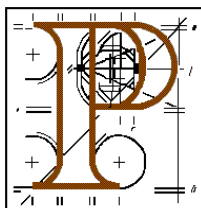


An Bord Pleanála



Inspector's Report

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

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

Planning Application

Planning Authority: Waterford (City and) County Council.

Planning Authority Reg. Ref.: 14/600109

Applicants: Ecopower Developments Limited.

Type of Application: Permission

Planning Authority Decision: Refuse

Planning Appeal

Appellants: 1st Party:
Ecopower Developments Limited

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

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

Observers: 35 observers - see section 10.0 of report

Date of Site Inspection: 30th December 2014

Inspector: G. Ryan

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1.0 INTRODUCTION

- 1.1** The subject proposal is for a windfarm development in an upland area of west Waterford, which is predominantly under Coillte forestry. An existing (but not operational) windfarm of 8 turbines sits to the immediate northwest such that the proposed development would in visual terms be an extension to it. The applicant applied for 12 turbines with a tip height of 126m. The site is located within a 'Strategic Area' under the County Development Plan, one of two such areas. Permission was refused by the planning authority largely due to visual impact and impacts on residential amenity.
- 1.2** The applicant appealed the refusal of permission and has submitted a proposition that 3 of the 12 proposed turbines be omitted. Additional documentation in respect of this proposition has been submitted. There are also three 3rd party appeals and 35 3rd party observations.

2.0 SITE

2.1 CONTEXT AND TOPOGRAPHY

- 2.1.1** The subject site is located in an upland area in west county Waterford. It is roughly equidistant from the towns of Dungarvan to the east (9km), Youghal (Cork) to the south (12km), and the closely-spaced towns of Tallow, Lismore, and Cappoquin to the northwest (9-15km). The nearest smaller towns/villages are Aghlish and Villierstown which lie approximately 2.5km and 5km northwest of the site respectively.
- 2.1.2** The townlands covered by the site are Monageela, Woodhouse or Tinakilly, Knocknamona, Knocknaglogh Lower, and Barranastook Upper.
- 2.1.3** The topography of the wider area is dominated by the Knockmealdown Mountains to the north of Tallow/Lismore/Cappoquin and the Commeragh Mountains to the North of Dungarvan. The peaks of both these ranges rise to between 600m and 700m. To the north of these ranges is the valley of the River Suir. The other major topographical feature in the vicinity is the valley of the River Blackwater, which runs north to south to the west of the site, from its 2nd last bridging point at Cappoquin to the sea at Youghal.
- 2.1.4** The site lies within the 'Drumhills' upland area which forms a localised upland area between the larger mountain ranges to the north and the west Waterford coast. The highest peak within the site rises to 206m, whereas Kilnafarna hill to the southeast rises

to 263m and the more isolated Carronadavderg to the south rises to 301m.

- 2.1.5** The Goish River drains the valley between the subject site and Carronadavderg to the south. Further to the south again is the catchment of the River Lickey. Both these rivers drain to the Blackwater. To the north of the site, the River Brickey drains in the opposite direction, meeting the sea at the intertidal area just south of Dungarvan.
- 2.1.6** The road network in the area consists largely of local roads. The N25 (Rosslare-Cork) route runs between Dungarvan and Youghal to the southeast of the site, the N72 (Dungarvan-Mallow-Killarney) route runs between Dungarvan and Cappoquin to the north, and the R671 regional route runs roughly parallel to the east bank of the Blackwater, running close to the towns of Villierstown and Aglish.
- 2.1.7** Moving away from the forestry plantation in all directions, landuses give way to agricultural fields, largely under pasture, with dispersed housing along the public roads, and some forestry.

2.2 SITE CHARACTERISTICS

- 2.2.1** The site itself consists largely of commercial forestry plantations at various stages of maturity – including clear-felled areas – and some adjoining agricultural fields. The proposed location of Turbine T1 is within such a field, whereas the remaining turbines are proposed for the forestry lands.
- 2.2.2** There is a significant and relatively permeable network of unpaved single track forest roads running through the site, which are accessible from the public road network to the south and west of the site.
- 2.2.3** The area of the site to which the application relates is stated as 65.1ha.
- 2.2.4** There is a recently constructed windfarm to the immediate northwest of the site, with a plant building to the east of the turbine array. At the time of my site inspection, the turbines had been constructed, although as the blades were not rotating, I would assume that the scheme has not been commissioned.
- 2.2.5** There is a local road running from this existing windfarm through the townlands of Woodhouse and Clogh which has been widened up to and including its junction with the R671.

3.0 PROPOSAL

3.1 BROAD OUTLINE

The scheme consists of works that can be summarised as follows: -

- 3.1.1** The erection of 12 wind turbines with hub height of 81.6m, rotor diameter of 90m, and overall height of up to 126.6m and one meteorological mast of up to 80m in height.
- 3.1.2** Also proposed are access roads, an electrical substation compound, equipment and control building, and ancillary site works. The applicant seeks a 10 year permission.
- 3.1.3** There would be permanent clearfelling of the forestry within a specified radius of each turbine.
- 3.1.4** Ground levels across the site at the turbine locations range from 131mOD to 223mOD.
- 3.1.5** Construction access is to be via the local road network at Knocknaglogh Lower to the south. (L6077 and L2022). Improvements to 7.4km of forestry access roads are proposed, along with an additional 1.1km of new unsurfaced road.
- 3.1.6** Turbine bases are to consist of 195m³ of reinforced concrete and a construction phase of 16 months is anticipated. Each turbine will accommodate crane hard standing areas and temporary excavation deposition areas (borrow pits) will be provided at turbines 2 and 4. Drainage proposals include the improvement of existing clean water drains along the main forestry access roads and the provision of settlement/silt ponds at each turbine location, which discharge to either forestry drains or the land surface.
- 3.1.7** Connection to the national grid is to be at the existing Dungarvan 110kV sub-station, 6km to the northeast.
- 3.1.8** The application form states that the applicants have an option to purchase from Coillte and an option to lease from Anthony Shalloe. The application is accompanied by a letter from Coillte, which states that they have no objections in principle to the proposed use of the lands for the proposed development. An accompanying map of the lands in question would appear to encompass the entirety of the subject site. A comparable letter is also included from Anthony Shalloe of Ballintaylor. Further details regarding property ownership are included as a stand-alone appendix to the planning application.

3.2 ENVIRONMENTAL IMPACT STATEMENT

- 3.2.1** The scheme is described predominantly within Chapter 3 of the applicant's EIS – 'The Proposed Development' - as well as throughout the EIS. Table 3 in section 8.3.14 below gives an outline of the various sections of the EIS, and my assessment at Section 11.0 below draws on the contents of the EIS where relevant to the issues relevant to the appeal.

3.3 PROPOSITION OF AMENDMENTS AT APPEAL STAGE

- 3.3.1** By way of a first party appeal, the applicant makes a proposition that 3 of the turbines be omitted. This is detailed in Section 8.3.10 below and is covered further in my assessment.

4.0 SUMMARY OF REPORTS TO THE PLANNING AUTHORITY

4.1 PLANNING OFFICER'S REPORT

4.1.1 Site description and context

- 4.1.2** Around 50% of this forestry plantation has been clear felled in recent years and is currently 'greening up', while the remainder is nearing maturity.

- 4.1.3** Local tourism and leisure amenities in the general area include the Blackwater Valley, Dromana, and other scenic routes including St. Declan's Way, Dromore, Drumhills, the Sean Kelly Cycle Heritage Route, the Kelly Legacy Route, Glenshelane Trail, N25 and N72 approaches to Dungarvan.

4.1.4 Zoning and policy

- 4.1.5** All lands outside of designated settlements and associated land zoning maps are considered to be zoned for agricultural use. Table 10.11 is the land use matrix and does not include any reference to wind energy development. As such, any proposal must be assessed on its merits by assessing whether the proposal has an adverse impact on future agricultural development and rural amenity.

4.1.6 Visual impact

- 4.1.7** Prior to the construction of the Woodhouse windfarm, the area could have best been characterised as a non-complex, uniform and flat upland area dominated in places by open farmland and forestry plantations with smaller fields, hedgerows and a small number of farm properties/dwelling houses on the slopes of the Drumhills.

- 4.1.8** This upland area is visible from a substantial area of the surrounding county and from a substantial number of scenic routes which are defined in the development plan. The location of the proposed development is defined as being visually vulnerable and sensitive in the Scenic Landscape Valuation of the Development Plan.
- 4.1.9** The planning officer is concerned that the development proposed would contribute to the visual disharmony resulting from the windfarm which is currently being constructed, to such an extent that the cumulative impact would be unacceptable.
- 4.1.10** The adoption of a 20km Zone of Theoretical Visibility (ZVT) diminishes the importance of cultural and historic landscapes in the vicinity, in particular the range of estate grounds along the river Blackwater. The planning officer disagrees with the applicant's characterisation of the site landscape sensitivity as medium, but rather would characterise it as high.
- 4.1.11** The assessment of cumulative impacts fails to consider connections to the national grid from both windfarms and/or from the Eirgrid Gridlink project.
- 4.1.12** **Built heritage**
- 4.1.13** The planning officer notes the comments of the Conservation Officers and those of the Department of Arts Heritage, and the Gaeltacht on this issue.
- 4.1.14** Having regard to the scale of the proposed development, the close proximity to the historic planned village of Villierstown, and the historic houses and demesnes along the Blackwater, the planning officer considers that the applicant has failed to demonstrate adequately that there would be no significant and negative long-term impact on the heritage assets of the area.
- 4.1.15** **Shadow flicker, noise, and impacts on residential amenity**
- 4.1.16** It is not clear whether topography has been factored into shadow flicker modelling.
- 4.1.17** The planning officer notes the 3rd party submissions on low frequency noise. Acoustic emissions for each of the turbine options is only given to wind speeds of 12m/s while the stated operational wind speeds are to 25/30m/s. It is unclear whether wind noise above 12m/s in effect drowns out turbine noise. It is not clear whether sound pressure levels are consistent with the 2006 Wind Energy Guidelines.
- 4.1.18** The planning officer notes the applicant's contentions regarding noise at nearby houses, but considers that assessment of noise

impacts on the forestry and woodland walks in the area should have been considered.

