of assessment of the possible impacts of the proposed development on birds in the area.

8.9.11. Regarding the impact of the proposed development which is based on the Percival wind farm and bird impact assessment, I consider that it reasonably concludes that in the context of relatively low levels of activity on the site and the presence of some

(although not extensive) suitable habitat the sensitivity of birds to adverse impact as a result of the development is low.

8.9.12. Regarding the survey for terrestrial habitat, which an appellant states is deficient I accept the applicant's statements regarding the adequacy of the surveys and expert input.

8.9.13. I consider that the potential for air quality impacts on flora and fauna can be discounted. Potential impacts on ecology during construction include the sedimentation and other water quality related pollutants. A tributary of the River Bride adjoins the southern site boundary as is clearly recorded in Chapter 7. The proposal and the associated construction measures include that all surface water to be discharged from the site will pass through soakways or vegetation filters and that there will be considerable separation distance from the nearest natural watercourses. The site is connected also to the Carrigadrohid reservoir (the Lee) by way of the Cummer. The watercourses downstream of the site are not known to contain populations of freshwater pearl mussels. Subject to implementation of best practice measures in relation to water quality no significant adverse impacts on aquatic species or on those who rely on such species for feeding would be likely. I will address this matter further in the AA section below.

8.9.14. Chapter 5 of the EIS addresses the matter of potential impacts arising from invasive species. No invasive species were identified within the site boundary and species present outside of the site are Japanese Knotweed, which is outside of the study area. Further to the surveys the developer will implement the relevant guidance on management of invasive species and will undertake post-construction monitoring as an additional measure.

8.9.15. Having regard to the contents of the EIS and other information presented by the applicant I am satisfied that it may be concluded that there will be negligible impact on the receiving environment in terms of impacts on flora and fauna.

8.10. Alternatives

8.10.1. Regarding alternatives the selection of the site was related to the previous permission for a wind energy proposal at the site. Notwithstanding that permission has now lapsed, I consider that the lack of consideration by the applicant of

alternative sites is reasonable in the context of the strong policy support for the wider area. On the matter of alternatives considered the EIS advises on the alternative layouts and the constraint assessment which lead to the reduction in proposed turbine numbers from 8 to 6. A 'do-nothing' option is mentioned.

8.10.2. In general as demonstrated in case law the requirement to consider alternatives does not involve a requirement to undertake an EIA of the alternatives considered, only to present the main alternatives which were considered. In my opinion that is achieved. I note in addition that there is some mention in the applicant's submissions and in the third party objections to the visual impact of the lower turbines compared with the higher structures proposed. There are also comparisons between the environmental impacts of the previously permitted scheme and the current proposal. It is not relevant that the Board undertake a detailed comparative assessment of these options, rather it is appropriate that the Board consider the development presented.

8.10.3. Regarding the alternative means of providing renewable energy as suggested by an observer, there is no obligation on the applicant to present such options in the EIS where these options were not considered.

8.10.4. I consider that the main alternatives studied by the developer and the reason for this choice are adequately described in the EIS.

8.11. Interactions

8.11.1. This matter is subject of Section 15 of the EIS. I consider that the following interactions are most noteworthy:

- Noise and vibration and human beings
- Flora and fauna, water and soils and geology
- Landscape and human beings
- Material assets and human beings.

8.11.2. I consider that the interactions and inter-relationships have been adequately assessed in the applicant's submissions and in this report and that suitable mitigation has been incorporated.

8.12. **Cumulative impacts.**

8.12.1. The third parties refer to the failure to consider the cumulative impacts of the proposed windfarm, the substation, the 150m road, the Shehy More and Carrigarierk developments in particular. There is an emphasis in this regard on the impacts on the landscape, noise, surface water and birds.

8.12.2. The consideration of cumulative impacts is a theme throughout the original EIS and has been elaborated upon in the various submissions from the applicant. I consider that the most useful and concise presentation of the cumulative impacts is that which is dated January 2016 and submitted to the Board in response to the appeal, which considers the worst case scenario of simultaneous construction of the proposed windfarm, substation and private roadway. The submissions include consideration of potential cumulative impacts of the windfarm in combination with a grid connection and accommodation works for turbine delivery route association with Shehy More (PL04.243486), which information was not available at the time of making of the original application for Barnadivane. The existing windfarm development has been assessed by the applicant in particular in relation to cumulative visual impacts and noise and my report above refers. I have had regard to all of the available information as the basis for my assessment and conclusions on cumulative impacts, which are as outlined below.