4.1.19 The report discusses potential disruption to communications infrastructure, devaluation of residential properties, and construction access, and considers that there are potential impacts in these areas. Public, recreational, and farming access to the lands is also raised as an issue.

4.1.20 Environmental Impact Assessment

4.1.21 The planning officer's report addresses some questions on the issue of validity of the EIS and of the planning application in general and considers the application to be acceptable on all counts.

4.1.22 Appendix 2 of the planning officer's report (presumably by the same author) consists of an 'Environmental Impacts Assessment Report'. It effectively summarises the EIS submitted by the applicant, yet concludes that there are significant omissions in the EIS which are considered further in the main body of the planning officer's report, and that the anticipated impacts on landscape, visual amenity, human beings, and cultural assets cannot be mitigated, and that as such there will be a substantial residual impact.

4.1.23 Appropriate assessment

4.1.24 The planning officer notes the report of the Heritage officer (See Section 4.2.5 below)

4.1.25 The planning officer's report notes a number of aspects of the NIS including proposed mitigation measures.

4.1.26 Having regard to the NIS, the planning officer considers that the proposed development would not adversely affect the integrity of sites in the Natura 2000 network in the vicinity.

4.1.27 Recommendation

4.1.28 The planning officer recommends a refusal of permission for reasons comparable to those summarised in section 5.0 below.

4.2 DEPARTMENTAL REPORTS

4.2.1 Conservation Officer

4.2.2 Town and village strategies are set out in Section 10.46 of the County Development Plan. Both Aglish and Villierstown are streetscapes of distinctive character. Some history of Villierstown is provided.

- 4.2.3** Volume 2 Appendix 12 of the EIS contains the cultural heritage report. It deals only with archaeology, and there is no mention of protected structures, demesnes, etc. Some photomontages have been submitted, but due to the paucity of information about the built heritage, it is impossible to fully assess the potential visual impact on protected structures, country houses, and demesnes along the River Blackwater and the historic villages.
- 4.2.4** The proposed development may be visually obtrusive and have the potential to detract from the setting and vistas of the historic houses and demesnes of Dromana, Tourin, and Strancally. In the event of a further information request, the conservation officer recommends that additional photomontages should be required [locations listed].
- 4.2.5** **Heritage Officer**
- 4.2.6** The Heritage Officer has reviewed and assessed Chapter 13 of the EIS, the AA Screening and NIS, and associated appendices 13.5, 13.6, and 13.7 and is satisfied that a comprehensive assessment has been carried out on potential for impacts from the proposed development on the natural environment.
- 4.2.7** This report notes, and concurs with, a number of the findings and undertakings of the applicant's NIS.
- 4.2.8** The Heritage Officer notes that the majority of the proposed development site consists of highly modified habitats, and that it is hydrologically connected to the River Blackwater SAC and Dungarvan Harbour SPA, and is within 10km of the Ballyeelinan Wood pNHA, although there is no connectivity to this site.
- 4.2.9** Leisler's Bats are the species at highest risk of impact from wind farm developments. A survey of the site recorded this species south of the proposed location for T5. If there is scope to avoid clear-felling this area and replanting of another non-wet woodland type site by moving location of T5, this would be considered preferable in order to both mitigate against potential negative impacts on bats and retaining the locally significant area of wet woodland.
- 4.2.10** The mitigation measures detailed in Section 13.8 are considered appropriate to avoid potential for adverse impacts on the Kilmurry and Goish watercourses.
- 4.2.11** **Additional internal referrals**
- 4.2.12** The following departments/officials were also circulated with notice of the proposed development, but did not issue reports to the planning file.

- Roads Department
- Waste Section
- Building Control Officer

4.3 REPRESENTATIONS

- 4.3.1** There were 278 submissions received by the planning authority. A summary of the issues raised is contained in Appendix 1 of the planning officer's report. These issues are largely reflected in the 3rd party appeals and observations received by the board, and are incorporated in the summary given in section 8.0 and 10.0 of this report.

4.4 SUBMISSIONS FROM EXTERNAL CONSULTEES

4.4.1 Irish Aviation Authority

- 4.4.2** No objections subject to an agreed scheme of warning lights and notification of coordinates/heights and construction schedule.

4.4.3 Health and Safety Authority

- 4.4.4** The HSA made a submission stating that the application appears to be outside the scope of the EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2006, and that therefore the Authority have no observations to forward.

4.4.5 Department of Arts, Heritage, and the Gaeltacht (archaeological monitoring)

- 4.4.6** A submission to the planning authority addresses issues of archaeology only. It recommends that requirements for archaeological monitoring be attached by way of condition.

4.4.7 Additional external consultees

- 4.4.8** The following bodies were circulated with notice of the proposed development by the planning authority, but did not make a submission.

- National Roads Authority
- Minister for Transport, Tourism and Sport
- Cork County Council
- Electric Ireland
- Minister for Communications, Energy and Natural Resources

- Department of Environment, Community and Local Government (Development Applications Unit)¹
- Eirgrid

4.4.9 Appendix 13.2 of the EIS – ‘Consultation’ includes outgoing correspondence from the applicant to a number of additional parties prior to the lodging of the application, as follows

Party	Response to the applicant
Birdwatch Ireland	No response
Inland Fisheries Ireland	Makes representations in respect of matters to be considered in the EIA and AA
Department of Arts, Heritage, and the Gaeltacht.	Acknowledgement only. Matter has been referred to NPWS and NMS.

Table 1

5.0 PLANNING AUTHORITY DECISION

The planning authority decided to refuse permission for two reasons, which can be summarised as follows

1. Notwithstanding the location of the site within a ‘strategic area’ for wind energy in the County Plan, the planning authority is not satisfied that the proposed development would not have significant adverse impacts on the environment having regard to the EIS’s deficiencies in adequately assessing the following impacts and potential impacts.
 - a) specific built heritage assets and associated tourism
 - b) transportation and associated impacts on residential properties along haulage routes and the fabric of the public road
 - c) cumulative impacts of existing and proposed wind energy development and associated grid connections on landscape and visual amenity
 - d) noise, with regard to recreational and residential amenity
 - e) property values in the immediate vicinity

¹ I note that the planning officer’s report - Section 4.0 – makes reference to a submission from the DoECLG. However, the planning officer’s report states that there is no objection ‘subject to archaeological monitoring of ground disturbance’. As such, it would appear that the planning officer has misattributed the submission from the DoAHG. I note that there is no submission from the DoECLG on file.

- f) continued public access during the construction phase of the development
2. Notwithstanding the location of the site within a 'strategic area' for wind energy in the County Plan, and taking cognisance of
- the nature, scale and location of the proposed development on an elevated visually vulnerable and sensitive site
 - the site's setting within a rural landscape which contains a significant number of built and natural heritage assets of special interest
 - the combination effect of the adjacent wind farm and the ancillary connections to the national grid,
- the proposed development would detract from the visual and rural landscape amenity of the area.

6.0 HISTORY

6.1 IN RELATION TO THE SUBJECT PROPERTY

PA Ref PP/CR/5/2014 - The planning application form references a pre planning meeting on 28th April 2014. I note that a copy of the record is included as appendix 6.1 of the EIS

6.2 'WOODHOUSE' WINDFARM

PA Ref 04/1788 – Permission granted on adjoining lands to the immediate northwest for eight wind turbines and ancillary works including a single story control building and substation. The turbines in this instance were to be 112m to the tip. This permission was granted an 'extension of duration' under PA Ref 10/175

PA Ref 09/642 – Permission granted on adjoining lands to the immediate northwest for an 110kV transformer to be adjacent to the previously approved windfarm.

PA Ref 10/45 – Permission granted on adjoining lands to the immediate northwest for modifications to the previously permitted windfarm development consisting of an increase in tower height from 70m to 80m and rotor diameter from 84 to 92m, giving an overall height to tip of 126m, which is the same height as those proposed under the subject application. At the time of my site inspection, the turbines had been constructed, although as the blades were not rotating, I would assume that the scheme has not been commissioned.

6.3 OTHER NEARBY PERMISSIONS

PA Refs 07/730, 08/17, 08/59, 12/127 all relate to the existing 52m high RTE transmission and communication structure at Knockaunabouchala Hill, around 1km southeast of the site of the easternmost proposed turbine.

Section 3.3 of the planning officer's report provides information regarding a number of grants of permission for houses in the vicinity.

6.4 OTHER WINDFARM APPLICATIONS IN THE WIDER AREA

PL24.213290 (PA Ref 04/1559) – permission granted by the planning authority, and by the board on appeal, for a scheme of 12 wind turbines at Barranafadock (and other townlands), which is located in the northwest of County Waterford, near the border with both Tipperary and Waterford, around 25km northwest of the subject site, and around 12km northwest of Lismore. The turbines proposed were 80m to hub height and 120m to tip.

PL24.237836 (PA Ref 10/6) – permission granted by the planning authority for a 2-turbine development at Rathnameneenagh, Ballycurreen, Co. Waterford, around 12km southeast of the subject site, and around 2km south of Ring. This decision was appealed to the board, but the appeal was subsequently withdrawn. The turbines have since been constructed. The turbines proposed were 79m to hub height and 120m to tip.

PL24.237469 (PA Ref 10/28) – permission granted by the planning authority and granted by the board on appeal for a scheme of 5 turbines at Robertsown, Leamybrien Co. Waterford, in the centre of the County between Kilmacthomas and Dungarvan, around 20km northeast of the subject site. It is my understanding that this scheme has not been constructed.