8.12.3. It has been discussed in the Noise section above that the operational noise impacts when considered on a cumulative basis would not be significant. Regarding the potential for concurrent construction of the private roadway, the 6 no. proposed turbines and the substation I note that due to the separation distances between these structures and the mitigation measures which are proposed in relation to the works at each particular location, no significant cumulative noise impacts would be anticipated in the construction phase. There would thus be no significant cumulative noise impacts which would be likely to have any additional effect on ecology or human beings.

8.12.4. Regarding the cumulative visual impacts of the development the existing wind farms in the area are relevant for consideration as is the proposed substation. The existing 4 no. Garranereagh turbines are subject of detailed consideration in the landscape and visual impact assessment as part of the landscape context. The consideration

of cumulative impacts concerns primarily the proposed substation, which I have addressed in both reports and which I consider can be mitigated through the screening effect of the proposed planting. The substation will be viewed in the context of the proposed and existing turbines and will give rise to additional impacts but subject to mitigation I concur with the applicant's assessment that the cumulative visual impacts would not be significant. In terms of the proposed turbines and the potential for cumulative effects, distant views will be most impacted and the presence of wind farms as a feature in the landscape would be emphasised, although at some locations each separate wind farm will be independently viewed. There are a number of permitted and existing wind farm developments in the wider area including to the west and south. The permitted and proposed wind turbines and the associated infrastructure in the wider area has been commented upon in my assessment above whereby I concluded that due to their scale in terms of turbine numbers and the separation between the different developments, significant adverse cumulative landscape and visual impacts would not result.

8.12.5. The proposed private roadway, the permitted grid connection to Shehy More, the works proposed in the construction of the proposed 6 turbines and other developments proposed in the area have all been assessed (including in decisions of the Board) in terms of their potential impacts on surface water flow and quality. All are subject of CEMPs. Water crossings where they occur would be subject to suitable designed mitigation measures. I accept that in the context of the receiving environment and its characteristics and species and having regard to the details of the proposed development, there would not be any significant cumulative impacts on the surface water flow, on water quality or on related ecology.

8.12.6. Regarding impacts on ecology in general as a result of the concurrent construction of the substation, roadway and the windfarms, the cumulative loss of habitat would result in less places of refuge from noise and disturbance for the duration, which constitutes a temporary and slight negative impact on birds and mammals. Taking into account the mitigation measures to protect bats and birdlife and the distance from designated sites and the nature of the habitats which would be affected, I consider that the cumulative impacts on ecology would be deemed to be acceptable and in particular in relation to Natura sites and qualifying interests is considered to be insignificant.

8.12.7. I consider that there are no potential cumulative impacts related to slope failure and soils and geology taking into account the proposed substation, road and wind turbines.

8.12.8. I consider that there is potential for cumulative effects on human beings as a result of road traffic related disturbance in the event of the concurrent construction of the grid connection and the private roadway, substation and the wind turbines. The effects would be short-term and the increased traffic levels would not be significant compared with the construction of the wind farm in itself and the impact would be localised and not of significance in terms of the region traffic flow.

8.12.9. Potential cumulative socio-economic impacts are described by the first party as positive. I consider that the presence of the additional wind energy development in this area including the substation will benefit individual landowners and give rise to some employment but also may deter investment in other sectors such as recreation and on balance I consider that the cumulative socio-economic impacts would be best considered to be neutral.

8.12.10. I consider that it can be concluded that the cumulative effects of the developments would be positive in terms of operation phase Air and Climate impacts.

8.12.11. In relation to the Lee Valley , due to topography and distance in particular I consider that there is no likelihood of significant additional impacts relating to landscape / visual impacts or ecology including birds and that these matters have been properly considered in the applicant's proposals as well as under previous applications.

8.12.12. In relation to any pending impacts including from the proposed substation near Dunmanway these would fall to consideration under any future applications or appeals.

8.12.13. In conclusion having regard to the cumulative impacts arising from planned and existing developments and in particular from the Shehy More grid connection, the 150m roadway, the proposed wind turbines and the substation, there would be no potential for significant adverse cumulative impacts, which would warrant to be addressed by condition.

8.13. **Other issues**

8.13.1. Regarding the matter of project splitting I note the appellant submissions relating to cumulative assessment being one part of the EIA process but not a replacement or substitute for an EIS of the single development. The applicant also notes that the project splitting issues are complicated by the assertion that the substation is intended to serve windfarms in the 25km radius.

8.13.2. In my opinion there is no attempt to avoid EIA and no issue of 'project splitting'. In this regard I note and concur with the applicant's statements that the individual and cumulative assessment of impacts has taken place, that there is no requirement for EIA to be undertaken in relation to the substation and no reason for it to be incorporated into the project as part of the current application / appeal for the wind turbines. The concurrent assessment of the two cases by the Board is appropriate and would ensure avoidance of gaps in the assessment process.