PL24.239522 (PA Ref 11/273) – Permission refused by the planning authority and refused on appeal for a proposal by the current applicants for 9 turbines (height to tip - 126.5m) at Russellstown New/ Russellstown/ Sillaheens/ Bawnfune/ Boolabrien Upper/ Curraheenovoher/ Glenabbey, Ballymacarbry, Co Waterford. The site was located in the north of the County, around 4km south of Clonmel, and around 25km north of the subject site. The site was designated as a 'preferred area' under the County Development Plan. The board's refusal reasons cited the inadequate assessment of

- visual impacts and potential impacts on tourism,
- potential impacts on water quality and proposals in relation to drainage management
- transportation and local road improvements (including potential impacts on architectural heritage and ecology),
- potential ecological impacts including on bird species and on the Natura 2000 network in the wider area,

7.0 POLICY

7.1 NATIONAL LANDSCAPE STRATEGY

This document is referred to by parties to the appeal. A draft of this document was produced by the Department of Arts, Heritage, and the Gaeltacht in July 2014. As of the time of writing, an adopted version has not been released.

7.2 WIND FARM DEVELOPMENT: GUIDELINES FOR PLANNING AUTHORITIES, 2006

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

- The need to identify suitable areas in development plans;
- Making and assessment of planning applications, including suggested conditions.
- The siting and design of wind farms including advice for different types of landscapes.
- Visual impact is among the more important considerations and advice is given in chapter 6 on spatial extent, spacing, cumulative effect, layout and height. There is an emphasis on the distinctiveness of landscapes and their sensitivity to absorbing different types of development
- Planning and design of a wind farm should be guided by the information collected within an EIA, which will include avoidance and reductive measure and the consideration of alternatives.
- Environmental considerations such as the impact on habitats and birds and the need for habitat management.
- The guidelines note that designation of an area of natural and cultural heritage does not in itself preclude development, unless it is judged to be such that it would impact on the integrity of such sites and their natural heritage interests. Chapter 5 addresses the environmental implications of wind farm developments and in particular the impact on designated sites, habitat and species. The bird species considered most at risk are raptors, swans, geese, divers, breeding waders and waterfowl, with migratory birds and local bird movements also important. The impact on other species, particularly those listed for protection, needs also to be assessed.
- The need for information on the underlying geology of the area including a geotechnical assessment of bedrock and slope stability and the risk of bog burst or landslide.
- Geological consultants should be employed to ensure that sufficient information is submitted.
- Other impacts on human beings such as noise and shadow flicker.

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

The guidelines make reference to wind energy developments and to this sector's role in regional development and rural diversification. Section 6.2.2 gives qualified support for wind Energy Developments stating that *"The South-East Regional Authority is supportive of wind farm developments at appropriate locations throughout the region."* The guidelines endorse Eirgrid's 'Grid 25' document and its recognition of *"the future capacity for wind farm development within the South-East to be in the region of 545 MW for on-shore wind farms and 445 MW for off-shore wind farms."*

The guidelines state that *"all development plans should identify the areas within which renewable energy proposals of a particular type will be given favourable consideration or otherwise. In this regard, reference should be made to the DoEHLG Guidelines to Planning Authorities on Wind Energy. ... Development Plans should incorporate targets for renewable energy in line with the 40% target set by Government and supported by these Guidelines."*

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

7.4 WATERFORD COUNTY DEVELOPMENT PLAN 2011-2017

7.4.1 Zoning

Section 10.57.1 of the plan deals with Use Zoning and states that *"All lands outside of the designated settlements and land zoning maps is regarded to be zoned as Agriculture A."* The subject site is within such an area. Land use zoning objectives and the land use zoning matrix are set out in Tables 10.10 and 10.11.

The objective for 'Agriculture A' is *"To provide for the development of agriculture and to protect and improve rural amenity."* The zoning matrix does not include an entry for wind energy developments or energy infrastructure. Industrial development is designated as 'Not Permitted'. Note 4 below Table 10.11 states that *"Uses not covered in the Land Use Matrix above may be allowed in accordance with the written provisions of the County Development Plan."*

Volume 2 of the plan contains zoning and objective maps for settlements throughout the county, including Aglish and Villierstown. The plan for Villierstown includes two 'Scenic Views', the first is southwest along the road called 'The Green', and the second is the view northwest through the town towards the old gates of Villierstown House and the start of the Dromana Drive. There are no 'Scenic Views' designated in the Aglish plan.

7.4.2 Wind energy policy

The location of the proposed development is identified in the Waterford County Wind Energy Strategy (appendix 8 of the Waterford County Development Plan 2011-2017) as being a 'Strategic Area', bounded by an area 'open for consideration' directly to the north and a 'no go' area to the

west. These designations are referenced in Section 8.10 of the plan and are detailed in Appendix 8 of the plan as follows. It is notable that the subject site falls within one of only two Strategic Areas in the county.

Strategic Areas- (Areas coloured in Yellow on the attached map)

These key areas are deemed eminently suitable for wind farm development and should be reserved for such purposes.

Preferred Areas (Areas coloured in Blue on the attached map)

These areas are suitable for wind farm development and should normally be granted planning permission unless specific local planning circumstances would support a decision to refuse permission in the context of the development plan.

Areas Open for Consideration (Areas coloured in green on the attached map)

Applications for planning permission will be treated on their merits with the developer having a clear responsibility to demonstrate as to why the development should be granted permission.

No-Go Areas (Areas coloured in Red on the attached map)

These are areas that are particularly unsuitable for wind farm development. While these areas are considered primarily unsuitable for wind farm development, there may be pockets of land within these “no- go areas” which, due to specific criteria such as significantly high wind speeds, distance from populated areas and screening by natural topography from scenic views and prospects, may be considered for wind farm developments subject to applicants providing appropriate submissions including wire frame analysis, zones of visual influence and digital terrain models.

The following policies and objectives are also relevant to the topic of wind energy developments.

Objective ENV 5 – *“It is an objective of the Development Plan:*

- a) To encourage, where appropriate, proposals for renewable energy developments and ancillary facilities;*
- b) To promote and facilitate wind energy production in the County in accordance with the County Wind Energy Strategy and the Wind Energy Guidelines (2004) produced by the Department of the Environment, Heritage and Local Government;*
- c) To facilitate, where appropriate, the development of small scale hydroelectric power generation, in particular when developed in combination with other forms of energy infrastructure, such as wind farms; and*

d) To support and encourage the appropriate development of the bio-energy sector and facilitate its development for energy production, heat storage and distribution.”

Policy ENV 10 – *“To facilitate and encourage sustainable development proposals for alternative energy sources and energy efficient technologies.”*

Policy ENV 11 – *“To promote and facilitate the sustainable development and use of wind energy in the County and to ensure all wind energy developments comply with the Waterford County Wind Energy Strategy and the DoEHLG guidance document on Wind Energy. Screening for Appropriate Assessment will be carried out where required to ensure that there is no negative impact on the integrity (defined by the structure and function and conservation objectives) of any Natura 2000 site located at or adjacent to a proposed site for wind energy development and that the requirements of Articles 6 (3) and (4) of the EU Habitats Directive 92/43/EEC are fully satisfied. The Planning Authority shall have regard to the possible visual impact of a wind farm development on towns and villages, protected views and amenity areas outside of the administrative area of Waterford County Council in the assessment of wind energy applications.”*

7.4.3 Landscape and visual policy

Appendix 9 of the plan is a Scenic Landscape Evaluation, which identified the lands within the proposed site as being both visually vulnerable and sensitive. A number of roads in the vicinity are designated as scenic routes.

Chapter 8 of the plan supports Landscape Character Assessment.

Policy ENV 2 is to support the provisions of the National Landscape Strategy.

Section 8.1 of the plan, Policy ENV 4 and Appendix A9 set out a number of scenic routes and Scenic Landscapes around the county and place development proposals within the context of the Scenic Landscape Evaluation map.

7.4.4 Architectural heritage and archaeology

As per the planning officer’s report, Protected Structures in the area include Ballinaparks House, Ballynatray House, Cappagh House, Lismore Castle, Moor Hill, Tourin House, Salterbridge House, Strancally Castle, and Whitechurch house, along with the historic towns of Aglish, Cappaquin, Dungarvan, Lismore, Villierstown and Youghal.

As per the planning officer’s report, National monuments within 500m of the site include WA 030-055 (Ringfort), WA 0030-054 (Ringfort), WA 0030-001 (Ringfort), WA 0030-074 (Enclosure), and WA 0030-075 (Redundant Record).

Policy 8.29 of the plan references this issue.

7.4.5 Natural Heritage

Policies NH1-NH9 of the plan are referenced in the planning officer's report on this issue.

7.5 NATURAL HERITAGE DESIGNATIONS

A number of sites are identified by the planning officer, in order of distance from the subject site

Name	Site codes			Distance (approximate)	direction
	pNHA	SAC/cSAC	SPA		
Blackwater River	0072	002170		4km	west
Dungarvan Harbour	00663		004032	6km	east
Blackwater Estuary			004028	10km	Southwest
Helvick Head to Ballyquinn			004192	10km	Southeast
Helvick Head	000665	000665		12km	East
Glendine Wood		002324		12km	Northeast
Ardmore Head		002123		13km	South
Commeragh Mountains	001952	001952		15km	Northeast
Ballyvoyle Head to Tramore / Mid Waterford Coast	1693		004193	18km	East
<i>River Lickey [/Lickey] Freshwater Pearl Mussel Catchment Area</i>				<i>3km</i>	<i>Southeast</i>

Table 2

8.0 GROUNDS OF APPEAL

8.1 One first party appeal and three 3rd party appeals were submitted to the board. I will summarise each in turn below.

8.2 ECOPOWER DEVELOPMENTS LIMITED

8.3 The 1st party appeal was submitted by Ecopower Developments Limited. I would characterise the appeal as consisting of two broad themes. The first is a rebuttal of the refusal reasons, with the second theme centring on a proposition to omit 3 of the 12 proposed turbines. It must be stated, however, that the first theme – rebuttal of the refusal reasons – is framed entirely with reference to the 9 turbine proposition.