9.0 APPROPRIATE ASSESSMENT

9.1.1. The application is accompanied by a Screening for Appropriate Assessment. The screening assessment concludes that having regard to the conservation objectives of the European sites the proposed development would not be likely to have significant effects on the European sites.

9.1.2. I consider it appropriate in considering the requirement for AA that the Board have regard to the recent legal decisions, including that of People over Wind v An Bord Pleanála. In relation to the items, which might be left to be decided between the planning authority and the developer including drainage details, the question of whether or not such details can be agreed post-consent is one which falls to be considered depending on the context and the sensitivity of the receptors.

European sites potentially impacted by the proposed development

9.1.3. There are no Natura 2000 sites in the immediate vicinity of the proposed development site (PDS). Natura 2000 sites within 15km are The Gearagh SAC and Gearagh SPA, Bandon River SAC and Mullaghanish to Musheramore Mountains SPA. These sites are potentially impacted having regard to the conservation objectives and the nature of the development.

9.1.4. The separation distances from the PDS to the Natura sites is 6.7km and 6.8km in the case of the Gearagh SAC / SPA and 10.8 km to the southwest in the case of the Bandon River SAC. The Mullaghanish to Musheramore Mountains SPA is within the 15km radius of the site.

9.1.5. The receiving environment is connected to the Lee (which contains The Gearagh sites) by the Bride and the Cummer rivers. The northern end of the PDS drains by way of the Cummer River to the Lee. A tributary of the Bride is south of the PDS.

9.1.6. I am satisfied that there is no other Natura site which could be affected by the proposed development.

Conservation objectives

Bandon River SAC (site code 002171)

9.1.7. The conservation objectives are to maintain or restore the favourable conservation condition of the Annex I habitats and / or the Annex II species for which the cSAC has been selected. The qualifying interests are:

- Floating River Vegetation
- Alluvial Forests
- Freshwater Pearl Mussel
- Brook Lamprey.

The Gearagh SAC (site code 000108)

9.1.8. There are detailed site specific conservation objectives for this site, which were published on 15th September 2016. The qualifying interests are:

- Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]
- Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation [3270]
- Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]
- Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]
- Lutra lutra (Otter) [1355]

9.1.9. The detailed conservation objectives aim to define favourable conservation condition for a particular habitat or species at the site. For each of the qualifying interests the conservation objective is to maintain the favourable conservation condition of the habitat or species, which is defined by a list of attributes and targets.

9.1.10. The site is of most importance for its extensive alluvial woodlands. Otter occur throughout the site. The Gearagh also supports part of an important wintering bird population including Whopper Swans, Teal, Mallard, Tufted Duck, Golden Plover, Dunlin, Mute Swans, which appear in late summer and Greylag Goose and Great Crested Grebe.

9.1.11. The targets and attributes are to be found in the relevant NPWS publication. For otter one of the attributes is the extent of freshwater (river) habitat. The target is that there would be no significant decline in this available habitat the length of which is mapped and calculated as 10.6km. The availability of food supply in terms of biomass, the prevention of barriers to movement and other targets are included.

The Gearagh SPA (site code 004109)

9.1.12. The birds listed as special conservation interests are:

- Teal
- Wigeon
- Mallard
- Coot

9.1.13. The conservation objective is also to acknowledge the importance of Ireland's wetlands to wintering waterbirds and the second conservation objective is:

- To maintain or restore the favourable conservation condition of the wetland habitat at The Gearagh SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

Mullaghanish to Musheramore Mountains SPA (Site code 004162)

9.1.14. The conservation objective is to maintain or restore the favourable conservation condition of the bird species listed as special conservation interests for this SPA:

- Hen Harrier.

Potential for likely significant effects

9.1.15. Potential impacts on European sites that may arise are indirect effects as a result of the development:

- Siltation or pollution of watercourses during construction and operation of the wind farm in particular due to spillages, soil handling and storage and from increased surface water runoff leading to pollution of watercourses draining to the Gearagh SAC and / or the Bandon SAC resulting in potential direct effects in terms of the loss or degradation of habitats and potential indirect effects in terms of effects on species which use European sites.
- Disturbance / displacement / collision impacts on birds from the Gearagh SPA and the Mullaghanish to Musheramore Mountains SPA during construction and when operational.
- In combination effects related to the above from construction and operation of the development and other significant developments in the zone of influence.

Evaluation of potential effects

9.1.16. I consider that the potential effects for each of the European sites is as follows.

Bandon River SAC (site code 002171)

9.1.17. There is no significant watercourse within the PDS or in the immediate vicinity. The site is elevated and drains towards the Lee catchment. As such there is no hydrological connectivity between the site and the Bandon SAC.