8.3.1 Rebuttal of refusal reasons

8.3.2 In response to refusal reason No 1 a) – impacts on specific built heritage assets and associated tourism – the appeal includes the following

- A revised Chapter 12, incorporating additional studies regarding Cultural Heritage
- A revised Chapter 11, including additional photomontages
- An addition to Chapter 9 of the EIS, including a Tourism and Amenity report.

8.3.3 In response to refusal reasons No 1 b) and 1 f) – assessment of transportation routes and public access – the appeal includes the following.

- A Construction Management Plan from Malachy Walsh and Partners, which includes proposals to facilitate continued public access through the forest during construction, albeit with diversions. Construction would take 9 to 12 months
- An Ecological Appraisal of the Construction Traffic Haul Route.

8.3.4 In response to refusal reasons No 1 c) – inadequate assessment of cumulative impacts of existing and proposed wind energy development and associated grid connections on landscape and visual amenity – the appeal includes the following.

- A revised Chapter 11 - Landscape and Visual Impact Assessment.
- In relation to grid connection, the Woodhouse windfarm is to connect to the existing 110kV line that traverses the site via a newly built substation. The Knocknamona project has secured confirmation of an underground 38kV grid connection modification agreement, from ESB networks, to connect the

windfarm to the National Grid at the Dungarvan 110kV substation at Killadangan, around 6km northeast of the site. This agreement is part of the Gate 3 Grid Connection Process.

- 8.3.5** In response to refusal reasons No 1 d) – noise, with regard to recreational and residential amenity – the appeal includes the following.
- An addition to Chapter 10 of the EIS titled “Examination of the noise impact of omitting T5, T9, and T12 and statements of the planner’s report as an addition to Chapter 10, Appendix 10.1: Noise Impacts.”
 - Appendix 7 of the appeal – Examination of noise impact of omitting T5, T9 and T12 (etc.).
- 8.3.6** In response to refusal reasons No 1 e) – property values in the immediate vicinity – the appeal includes the following.
- Refers to excerpts from the original EIS, and the County Development Plan.
- 8.3.7** In response to refusal reasons No 1 f) – public access during the construction phase – the appeal includes the following.
- Refers to the response given in relation to refusal reason 1 b) above.
- 8.3.8** In response to refusal reason No 2, - detracting from visual and rural landscape amenity – the appeal asserts that the planning authority’s position is not consistent with the findings of the revised Chapter 11 – LVIA.
- 8.3.9** The appeal makes a number of comments in relation to the planning officer’s report, as follows.
- Zoning – The report is not definitive on this issue, and is inconsistent. The planning officer is incorrect to use an assumed zoning of ‘Agriculture’, as the WES is applicable in this instance.
 - Refusal – Due to the site’s identification within the CDP, the issues raised in refusal reason No 1 should have been the subject of a further information request.
 - Guidelines – The planning officer’s statement regarding the ‘dated’ nature of the existing departmental guidelines is misleading.
 - Shadow flicker – The planning officer notes that the computer model used for calculating shadow flicker was not identified or the inputs to the model described. Section 3.4 of the appeal

submission provides details in this regard. Zero hours of shadow flicker is predicted to occur at all residences within 1km of the proposal (12-turbine or 9-turbine)

- Telecommunications – Notwithstanding Section 6.4 of the planning officer’s report, the proposed layout is such that it is unlikely that any mitigation measures will be necessary, but this will be dependent on the findings of further consultations prior to construction.
- Borrow Pits and Settlement Ponds – The planning officer’s report states that there is no reference to maintenance, drainage, treatment, or remediation of these features. These matters are addressed in Chapters 13 and 15 of the EIS. The appeal provides some additional text on this issue.

8.3.10 Omission of 3 turbines

8.3.11 Taking cognisance of the generality of the planning officer’s report, the 3rd party submissions on visual impact, residential amenity, etc., the conservation officer’s report, the heritage officer’s report, and Refusal Reason No. 2, the applicant is now submitting the proposition that the scheme be reduced from 12 to 9 turbines. T5, T9, and T12 would be omitted, with the remaining turbines being unaffected.

8.3.12 The appeal is accompanied by a number of appendices that incorporate this proposition. Appendix 1 consists of a copy of the decision and reasons for refusal. The remaining appendices are summarised in Table 3 below.

8.3.13 The rationale for omitting the 3 turbines is set out in broad terms as follows

- To reduce the intensity and lateral extent of the development along the ridge at Knocknamona. The turbines omitted are the ones that most consistently contributed to visual clutter through overlapping (in conjunction with the Woodhouse turbines).
- Turbine T5 was proposed for a part of the site that was identified as offering some habitat diversity in the Heritage Officer’s report.
- The omission of the turbines reduces the noise impact on all of the houses evaluated in the noise report in Appendix 7, except for H2 and H3, which would remain the same. In particular, the omission of T12 would lessen the noise impact on H11 and H14 to the southwest of the site. Table 10.4 of the appeal submission refers.

8.3.14 Summary of information available to the board from the applicant

8.3.15 The table below summarises the information current before the board from the applicant across the EIS topics, incorporating both the original EIS and the appendices included with the Appeal. Where the Appeal submission is intended to replace a section of the EIS, it is included on the same row as the original section. Where it is intended to supplement the original EIS, it is included in a separate row. This applies to Chapters 11, 12, and the NIS.

Original EIS Chapter	Original EIS Appx.	Topic	Appeal Appx.	Appeal Appendix Topic
1		Introduction		
2		European and National Policy Context		
3		The Proposed Development		
4		Site Selection Process		
5		Waterford County Development Plan		
6		Wind Energy Guidelines		
	6.1	Pre-planning consultation		
	6.2	Letter from Irish Aviation Authority		
7		Construction Impacts and Employment		
	7.1	Haul Route, Roads and Bridges Assessment		
	7.2	FWD Survey		
	7.3	Swept Path Analysis for works to Public Road		
			5	Construction Traffic Management including traffic volume updates and construction timetable.

Original EIS Chapter	Original EIS Appx.	Topic	Appeal Appx.	Appeal Appendix Topic
8		Air and Climate Impact Assessment		
9		Socio-Economic Impact Assessment		
			4	Tourism and Amenity Report – Rethink Tourism
10		Residential Amenity		
	10.1	Noise and Vibration Impact Assessment		
	10.2	Telecommunications Impact		
			7	Examination of the noise impact of omitting T5, T9, and T12 and statements of the planner's report
			10	Revised Shadow Flicker Effect Map for 9-turbine proposal
11		Landscape and Visual Assessment	2	Entire revised Chapter
12		Cultural Heritage Assessment	3	Entire revised Chapter
13		Ecological Impact Assessment		
	13.1	Examples of Evaluation at Different Geographic Scales		
	13.2	Consultations		
	13.3	Maps and Drawings		
	13.4	Aquatic Ecology+B402		
	13.5	Bat Activity Distribution Mapping		
	13.6	Ornithology		

Original EIS Chapter	Original EIS Appx.	Topic	Appeal Appx.	Appeal Appendix Topic
	13.7	Natura Impact Statement	8	Entire revised NIS
			6	Ecological Appraisal of the Construction Traffic Haul Route
14	Geotechnical Impact Assessment			
15	Hydrology and Hydrogeology Impact Assessment			
	15.1	Sediment and Erosion / Storm Water Control Plan.		
	15.2	Groundwater Risk Assessment and Impact Assessment		
16	Executive Summary			
			9	Summary of potential impacts, mitigation measures, and residual effect.
			11	Technical note to the EIS on changes due to the omission of T5, T9, and T12

Table 3

8.4 MICHAEL & GIANCARLA ALEN-BUCKLEY

8.4.1 This 3rd party appeal was submitted by Reid Associates on behalf of the appellant. The appellants give an address at Strancally Castle, Knockanore, Co. Waterford, which is around 6km due west of the subject site, on the west bank of the River Blackwater. The appellant's property and the subject site are mutually accessible by road only via Cappoquin, a distance of around 26km.

8.4.2 The grounds of this appeal can be summarised as follows.

8.4.3 Oral hearing request

8.4.4 The appellant requests an oral hearing on the basis of there being issues of significant public interest.

8.4.5 Visual impact

8.4.6 The proposed development would have a disproportionate visual impact due to its elevated location.

8.4.7 The scenic landscape evaluation of the county highlights areas of elevated topography, with low growing or sparse vegetation, with little existing development, should have a low potential to absorb new development.

8.4.8 The height of the structures, at 126m, would be more imposing than any other structures in the country.

8.4.9 Grid connection

8.4.10 The works and structures necessary for the connection of the proposed development to the electricity grid have not been included within the application. This is a fundamental flaw in the nature and description of the development, and entails project spitting from an EIA perspective.

8.4.11 Development plan provisions

8.4.12 The plan provides that all land outside of designated towns and settlements is zoned for agricultural use that is to protect and provide for the development of agriculture and to protect and improve rural amenity. Wind energy generation is an industrial activity that is inconsistent with this objective.

8.4.13 The land use matrix does not allow for the development of wind turbines within an agricultural zone. Uses not covered by the land use matrix may be allowed in accordance with the written provisions of P219 of the plan.

8.4.14 The wind energy maps must be referenced with the landscape objectives map and the heritage objectives.

8.4.15 Strategic areas for wind development are only suitable if they satisfy all three tests set out in Policy ENV11.

8.4.16 Appropriate assessment

8.4.17 The wind energy strategy was adopted as a variation to the county plan. There is no evidence of there having been any specific AA of the strategy. As such, its legal status is questionable. AA screening of the county plan identified wind

energy development and bird migration routes as a scoping issue, but this was inadequately scoped.