9.1.18. In view of the above, the proposed development is not likely to have significant effects on the Bandon River SAC in light of the conservation objectives of the site.

The Gearagh SAC (site code 000108)

9.1.19. The watercourses draining the PDS ultimately connect to the Lee at a point downstream of the Gearagh SAC / SPA. As such any sedimentation or other pollutants which could enter the water course would flow away from the designated habitats and the habitats on which the designated species are reliant. The point at which the Cummer reaches the Carrigadrohid reservoir (the impounded Lee) is 11.5km downstream of the proposed development site. There is thus very limited

likelihood of significant effects. However, there is potential that adverse water quality impacts could affect mobile species including otter.

9.1.20. In terms of proximity to watercourses T1 and T2 are about 600m from the rising of the Cummer River and T4 and T2 are closer, 111m in the case of T4. T6 is shown as being over 200m from the Bride. These separation distances are greatly in excess of any required buffers which would be required to ensure water quality protection including in the construction phase, which I consider is the main risk period, notwithstanding some risk in the operational period from increased surface water runoff. For these reasons it is considered highly unlikely that any silt-laden runoff or pollutants that may arise during the construction or operation of the wind farm would enter the watercourses draining to the Lee or would come into contact with mobile species such as otter or adversely affect the foodstuffs on which otter relies.

9.1.21. I am satisfied that the proposed development is not likely to have significant effects on The Gearagh SAC in light of the specific conservation objectives of the site.

The Gearagh SPA (site code 004109)

9.1.22. The SPA is part of an impounded section of the Lee. It is a shallow lake, which is fringed by wet woodland, scrub and grassland that is prone to flooding and the site supports important populations of species of national importance (Mute Swan, Wigeon, Teal, Northern Shoveler, Coot, Golden Plover) and regular visitors (Whooper Swan, Tufted Duck, Lapwing).

9.1.23. The conclusions above in relation to the potential for significant effects arising from silt pollution or other pollution entering watercourses apply also to the birds and habitats of the SPA. I consider that such effects can be discounted.

9.1.24. The Winter Birds surveys concluded that there is low level usage of the PDS by wintering birds, which conclusion I accept. Therefore, I consider that there is no aspect of the proposed development which would be likely to give rise to significant effects on the special conservation interests of this Natura site as a result of disturbance or displacement impacts or indeed collision.

9.1.25. In view of the above, the proposed development is not likely to have significant effects on The Gearagh SPA in light of the conservation objectives of the site.

Mullaghanish to Musheramore Mountains SPA (Site code 004162)

9.1.26. The conservation objective is to maintain or restore the favourable conservation condition of the bird species listed as special conservation interests for this SPA:

- Hen Harrier.

9.1.27. There is no reference in the bird surveys to use of this site by Hen Harrier, or in the third party submission. The grassland habitat on site would not be preferred habitat for the species. There is no likelihood of significant interference in the construction period with nesting or foraging habitats. In the operational period the only potential risk would relate to collision or displacement as the species to avoid the lands in the immediate vicinity of turbines. Given the results of the survey and on the basis of very occasional presence of the species which may from time to time overfly the area, these potential impacts can be eliminated. I conclude that there is no aspect of the proposed development, which would be likely to give rise to significant effects on the special conservation interests of this Natura site as a result of disturbance or displacement impacts or collision in view of the low level usage of the environs.

9.1.28. In view of the above, the proposed development is not likely to have significant effects on the Mullaghanish to Musheramore Mountains SPA (Site Code 004162) in light of the conservation objectives of the site.

In combination effects

9.1.29. As the proposed development would not give rise to direct or indirect effects on any Natura 2000 site, its effects in combination with other projects, including the existing turbines in the vicinity, the proposed access road and substation, or the proposed Carrigarierk or Shehy More developments and other developments would not be significant.

Conclusion

9.1.30. It is therefore reasonable to conclude on the basis of the information available, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on any European site, and in particular the SAC and SPA at the Gearagh (site codes 000108 and 004109) respectively, or the SPA at the Mullaghanish to Musheramore Mountains (site code 004162) or Bandon River SAC

(site code 002171) in view of those Sites' conservation objectives. An Appropriate Assessment is therefore not required.

10.0 Recommendation

I recommend that permission be granted for the reasons and considerations and subject to the conditions below.

11.0 Reasons and Considerations

Having regard to –

(a) 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 provisions of the Cork County Development Plan 2014-2020, including objective ED-4 and ED 6-1 and the location of the site within an area where wind energy is acceptable in principle and the provisions to facilitate where practical and feasible infrastructure connections to wind farms and other renewable energy sources subject to normal planning considerations.

(c) The planning history of the site and surrounding area.

(d) The nature of the landscape and the absence of any specific conservation or amenity designation for the site and immediate environs.

(e) The submissions on file.

(f) The documentation submitted by the applicant including the appropriate assessment screening report;

Environmental Impact Assessment

The Board considered the case concurrently with the appeal under PL04.238152 for a substation. The Board considered that there was no 'project splitting' in this case and no avoidance of any requirements under Environmental Impact Assessment. The Board noted that the concurrent consideration of the proposed substation and

the windfarm together planning history details of other developments related to renewable energy and / grid connection in the area ensured that all impacts including direct, indirect and cumulative impacts were comprehensively assessed for the purposes of Environmental Impact Assessment.

Appropriate Assessment

The Board noted that the proposed development is not directly connected with or necessary for the management of a European site.

In completing the screening for appropriate assessment, the Board accepted and adopted the screening assessment and conclusion carried out in the Inspector's report in respect of the identification of European sites which could potentially be affected and the identification and assessment of the potential likely significant effects of the proposed development, either individually or in combination with other plans or projects, on these European sites in view of the site's conservation objectives. The Board was satisfied that the proposed development, either individually or in combination with other plans or projects, would not be likely to have a significant effect on European sites Nos. 002171, 000108, 004109, 004162, or any other European site in view of the sites Conservation Objectives.

It is considered that, subject to compliance with conditions below, the proposed development would not seriously injure the residential amenities of the area or of property in the vicinity, would be acceptable in terms of visual amenity and traffic safety and would not be detrimental to other aspects of the environment. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

12.0 **Conditions**

1. The proposed development shall be carried out and completed in accordance with the plans and particulars of the application to the planning authority on 19/12/2014 as amended by the submissions received by the planning authority on 26/05/2015, 5/06/2015, 20/07/2015 and 10/09/2015 and the further details received by An Bord

Pleanála, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority the undertaker shall agree such details in writing with the planning authority prior to the commencement of development and the proposed development shall be carried out in accordance with the agreed particulars.

Reason: In the interest of clarity.

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

Reason: To facilitate the completion of the development.

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

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

4. All mitigation measures identified in the Environmental Impact Statement as amended on 10/09/2015 and in the other particulars submitted on behalf of the applicant shall be implemented in full by the developer except as may otherwise be required in order to comply with the following conditions. The developer shall appoint a person with appropriate ecological and construction expertise as an environmental manager to ensure that the mitigation measures identified are implemented in full.

Reason: In the interest of clarity and to protect the environment.

5. The following shall apply to the development:

(a) The permitted turbines shall have a maximum tip height of 131 metres.

Details of the turbine design, height and colour shall be submitted to, and agreed in writing with, the planning authority, prior to commencement of development.

(b) Cables from the turbine to the substation shall be run underground within the site.

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

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

(e) No advertising material shall be placed on or otherwise affixed to any structure on the site without a prior grant of planning permission.

(f) The access tracks within the site shall be surfaced in suitable material, acceptable to the planning authority, and shall not be hard topped with tarmacadam or concrete.

(g) Roads, hard-standing areas and other hard-surfaced areas shall be completed to the written satisfaction of the planning authority within three months of the date of commissioning of the windfarm.

(h) Soil, rock and other materials excavated during construction shall not be left stockpiled on site following completion of works. Excavated areas including the borrow pits and areas of peat placement shall be appropriately restored within three months of the date of commissioning

of the wind farm, to details to be submitted to, and agreed in writing with, the planning authority.

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

6. Wind turbine noise arising from the proposed development, by itself or in combination with other existing or permitted wind energy development in the vicinity, shall not exceed the greater of:

5 dB(A) above background noise levels or

43 dB(A) $L_{90,10min}$

when measured externally at dwellings or other sensitive receptors. All of the noise mitigation measures set out in the submitted documentation shall be fully complied with.

Prior to commencement of development, the developer shall submit to and agree in writing with the planning authority a noise compliance monitoring programme for the subject development, including any mitigation measures such as the de-rating of particular turbines. All noise measurements shall be carried out in accordance with ISO Recommendation R 1996 "Assessment of Noise with Respect to Community Response," as amended by ISO Recommendations R 1996-1. The results of the initial noise compliance monitoring shall be submitted to, and agreed in writing with, the planning authority within six months of commissioning of the wind farm

Reason: In the interest of residential amenity.

7. The following shall apply to the development:

(a) The proposed development shall be fitted with appropriate equipment and software to suitably control shadow flicker at nearby dwellings, including control or turbine rotation, in accordance with details which shall be submitted to, and agreed in writing with, the planning authority prior to the commencement of development.