8.4.18 The 2006 departmental Wind Energy guidelines were not subject to AA.

8.4.19 The appeal is accompanied by a review of the NIS by SLR consulting that highlights the defects in the appropriate assessment, characterising Section 6.5 of the NIS as inconsistent and confused. The bird surveys are inadequate. There is no information on the effects of the proposed development's impacts in light of the conservation objectives for the Natura 2000 sites or their individual qualifying features.

8.4.20 **Objection to the planning authority**

8.4.21 The appeal is accompanied by a copy of the appellants' original objection to the planning authority, prepared by Hunter Page Planning. This covers issues largely reflected in the appeal grounds summarised above. Other issues include reference to a lack of cumulative visual assessment and public consultation, and the presence of Whooper Swan migration routes in the area.

8.5 **BLACKWATER VALLEY ALLIANCE**

8.5.1 This 3rd party appeal was submitted by Robbyn Swan, with an address at Dromore, Aglish, Co. Waterford, a large townland that is around 2km west of the subject site at its nearest point, on the east bank of the River Blackwater. The appeal states that the Blackwater Valley Alliance was formed in 2005 by citizens concerned with protecting the Blackwater River, with founder members living or working on the 28km stretch between the mouth of the river and Lismore.

8.5.2 The Blackwater has for centuries been valued by tourists and residents for its peace and tranquillity, which has been threatened in the past and is now under threat from a proliferation of wind turbine developments and the proposed Eirgrid Grid Link project, which could march pylons and overhead cables as much as 60m high and close to and across the Blackwater.

8.5.3 The proposed development would create Waterford's largest wind power development and would alter the character of the landscape from rural to industrial.

8.5.4 In refusing the proposed development, the planning authority have not been sufficiently thorough or stringent. BVA requests that the board reject the proposed development, not just for the reasons cited by the planning authority, but for additional reasons which are given as follows

1. The planning authority should have invalidated the application due to ambiguities in the address.
2. Areas surrounding or adjacent to the site have been designated 'sensitive' or 'vulnerable' in the plan.
3. The impacts of the adjacent Woodhouse wind farm currently under construction are not fully known. References the conditions attached by the board under the Barranafadock windfarm permission [see section 6.0 above].
4. The application made false claims regarding the benefits to society.
5. Refers to environmental damage by the sourcing of the rare earth metals needed to construct the magnets in the turbines.

8.5.5 The wind energy strategy is poor and the maps make it hard to identify locations. No-go areas are located adjacent to strategic and preferred areas, such that turbines would tower on the skylines of no-go areas.

8.6 JOHN & NIAMH REYNOLDS

- 8.6.1** The appellants give an address of Kerreen, Villierstown, Co. Waterford. Kerreen Upper and Kerreen Lower are townlands to the immediate northwest of the subject site. Some of the turbines of the Woodhouse windfarm are located in Kerreen Upper.
- 8.6.2** The application should have been declared invalid, rather than merely refused, due to lack of Strategic Environmental Assessment (SEA) of renewable energy strategies at European and national level. Refers to the Aarhus Convention regarding public participation.
- 8.6.3** The NIS does not provide adequate scientific evidence.
- 8.6.4** Refers to a study carried out by Malcolm Brown, BW Energy Ltd regarding the Irish Government's Strategy for Compliance with the EU Directive 2009/28 which states that conversion from coal to biomass at the Moneypoint power station in Co. Clare could meet renewable targets at 10% of the cost of upgrading transmission systems to accommodate additional wind energy developments.
- 8.6.5** Until studies can prove that health effects due to proximity to windfarms do not exist, this application should be rejected.
- 8.6.6** No further permissions for windfarms should be granted pending the implementation of the new National Landscape Strategy, which is being prepared.
- 8.6.7** In respect of impacts on birds, the applicant's statement that "In the absence of any reliable information on the effects of

displacement on birds” “The effect of habitat loss is minimal” is appalling.

- 8.6.8** The appellants’ property would be greatly devalued as they would be surrounded on 3 sides by wind turbines not more than 800m away.

9.0 SUMMARY OF RESPONSES

9.1 PLANNING AUTHORITY

- 9.1.1** The planning authority have made a submission to the board supporting their decision to refuse permission. The submission addresses the grounds of the first party and 3rd party appeals. Items of note can be summarised as follows
- 9.1.2 Zoning and wind energy policy**
- 9.1.3** The planning authority contends that the land use zoning provided for in the development plan maps, taken in conjunction with section 10.57 and tables 10.10 and 10.11 of Volume 1 of the Development plan inform how the other policies of the plan should be interpreted. Where there is inconsistency or conflict between various policies and objectives, then the planning authority must give precedence to land use zoning objectives. The wind energy strategy is not a land use zoning map. Inconsistencies between policies and objectives are inevitable.
- 9.1.4** The applicant is correct in highlighting the fact that not all uses are specified in tables 10.10 and 10.11, but is incorrect in suggesting that the adjoining 8 turbine windfarm is the primary use in the area.
- 9.1.5** There are only 3 windfarms in the county, with a total of 12 turbines. The originally proposed development represents a 100% increase.
- 9.1.6 Visual and general**
- 9.1.7** The planning authority note the proposition to reduce the scheme from 12 turbines to 9 turbines.
- 9.1.8** While the amended LVIA is comprehensive and thorough, the assessment incorrectly relies on the adjacent wind farm development as a means of characterising the areas. Notwithstanding the proposition to omit 3 turbines, there remains a negative visual and landscape impact, a negative impact on tourism.

9.1.9 Road widening

9.1.10 The planning authority considers that the proposed road widening and general improvements along the local road network are insufficient, particularly as works are to be carried out on lands which are under private ownership, and the applicant cannot guarantee their implementation. Refers to the comments of the planning authority's Roads Inspector in this regard (attached) which state that the L6077 is in poor condition and is likely to deteriorate significantly under construction traffic. A bond is required. Road widening, junction widening, passing bays are to be agreed with the planning authority.

9.1.11 Grid Connection

9.1.12 The planning authority notes that no evidence has been provided from ESB Networks with regard to the agreement to underground the connection to the grid. Class 26, Schedule 2 Part 1 of the Planning and Development Regulations 2001 as amended would provide for the laying of underground cabling as exempted development when carried out by an undertaker authorised to provide an electricity service. The proposed undergrounding of grid connections would be acceptable and would lessen the impact of the proposed development.

9.1.13 Noise

9.1.14 The planning authority is satisfied that the revised noise assessment submitted by way of appeal is consistent with requirements of existing guidance.

9.1.15 Shadow flicker

9.1.16 The planning officer's report has identified that there is no reference to the modelling methodology used in calculating shadow flicker for the proposal. The conclusion of zero hours shadow flicker at all residences within 1km is noted. The planning authority is satisfied that this issue has been addressed adequately.

9.1.17 Telecommunications, borrow pits, settlement ponds

9.1.18 The planning authority is satisfied that these issues have been addressed adequately.

9.1.19 Third party appeals

9.1.20 The response addresses and rebuts, as appropriate, the grounds of the 3rd party appeals.

9.1.21 Conservation officer

9.1.22 Separate comments from the conservation officer are attached. This submission references potential impacts on landscapes, protected structures, and historic towns. The submission notes the revised Chapters 11 and 12 as submitted by the applicant in their appeal. In relation to visual impact, the mitigation due to the trees being in leaf is noted, as is the distance between the sites and the proposed development. On the issue of cultural heritage, the focus appears to be on archaeology, whereas the conservation officer's concerns were with regard to the built heritage. The conservation officer concludes that there would be a negative visual impact on the historic planned village of Villierstown and Aglish.

9.1.23 Heritage officer

9.1.24 Separate comments from the heritage officer are attached regarding the 3rd party observations on the issue of SEA of the Waterford Wind Energy Strategy and AA of the proposed development. The submission states that the Strategy was subject to SEA in 2007 which resulted in the Lickey catchment (freshwater pearl mussel) being reclassified from a strategic area to a no-go area. As such, the assertion that there was no SEA of the Strategy is incorrect. AA screening was not carried out contemporaneous to preparation of the Wind Energy Strategy in 2006 as it predated Circular SEA 1/08 & NPWS 1/08 of February 2008. However, preparation of the strategy was informed by the location of the Natura 2000 network. The omission of the Lickey catchment demonstrates the incorporation of the Habitats Directive provisions, albeit not by the AA process subsequently prescribed in 2008 and 2009 by the DoEHLG.

9.1.25 As regards AA of the scheme itself, the only Natura 2000 site with a direct corridor link to the proposed development is the river Blackwater between the headwater stream on site and the Goish River. A number of mitigation measures are detailed in the EIS which will reduce the potential for adverse impacts. It is not considered that the proposed development will incur adverse impacts on the integrity of these sites. The SLR review of the NIS cites the lack of any specific conservation objectives. It is contended that conservation objectives are known and understood by the competent authority and enable an assessment. The conservation objectives [generic] are cited.

9.2 1ST PARTY RESPONSE TO 3RD PARTY APPEALS

9.2.1 This submission is presented as a rebuttal to the 3rd party appeals submitted, and by its own admission restates much of the material submitted in the 1st party appeal. Other points of note can be summarised as follows.

- 9.2.2** In relation to the appeal by Robbyn Swan which asserts that there are ambiguities in the description of the site location, the appellant states that listing all the townlands in which the windfarm is located is standard practice in such instances. On this specific instance, one of the townlands is actually officially referred to on the OSI and Land registry records as ‘Woodhouse or Tinakilly’. As such, this is a reflection of existing nomenclature, rather than an ambiguity in description.
- 9.2.3** The submission references the wider benefits of wind energy
- 9.2.4** Section 3 of the submission documents the applicant’s pre-application public consultation.
- 9.2.5** On the issue of Strategic Environmental Assessment of Plans and Guidelines, it is the applicant’s position that the 2006 Wind Energy Guidelines did not need to be subject to SEA and that the county’s Wind Energy Strategy was subject to SEA as part of the County Development Plan process.

9.3 3RD PARTY (BLACKWATER VALLEY ALLIANCE) RESPONSE TO 1ST PARTY APPEAL

- 9.3.1** In addition to matters raised in their appeal (see Section 8.5 above), the main points of this submission can be summarised as follows.
- 9.3.2** The present application amounts to a different application [by virtue of the amendments proposed in the 1st party appeal], which as a consequence requires a new EIS. It is not possible to draft alterations into a current appeal. This is an abuse of the appeal process. The applicant has acknowledged that the original proposal is unsuitable and inappropriate. The applicant should make a new application. The applicant’s approach is intended to exhaust the energies of 3rd parties.
- 9.3.3** The planning authority determined that the EIS was inadequate. The board cannot revisit this, and must dismiss the appeal.
- 9.3.4** The board should not consider this appeal further, having regard to the nature of the appeal (being different to the initial proposal) and section 138(1) of the Planning and Development Act 2000 (as amended)².

² 138.—(1) The Board shall have an absolute discretion to dismiss an appeal or referral—
 (a) where, having considered the grounds of appeal or referral or any other matter to which, by virtue of this Act, the Board may have regard in dealing with or determining the appeal or referral, the Board is of the opinion that the appeal or referral—
 (i) is vexatious, frivolous or without substance or foundation, or
 (ii) is made with the sole intention of delaying the development or the intention of securing the payment of money, gifts, consideration or other inducement by any person,
 or

**9.4 3RD PARTY (MICHAEL AND GIANCARLA ALEN-BUCKLEY)
RESPONSE TO 1ST PARTY APPEAL**

- 9.4.1** This submission was made by Reid Associates on behalf of the appellants. In addition to matters raised in their appeal (see Section 8.4 above), the main points of this submission can be summarised as follows.
- 9.4.2** The conclusion of the EIA process by the planning authority was that the EIS was defective. There is no provision in legislation for EIA to be carried out by both the planning authority and the board. As such, there is no valid planning application before the board.
- 9.4.3** The applicant has sought to remedy a defective application at appeal stage. The applicant is now proposing a materially different development. The EIA for the original application remains defective, and the substantial EIS documentation submitted during the course of this appeal comprise only a partial EIS for a materially different development.
- 9.4.4** The board should dismiss the appeal pursuant to Section 138(1) of the Planning and Development Act 2000 (as amended).
- 9.4.5** Reasonable alternatives have not been examined.
- 9.4.6** The random omission of 3 turbines raises issues of economic sustainability. Furthermore, there is no coherent plan for decommissioning.
- 9.4.7** The proposed development would be injurious to the demesne landscapes of the Blackwater Valley, including Strancally Demesne. A photo of the view to the existing windfarm at Woodhouse is included. The submission goes on to discuss visual impact at length. Photos of the existing windfarm at Woodhouse are included. The appellant asserts that the proposed development would have turbines 40m taller than those at Woodhouse.
- 9.4.8** The Wind Energy Guidelines are not objective, having regard to the EIA directive.
- 9.4.9** The archaeological and cultural assessment is defective.
- 9.4.10** The NIS is defective. Up to 200 Whooper Swans overwinter on Strancally Camphire bogs, just across the River Blackwater from the proposed windfarm. These birds are part of a larger flock that

(b) where, the Board is satisfied that, in the particular circumstances, the appeal or referral should not be further considered by it having regard to—
(i) the nature of the appeal (including any question which in the Board's opinion is raised by the appeal or referral), or
(ii) any previous permission which in its opinion is relevant.

overwinter in the Blackwater valley, and are the defining interest of the two SPAs on the river Blackwater. Photos of Whooper Swans are included. Page 84 of the NIS states that whooper swans were not observed during ornithological surveys at the proposed site that no suitable habitat occurs within the site, and that it is not likely that disturbance or displacement impacts will ensue on whooper swan. The appellants contend that there is a real and substantial risk of swans flying over the site.

9.4.11 The traffic management plan is not capable of being implemented. There are no letters of consent from the affected landowners.

9.4.12 St. Declan's Path, a long distance route from Youghal to Dungarvan, passes in close proximity to the exiting turbines, as does the Sean Kelly cycle route.

9.5 3RD PARTY (JOHN AND NIAMH REYNOLDS) RESPONSE TO 1ST PARTY APPEAL

9.5.1 In addition to matters raised in their appeal (see Section 8.6 above), the main points of this submission can be summarised as follows.

9.5.2 The applicant has submitted a new cumulative noise impact study (appendix 7) after omitting 3 turbines. 14 houses were chosen as they were within 1km of the new windfarm. The applicant failed to include other houses which are within 1km when both windfarms are considered. The appellants are one such house.

9.5.3 Audible Amplitude Modulation has not been considered.

9.6 ADDITIONAL CONSULTEES AT APPEAL STAGE

9.6.1 The board requested submissions from Fáilte Ireland and from the Commission for Energy Regulation under Article 28(1)(b) of the Planning and Development Regulations 2001 to 2013. No submissions were received.

10.0 OBSERVERS

A total of 35 valid observations were received from the following parties.

1. Drumhills Community Wind Farm Awareness Group
2. Anthony Summers and Robbyn Swan
3. Sally Ann Quirke
4. Eibhlin de Paor
5. Una de Paor
6. Thomas Hickey & Others
7. Sean Moore & Michaela Volna

8. Keith & Lisa Barker
9. Jason & Alley Cairns
10. Eamonn & Christina Kelly
11. Patrick & Annabelle Massey
12. Kathleen Mulcahy
13. Brian & Helen Murphy
14. John & Amy Brady
15. John J. Cullinan and Others
16. Deirdre Whelan
17. Theresa Ryan
18. Bridget and William O'Connell
19. Amanda Mansfield
20. Ruairi & Therese O'Donnell
21. James Casey
22. Derry Cotter
23. Paddy Kiely
24. Barbara Grubb
25. Philip Wingfield
26. Peadar Ó Sulleabháin
27. Austin A. Spratt
28. Ann-Marie & Pat Browne
29. Mary Hally
30. Orna Breathnach & Mark Walsh
31. Seamus Lynch
32. Tom Feerick
33. Alban O'Donoghue
34. Wexford Energy Action Group
35. Kevin Hally

10.1.1 The issues raised in these observations are largely reflected in the 3rd party appeal grounds summarised in section 8.0 above. Other issues raised can be summarised as follows.

10.2 TERMS OF THE PROPOSAL

10.2.1 The proposal is not specific in terms of the dimensions of the turbines.

10.2.2 The mapping supplied makes it difficult to see where the turbines are proposed relative to houses.

10.2.3 There has been insufficient public consultation.

10.2.4 The request by the applicant for a 10 year permission is unreasonable.

10.3 GRID CONNECTION

- 10.3.1** The proposal would be relying on 6km of overhead cabling to connect it to the Dungarvan Substation at Killadangan for which planning permission has not been submitted. This cable route is an integral part of the development and should therefore be included in the EIS and NIS. Similarly, the proposal states that the Kilnafarna mast (microwave radio equipment) may need to be moved. There has been no assessment of this.
- 10.3.2** The applicant states in their appeal that they have ‘secured’ an ‘underground grid connection modification agreement’ with the ESB to Dungarvan as part of the Gate 3 process. There is no evidence of any documentation to this effect. This statement differs significantly to what was stated in the original planning file.
- 10.3.3** Policy INF26 intends that the National Grid connections should have minimal length and visual impact. The proposed development is not proximate to the national grid.

10.4 EIS – GENERAL ISSUES

- 10.4.1** Insufficient detail has been provided in the EIS regarding alternative sites, difficulties encountered in compiling the required information, qualifications/ expertise of the authors, or interaction of potential impacts.
- 10.4.2** The proposed development does not appear to comply with the recommendations of the recent High Court decision of Kelly v An Bord Pleanála (JR 2013 No. 802)

10.5 NOISE

- 10.5.1** There is insufficient detail of the noise models supplied. The modelling is based on data for the Nordex N90, but these are not necessarily the turbines proposed. The graphs in Appendix 10.1 appear to present significantly higher values than those supplied in Tables 10-8 and 10-9. A 35dB threshold should be considered, as opposed to the 40dB proposed by the applicant. Exceedances of the 40dB are shown. Greater consideration should be given to low-frequency noise. The modelling uses incorrect heights/hub heights and turbine models for the existing Woodhouse windfarm and for the proposed development.
- 10.5.2** There should be no decision on the proposed development until Condition 9³ of the Woodhouse permission is complied with,

³ Condition 9 of 10/45 requires that the developer arrange for the monitoring of noise levels within 3 months of the commissioning of the development. Complete details of the nature and extent of the monitoring programme and noise sensitive locations to be monitored, shall be agreed with the planning authority.

including specified mitigation by switching off of specified turbines on foot of monitoring.

10.5.3 Residential properties H15 and H16 have been omitted from the Noise Assessment.

10.5.4 It would have been helpful had the developer provided tabular data comparing existing background noise level with the corresponding predicted cumulative values for the 3 surveyed locations. At NML3, the surveyed background noise for wind speeds of 7m/s and under is below 30dB. The predicted noise level for this wind speed is 41dB LA₉₀, which is in excess of the 40dB limit offered. As such, this contradicts the applicant's assertion that the development will comply with the 2006 guidelines.

10.6 SHADOW FLICKER

10.6.1 The shadow flicker modelling parameters are not provided. The assessment should have been undertaken beyond 10 rotor diameters. There is no tabular data as to the potential effect of shadow flicker on each residential location. No assessment has been provided of the 30 min/day threshold. It is not appropriate to apply metrological correction factors to the 30 min/day criteria. If a 30+ minute impact is predicted for a particular location, this event will occur when the sun shines.