(b) Shadow flicker arising from the proposed development, by itself or in combination with other existing or permitted wind energy development in the vicinity, shall not exceed 30 hours per year or 30 minutes per day at existing or permitted dwellings or other sensitive receptors.

(c) A report shall be prepared by a suitably qualified person in accordance with the requirements of the planning authority, indicating compliance with the above shadow flicker requirements at dwellings. Within 12 months of commissioning of the proposed wind farm, this report shall be submitted to, and agreed in writing with, the planning authority. The developer shall outline proposed measures to address any recorded non-compliances, including control of turbine rotation. A similar report shall be provided by the developer to the planning authority at such time intervals as may be required by the authority.

Reason: In the interest of residential amenity.

8. Details of aeronautical requirements shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development, following consultation with the Irish Aviation Authority. Prior to the commissioning of the turbines, the developer shall inform the planning authority and the Irish Aviation Authority of the co-ordinates of the as-constructed tip heights and co-ordinates of the

turbines and wind monitoring mast.

Reason: In the interest of air traffic safety.

9. Prior to the commencement of work the developer shall submit for the written agreement of the planning authority a detailed Construction and Environment Management Plan and an Environmental Emergency Response Plan for the proposed project.

This shall include details of construction practice for the development including hours of working, noise management measures and off-site disposal of waste. Surplus excavation material to be taken off site shall only be recovered or disposed of at an authorised site in accordance with the Waste Management Acts.

Reason: In the interests of residential amenity, public health and safety and the protection of the environment.

10. Site development and building works shall be carried out only between the hours of 08.00 to 19.00 Mondays to Fridays inclusive, between 08.00 to 14.00 on Saturdays and not at all on Sundays and public holidays. Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the planning authority.

Reason: In order to safeguard the amenities of property in the vicinity.

11. The following requirements relating to noise during construction shall be complied with in the development:

Noise monitoring locations and a schedule for the submission of noise monitoring results for the purposes of the construction phase of the proposed development shall be agreed in writing with the planning authority prior to the

commencement of any development on site.

Construction noise levels shall be in accordance with the limits set out in the TII document, 'Good Practice Guidelines for the Treatment of Noise during the Planning of National Road Schemes' (2014).

Reason: To protect the amenities of property in the vicinity of the site.

12. Prior to the commencement of any other development works on the application site, the developer shall have completed, to the written satisfaction of the planning authority, the upgrading works to the existing site access arrangements and the associated road improvement works along the public road.

The provision of the required upgrading of the site access arrangements and the associated road improvement works on the public road at the accesses shall be undertaken at the expense of the developer.

Reason: In the interest of proper planning and sustainable development and in the interest of pedestrian and road traffic safety.

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

(i) a condition survey of the roads and bridges along the haul routes to be carried out at the developer's expense by a suitably qualified person both before and after construction of the wind farm development. This survey shall include a schedule of required works to enable the haul routes 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/authorities prior to commencement of development.

(ii) detailed arrangements whereby the rectification of any construction damage which arises shall be completed to the satisfaction of the planning authority/authorities.

(iii) detailed arrangements for temporary traffic arrangements/controls on roads.

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

(b) 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.

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

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

14. On full or partial decommissioning of the wind farm or if the wind farm ceases operation for a period of more than one year, the masts and the turbines concerned shall be removed and all decommissioned structures shall be removed, and foundations removed or covered with soil to facilitate re-vegetation, within three months of decommissioning.

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

project.

15. Water supply and drainage arrangements including the disposal of surface water shall comply with the requirements of Irish Water and the local authority for such works in respect of both the construction and operation phases of the proposed development.

Reason: To ensure adequate servicing of the proposed development and prevent pollution.

16. Any over ground tanks containing liquid fuels shall be contained in waterproof bunded areas of sufficient volume to hold 110% of the value of the largest tank within the bund. All valves on the tank shall be contained within the bunded area. The bunded area shall be fitted with a locking penstock valve, which shall be opened only to discharge storm water to the interceptor. The developer shall ensure that this valve is locked at all times.

Reason: To protect the environment.

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

    a. Notify the planning authority in writing at least four weeks prior to the commencement of any site operation relating to the proposed development.

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

    c. Delimit a buffer zone of 100m around each of the recorded monuments CO094-036 and CO083-078 in advance of construction

and shall implement the recommendations of the site archaeologist in this regard.

The assessment shall address the following issues:

i. the nature and location of archaeological material on the site, and

ii. the impact of the proposed development on such archaeological material.

A report, containing the results of the assessment, shall be submitted to the planning authority and, arising from this assessment, the developer shall agree in writing with the planning authority details regarding any further archaeological requirements including, if necessary, archaeological excavation prior to commencement of construction works. In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

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

18. Prior to commencement of development, the developer shall agree a protocol for assessing any impact on radio or television or other telecommunications reception in the area. In the event of interference occurring, the developer shall remedy such interference according to a methodology to be agreed in writing with the planning authority, following consultation with other relevant authorities and prior to commissioning the turbines.

Reason: In the interest of residential amenity.

19. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the reinstatement of public roads which may be damaged by the transport of materials to the site, coupled with an agreement

empowering the planning authority to apply such security or part thereof to the satisfactory reinstatement of the public road. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

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

20. 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: In the interest of orderly development and visual amenity and to ensure satisfactory reinstatement of the site.

21. 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 the 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 the Board to determine the proper application of the terms of the Scheme.

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

Mairead Kenny
Senior Planning Inspector
18th January 2019

APPENDIX 4

Decision of the Commissioner for Environmental Information on an appeal made under article 12(5) of the European Communities (Access to Information on the Environment) Regulations 2007 to 2014 (the AIE Regulations)

Case CEI/15/0032

Date of decision: 26 October 2016

Appellant: Damien McCallig

Public Authority: The Department of Communications, Climate Action and Environment (the Department)

Issue: Whether the Department was justified in refusing access to certain information on wind energy modelling on the ground of article 8(a)(iv) because disclosure would adversely affect the confidentiality of its proceedings

Summary of Commissioner's Decision: The Commissioner found that

- The Department's refusal to provide access to information on the second and third parts of the request was justified because such information was not held by or for the Department
- The Department's refusal to provide access to the withheld information on the first part of the request was not justified

The Commissioner varied the Department's decision to reflect these findings. In addition, he required the Department to provide the appellant with access to the withheld information

Right of Appeal: A party to this appeal or any other person affected by this decision may appeal to the High Court on a point of law from the decision, as set out in article 13 of the AIE Regulations. Such an appeal must be initiated not later than two months after notice of the decision was given to the person bringing the appeal.

Background

Under Directive 2009/28/EC (the "Renewable Energy Directive") Ireland has a binding national target for renewable energy consumption of 16% in 2020. As required under this Directive, Ireland adopted a national renewable energy action plan (NREAP) which sets out the approach to the achievement of these targets. The NREAP requires the further exploitation of Ireland's wind-energy capacity. Wind energy development is guided by the 2006 Wind Energy Development Guidelines.

The Department of Housing, Planning, Community and Local Government (which was then the Department of the Environment, Community and Local Government) published draft revised guidelines to the noise, setback distance and shadow flicker aspects of the 2006 Guidelines in December 2013. To inform this process, it conducted a public consultation process which received 7,500 submissions. It is now working on finalising revised guidelines in close cooperation with the Department (which was previously called the Department of Communications, Energy and Natural Resources).

On 26 August 2015 the appellant submitted an AIE request to the Department. He asked for certain information in a bullet-pointed list, shown here for ease of reference as a numbered list:

1. Modelling, analysis and related reports, carried out on Ireland's land area and the power generating potential from wind energy projects on those areas. In particular I am seeking access to the outcomes of the modelling under various setback and turbine height scenarios (for the State, as a whole, and by local authority area if available);
2. Information relating to the minimum turbine size and setback distances required to meet Ireland's renewable energy targets; and
3. Information relating to minimum turbine size and setback distances required to provide for, what the department would consider, commercially feasible wind energy development in Ireland.

On 21 September 2015, the Department informed the appellant that it held 7 records within the scope of the request and refused access to all of this information.

On 17 October 2015 the appellant requested an internal review. On 11 November 2015 the Department affirmed its original decision, and the appellant appealed to this Office on 22 November 2015.

Scope of Review

Under article 12(5) of the AIE Regulations, my role is to review the Department's internal review decision and to affirm, annul or vary it.

In conducting my review I took account of the submissions made by the appellant and by the Department. I had regard to: the Guidance document provided by the Minister for the Environment, Community and Local Government on the implementation of the AIE Regulations (the Minister's Guidance); Directive 2003/4/EC (the AIE Directive), upon which the AIE Regulations are based; the 1998 United Nations Economic Commission for Europe Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the Aarhus Convention); and *The Aarhus Convention—An Implementation Guide* (Second edition, June 2014).

Relevant AIE provisions

Article 8(a)(iv) provides that a public authority shall not make available environmental information where disclosure of the information would adversely affect the confidentiality of the proceedings of public authorities, where such confidentiality is otherwise protected by law (including the Freedom of Information Acts with respect to exempt records within the meaning of those Acts).