10.6.2 H1 and H2 are both within 10 rotor diameters of T7. Rudimentary calculations using online tools shows that T7 does cast a shadow over H1 and H2 as the sun sets from late November/early December to mid-January. As such, the applicant's assertion of zero shadow flicker is surprising.

10.7 VISUAL IMPACT

10.7.1 The viewpoints shown in the LVIA do not appear to represent the worst case scenario, and under represent the impacts. Examples are given of where more open views are available nearby to the selected vantage points.

10.7.2 The ZTVs are not in accordance with the 2006 DoE guidelines, which recommend that visibility based on numbers of turbines visible to half the blade length in addition to hub height should be provided. The cumulative impact of the proposed development with existing and permitted turbines would lead to a feeling of being surrounded 360 degrees by wind turbines in West Waterford and East Cork.

10.7.3 The proposed development would be inconsistent with the recommendations of the 2006 DoE guidelines with regard to siting and context.

- 10.7.4** The proposed development would be contrary to the County Development Plan's 'Scenic Landscape Evaluation' which identifies the ridgeline of Drumhills as 'sensitive'. A series of planning applications that have been refused due to visual impact in the vicinity is provided.
- 10.7.5** The adjacent turbines at Woodhouse were constructed in August/September 2014. They are incongruous structures that dwarf the river valley.
- 10.7.6** The proposed development is premature pending the preparation and adoption of the National Landscape Strategy.

10.8 OTHER IMPACTS ON THE AREA

- 10.8.1** There is a lack of a detailed buildings survey in the vicinity or detail of tourism and recreational activities. The proposed development would impact negatively on tourism in the area. The site is adjacent to St. Declan's Way and the Sean Kelly cycling route.
- 10.8.2** The proposed development would impact negatively on livestock.
- 10.8.3** Current planning regulations mean that the children of the area have the best chance of getting planning of their own homes within the area of their upbringing. The proposed development significantly reduces the potential lands that may be used as sites in the future.

10.9 WIDER ENVIRONMENTAL AND ENERGY ISSUES

- 10.9.1** No carbon balance calculation has been provided. Scottish Natural Heritage provide guidelines on calculating carbon budgets.
- 10.9.2** National targets for renewable energy are not appropriate. Decommissioning has not been considered. The claimed CO₂ benefits do not bear scrutiny, nor do the claims regarding jobs.
- 10.9.3** The EU's and Ireland's National Renewable Energy Action Plan (NREAP) has been found to be unlawful by the UNECE.

10.10 IMPACTS ON FLORA AND FAUNA

- 10.10.1** Hen Harrier are present in the area, and are protected under the Birds Directive. Sightings have been reported to the Department of Arts Heritage, and the Gaeltacht. The use of a desktop study on the issue of bats is insufficient. There are Kestrel, Owl, and Pine Marten in the areas, as well as Wet Willow habitat. Whooper Swans fly over and adjacent to the site to/from the flock's feeding and roosting grounds on the Blackwater Callows SPA.

- 10.10.2** The proposed development could have negative impacts on water quality in the area and on shellfish fisheries in Dungarvan bay due to sediment release. There was no consolation with Bord Iascaigh Mhara. Dungarvan Bay is an SPA and SAC.

11.0 ASSESSMENT AND EIA

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

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

11.3 Other issues can be addressed under the following headings;

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

and while these fall outside what could be considered relevant to the EIA, it should be noted that they are also addressed as part of the applicant's submitted EIS (Chapters 2, 5, 6 of the EIS refer).

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

- EIS – Compliance with Planning and Development Regulations 2001
- EIA – Alternatives Considered (EIS Chapter 4)
- EIA – Construction and Employment, Material Assets (EIS Chapter 7)
- EIA – Air and Climate (EIS Chapter 8)
- EIA – Socio-Economic Impact (EIS Chapter 9)
- EIA – Residential Amenity - Noise (EIS Chapter 10 (part))
- EIA – Residential Amenity – Shadow Flicker (EIS Chapter 10 (part))

- EIA – Landscape and Visual (EIS Chapter 11)
- EIA – Cultural Heritage (EIS Chapter 12)
- EIA – Ecology (EIS Chapter 13)
- EIA – Geotechnical issues, Hydrology and Hydrogeology (EIS Chapters 14 and 15)
- EIA – Interactions of the foregoing (No specific EIS Chapter refers)

11.5 PRINCIPLE OF DEVELOPMENT AND POLICY CONTEXT

11.5.1 The scheme to be assessed in this report

11.5.2 The question arises at the outset as to which of the schemes should be assessed in this report; the 12-turbine scheme as originally proposed to (and decided upon by) the planning authority, or the 9-turbine scheme presented by the applicant as a proposition in their 1st party appeal. The justification for this proposition is presented by the applicant in their appeal and summarised in section 8.3.10 above. It relates primarily to the objective to reduce visual clutter, protect habitats (T5), and lessen cumulative noise impacts.

11.5.3 It is the case that all of the 3rd party submissions and departmental reports prior to the planning authority's decision were based on the 12-turbine scheme. It is worth clarifying at this point that the revisions presented by the applicant were not re-advertised publically, nor circulated beyond the parties to the appeal.

11.5.4 I note that the planning authority in their response to the 3rd party appeal have presented positions based on the revised information submitted in the appeal relating to the 9-turbine proposition, but that they have not changed their position on any of the substantive issues.

11.5.5 Several of the 3rd party submissions to the board take the position that the amendments to the proposal amount to a new scheme which should be pursued, if so desired, via a new planning application. This position is outlined in detail in the two 3rd party responses to the 1st party appeal by Blackwater Valley Alliance and the Alen-Buckleys. They assert that it is not within the board's remit to consider these amendments.

11.5.6 I propose, in the interests of natural justice, to assess the proposed development as a 12-turbine development. I propose to consider, where appropriate, the information presented by the applicant in their 1st party appeal, insofar as this is relevant to considering the 12-turbine scheme.

11.5.7 However, the omission of 3 turbines in a measure that the board, should they be minded to grant permission, could in any event impose by condition in order to address identified negative

impacts of the scheme. As a suggested condition, the applicant's proposition is an entirely valid contribution to the appeals process, as indeed is any suggested condition by any appeal party.

- 11.5.8** Appendix 11 of the appeal submission consists of a summary comparison of the 12-turbine and 9-turbine schemes, how this impacts on the original EIS, along with the 'pros and cons' of the appeal's proposition.
- 11.5.9** **Broad policy context**
- 11.5.10** Chapter 2 of the EIS makes reference to European and National policy which the applicant considers to be relevant to the proposed development. It is indeed the case that much of this policy is broadly supportive of renewable energy in general and wind energy developments in particular. I note that many 3rd party submissions criticise wind energy in principle, questioning its economic justification, environmental performance, and broad social impacts. While this is indeed a valid, valuable and worthwhile area for debate, I do not consider it within my remit to enter into an assessment of such issues, nor take a position on the matter. The forum for such matters lies in the formulation of policy at a national, regional, and local level.
- 11.5.11** I note that the Regional Planning Guidelines also broadly support renewable energy, but that they do not have a spatial component in this regard.
- 11.5.12** **Wind Energy Development Guidelines (Department of Environment, Heritage, and Local Government 2006)**
- 11.5.13** These guidelines, hereafter referred to as the DoE Guidelines are the primary national policy on wind energy developments. They were issued under Section 28 of the Planning and Development Act, 2000, which requires both planning authorities and An Bord Pleanála to have regard to them in the performance of their functions.
- 11.5.14** The age of these guidelines and their current status is a matter of debate and discussion by the parties to the appeal. I do note that they are 9 years old, and that they were written at a time when there were significantly fewer windfarms in Ireland, with significantly smaller turbines on average. I also note that the DoEHLG engaged in public consultation in respect of a focused review of certain aspects of these guidelines (noise, proximity, and shadow flicker). The public consultation phase of this review closed in February 2014.
- 11.5.15** Chapter 6 of the EIS goes through the DoE Guidelines in detail, relating aspects of the scheme to the various sections of the guidelines in turn. These issues are largely dealt with under the

topical headings later in the EIS and are also assessed as they arise in this assessment.

11.5.16 County Development Plan – broad policy context

11.5.17 As can be seen from the suite of policies summarised in Section 7.4.2 above, the County Development Plan is broadly supportive of renewable energy developments in general, and wind energy developments in particular, albeit with the caveat that environmental considerations and impacts on residential amenity must be considered against the delivery of such objectives. I note that Chapter 5 of the EIS cross-checks the proposed development against the County Development Plan, going through each chapter.

11.5.18 County Development Plan – Wind Energy Strategy (WES)

11.5.19 Of particular significance to the subject proposal is the Wind Energy Strategy (WES) which is incorporated as an appendix to the County Development Plan. This sets out a 4-tier spatial approach to wind farm proposals, designating all parts of the county as being within one of the following areas, in descending order of preference

- Strategic Areas (Yellow)
- Preferred Areas (Blue)
- Areas Open for Consideration (green)
- No-Go Areas (Red)

11.5.20 Figure 5.1 of the EIS provides a useful overlay of the proposed turbines against the WES strategy.

11.5.21 The subject site falls within one of only two top-tier ‘Strategic blocks. To the west and south is a contiguous ‘No Go’ area associated with the Blackwater Valley, and to the northeast is an ‘Open for consideration’ area straddling the N72 Dungarvan-Cappoquinn Road. The Woodhouse windfarm would appear to straddle the boundary between the ‘Strategic’ and ‘Open for Consideration’ areas, with roughly 4 turbines in each.