Article 10(1) provides that, notwithstanding article 8, a request for environmental information shall not be refused where the request relates to information on emissions into the environment.

Article 10(3) provides that a public authority shall weigh the public interest served by disclosure against the interest served by refusal.

The information at issue

The Department acknowledged holding 7 relevant records. I examined these records in the light of the AIE request and found that the information which they contain relates to part 1 of the request. None of it relates to parts 2 or 3. All of the records were held when the AIE request was made. The records contain the inputs and outputs of various hypothetical modelling scenarios. There is no reason to believe that these scenarios were the only ones modelled, since there might have been further modelling carried out since the date of the AIE request. However, I am satisfied that these records constitute all of the records, within the scope of the request, which were held by or for the Department when the AIE request was made.

The Department's position

In its original decision, the Department explained that it was working with the (then) Department of the Environment, Community and Local Government in a process which is intended to lead to the adoption of revised guidelines to the noise, setback distance and shadow flicker aspects of the 2006 Wind Energy Development Guidelines.

The Department maintains that it is "still in the deliberative process" and the modelling records are being used to inform the decision-making process. It said that:

> "This is a very technical area and engagement between the two Departments is ongoing".

It maintains that refusal on the ground of article 8(a)(iv) is justified since disclosure of the information would adversely affect the confidentiality of its proceedings, which, it argued, is protected by section 29 of the Freedom of Information (FOI) Act 2014. It maintains that refusal on this ground is justified following the application of a public interest test. It said that it had "weighed the public interest served by disclosure against the interest served by refusal", but it did not specify all of the public interests which it had identified.

The Department maintains that the requested information does not provide information on emissions into the environment, but did not provide details of how it made this determination.

My investigator sought several clarifications from the Department. The Department confirmed that its Minister is not the lead decision-maker on the revised Guidelines. The "deliberative process" in which it is engaged is therefore, essentially, the process of the Minister for Communications, Climate-Action and Environment deciding on his view on revised Guidelines. The Department also confirmed that none of the modelling data could be said to be obsolete. It said that:

> "The modelling exercises were preceded by 2 extensive public consultations... (which) elicited a very significant number of varied responses from the public...the process of finalisation of the Guidelines remains ongoing."

"Disclosure would be contrary to the public interest because deliberations are not complete, because the modelling outputs would not inform or provide clarity to the public and because it would interfere with the decision-making process."

"There is a high risk that (disclosure) would cause confusion in the public mind."

"This Department considers that releasing the modelling results could pre-empt decision-making by the two Ministers."

It argued that disclosure could prejudice investment in the wind energy sector, damage that sector, and would negatively impact on Ireland's ability to meet its 2020 renewable energy targets. It argued that release would potentially contribute to increasing the cost of compliance.

It emphasised that there are sensitive issues still at the level of negotiation between Government Ministers and Departments which will ultimately require a Government Decision. It argued that for all of these reasons, disclosure would not be in the public interest.

The appellant's position

The appellant questioned whether the Department is still in the deliberative process. He argued that even if the Department was still in the deliberative process, "merely forming part of an incomplete process is not enough to warrant refusal under the AIE Regulations nor the FOI Act". Furthermore, he argued, no evidence has been provided by the Department that release of the information would adversely affect anything.

The appellant challenged the Department's reliance on section 29 of the FOI Act. He stated that the FOI Act clearly exempts (from protection) "factual information" which is defined as including "information of a statistical, financial, econometric or empirical nature, together with any analysis thereof". He stated that the 3 elements of his request fall into this category of exemption under section 29(2).

The appellant also argued that it is clear from his request that article 10(1) applies in this instance, as the information requested relates to emissions, both in relation to the reduction of emissions into the environment (Ireland's wind energy potential, guidelines for planning and spatial modelling) and emissions from wind energy development such as noise and shadow flicker.

He said that that information provided by the Department showed that the withheld documents relate to the wind energy planning guidelines which will propose more stringent day and night noise limits for future wind energy developments. He argued that since I have previously found that noise is an emission, this is another reasons why his request relates to emissions for the purposes of article 10(1).

He argued that his request clearly relates to information on Ireland's ability to meet its renewable energy targets; i.e. by means of reduction in carbon dioxide and other harmful emissions. Furthermore, he argued, electricity itself, and its generation, is an emission for the purposes of the AIE regulations.

The appellant submitted that his argument is supported by the judgment of the General Court of the Court of Justice of the European Union in Case T-545/11 (*Stichting Greenpeace Nederland-v-Pesticide Action Network Europe*). In that case the Court held that, in order for environmental information to constitute information on emissions, "it suffices that the information requested