11.5.22 The WES states in relation to ‘Strategic’ areas that *“These key areas are deemed eminently suitable for wind farm development and should be reserved for such purposes.”*

11.5.23 It is worth briefly considering the development potential of the county’s Strategic areas, for comparative purposes. The subject site comprises perhaps the northern third of the northern block of Strategic lands. The southern two thirds are largely low-lying, within the Goish River valley. Furthermore, if a nominal (for

comparative purposes) 500m buffer is applied to residential properties, very little land remains.

- 11.5.24** The 2nd southern block of ‘Strategic’ lands straddles and lies to the south of the N25 between Youghal and Dungarvan, and is around twice the size of the northern block which includes the subject site. However, there is dispersed housing throughout this area, and very few contiguous areas of any significant size that are more than 500m from houses. The largest such block is maybe a quarter the size of the subject site, enough for maybe 3 turbines in theoretical terms.
- 11.5.25** As such, and without prejudice to the site specific assessment of the subject proposal to follow, and without prejudice to any future applications elsewhere in the county, the subject site is by far the most viable contiguous site within the ‘top tier’ designated lands in the county.
- 11.5.26** **County Development Plan – Zoning**
- 11.5.27** As detailed in section 4.1.4 above, the ‘default’ zoning outside of designated settlements is A: ‘agriculture’, in accordance with Section 10.57.1 of the plan. The zoning matrix (Table 10.11) does not include wind energy development as a use class. Note 4 beneath the zoning matrix states that *“Uses not covered in the Land Use Matrix above may be allowed in accordance with the written provisions of the County Development Plan.”*
- 11.5.28** The planning officer’s report provides a detailed assessment against the zoning provisions of the county plan, and finds that wind energy development is incompatible with the default agriculture zoning in this instance. The planning officer places this finding alongside the supportive policies of the WES and determines that the default zoning must take precedence. This position is reflected in the planning authority’s reasons for refusal and in planning authority’s response to the first party appeal. The applicant counters this position in their 1st party appeal.
- 11.5.29** **County Development Plan – Reconciliation of WES and zoning**
- 11.5.30** The planning officer’s position is well reasoned and follows a clear logic. However, it is just one potential resolution of the apparent conflict between the zoning matrix and the WES. It is worth considering the implications of this logic being applied in all instances. In my opinion, it would effectively make the policies of the WES redundant and would amount in practice to a total prohibition of wind energy development in the county. Viewing the policies of the County Development Plan in their totality, it is clear that this is not the intended effect.

11.5.31 I consider a reasonable interpretation of the plan in broad terms is that wind energy developments would be permitted within the county subject to the scheme's favourable performance in respect of environmental impacts, impacts on residential amenity, and other relevant factors, and that the WES is a valid and useful tool in guiding the process of site selection in the first instance.

11.5.32 I consider that it is appropriate to give a presumption in favour of the proposed development on foot of its 'top tier' status within the WES, but that this presumption is predicated on acceptable performance against the '3 tests' outlined in the WES, and indeed the tests set out in Policy ENV11, as highlighted in the appeal from the Alen-Buckleys. These 'tests' can be summarised as follows, and will be the subject of further assessment in their own right. I will return to conclude on these matters in section 13.2 below.

Test	Source	
	WES	ENV11
No. n/a Directs to WES		comply with the Waterford County Wind Energy Strategy
No. 1 400m buffer	<i>No turbines shall be positioned within 400m of a habitable house;</i>	
No. 2 Impact on Airport	<i>No wind farm projects shall be at variance with the safe operations of Waterford Regional Airport;</i>	
No. 3 DoE guidelines	<i>Wind farms shall be developed in accordance with recommendations in the Wind Energy Development Guidelines by the Department of the Environment, Heritage and Local Government.</i>	.. and the DoEHLG guidance document on Wind Energy.

No. 4 Appropriate Assessment		no negative impact on the integrity (defined by the structure and function and conservation objectives) of any Natura 2000 site
No. 5 Visual impacts outside the county		visual impact of a wind farm development on towns and villages, protected views and amenity areas outside of the administrative area of Waterford County Council in the assessment of wind energy applications.”

Table 4

11.5.33 Conclusion on Principle of Development and Policy Context

11.5.34 In my opinion, the proposed development is acceptable in principle subject to a favourable assessment of its performance under the tests outlined in Table 4 above.

11.6 LEGAL AND PROCEDURAL MATTERS

11.6.1 Legal interests in lands

11.6.2 As documented in Section 3.1.8 above, the applicant has submitted documentary evidenced of their interest in the lands of the subject site. I consider this to be sufficient interest to make a planning application in this instance. I note that the 3rd party response (to the 1st party appeal) from the Alen-Buckleys raises questions regarding the applicant’s interest in lands needed for road widening on the construction access route. This matter is addressed further in section 11.9 below. With reference to the provisions of Section 34(13)⁴ of the Planning and Development Act 2000 (as amended), I do not consider that this is an impediment to the applicant making a planning application or the board making a decision in this instance. If the applicant cannot secure the necessary permissions to enable construction access, the development cannot be implemented.

11.6.3 Duration of permission

11.6.4 The applicant is seeking a 10-year permission under Section 41 of the Planning and Development Act, rather than the standard

⁴ “A person shall not be entitled solely by reason of a permission under this section to carry out any development.”

period of 5 years. Such a condition would indeed be consistent with the legislation. The 2006 Wind Energy Guidelines (DoEHLG) state (Section 7.20 that) *“Planning authorities may grant permission for a duration longer than 5 years if it is considered appropriate, for example, to ensure that the permission does not expire before a grid connection is granted.”*

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

11.6.6 Grid Connection

11.6.7 The applicant states that the proposed grid connection from the windfarm to the national grid will be via an underground connection to the 110kV substation at Killadangan, 6km to the northeast, and that there is consent for this connection under Eirgrid’s ‘Grid 3’ connection process. This position is reiterated in the first party appeal and the 1st party response to the 3rd party appeals. No alignment or other details have been provided.

11.6.8 The appeal from the Alen-Buckleys asserts that there is no consent for a grid connection in place, and that the applicant’s approach therefore amounts to ‘project splitting’ in terms of EIA. 3rd party observations to the board reflect this position, asserting that the grid connection is an integral part of the development. A recent high court case *O Grianna & ors -v- An Bord Pleanála ([2014] IEHC 632 / 2014 19 JR & 2014 10 COM)* is cited in this regard.

11.6.9 The planning authority in their response to the appeal state that there is no evidence of consent for an underground connection, but consider that it would be likely to be exempted development.

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

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

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

... it points to a prematurity in the seeking of permission for the construction of the wind farm ahead of the detailed proposals for its connection to the national grid from ESB Networks. I appreciate

that Framore have indicated that it simply is not possessed of the necessary information in this regard and could not include it in its EIS. But that does not mean that given more time and further contact with ESB Networks it could not be achieved so that it could be included in an EIS which addressed the impact of the environment of the total project “at the earliest stage”.

...

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

- 11.6.12** My interpretation of this judgement is that there should be sufficient detail in a windfarm EIS relating to the grid connection to allow for a cumulative and comprehensive assessment of environmental impacts. In the absence of such information, the EIS is defective, and permission cannot be granted. Whether the grid connection would or would not be exempted development or would or would not have significant environmental impacts is a moot point. The O’Grianna judgement, in my opinion, requires that grid connection be incorporated into the EIS, and that this be before the board when the board conducts their EIA.
- 11.6.13** The application to the planning authority, and indeed the appeal to the board, both predate the judgement in the O’Grianna case. Indeed, the DoE Guidelines (2006) advise that indicative options for grid connection is sufficient. Nevertheless, the board is obliged to assess and determine the case within the current legislative context. As such, the EIS is legally defective, and the board is precluded from granting planning permission at this time.
- 11.6.14** My findings on this issue feed into the considerations at 11.7 below.
- 11.6.15** I note that there is an existing 110kV transformer within the adjacent Woodhouse windfarm which is designed to connect directly to the 110kV line that crosses the site. This is evidenced by the planning history of the site, and as stated by the applicant in their 1st party appeal. There is no information on file that would illuminate the question of why the applicant is not proposing to connect to this facility. There is little point speculating on this matter at this time.

11.7 EIS – COMPLIANCE WITH PLANNING AND DEVELOPMENT REGULATIONS 2001

- 11.7.1** The planning officer's report takes the position that there are significant omissions in the EIS. In their 3rd party responses to the 1st party appeals, both the Blackwater Valley Alliance and the Alen-Buckleys take the position that as the planning authority had determined that the EIS was inadequate, that this matter cannot be revisited by the board. I do not concur with this position. The board's role is to undertake a 'de novo' assessment of the proposal, and is not bound by the findings of the planning authority.
- 11.7.2** Article 94 and Schedule 6 of the Planning and Development Regulations 2001, as amended, set out the information to be contained in an EIS and, in my opinion, the document accompanying the application technically accords with the said details, with the subjects to be addressed set out therein. I note the matters presented by the applicant in their appeal, where relevant. This material validly supplements the initial EIS, in my opinion, and comes within the terms of the process as outlined by legislation.
- 11.7.3** However, as per my assessment at 11.6.6 above, and in light of the O'Grianna judgement, the lack of information regarding grid connection is a critical shortcoming in the EIS. It would not comply with the requirement of item 1(a) of Schedule 6 of the Regulations, namely that the EIS contain '*A description of the proposed development comprising information on the site, design, and size of the proposed development*'
- 11.7.4** Given that an element of the proposed development – the grid connection – is not included in the description of the proposed development, Article 94 is therefore not complied with. The EIS is therefore defective in the current legislative context and permission cannot be granted.

11.8 EIA – ALTERNATIVES CONSIDERED (EIS CHAPTER 4)

- 11.8.1** Chapter 4 of the EIS presents information regarding the site selection process. A wind resource atlas with national grid overlay is presented in Figure 4.1, which also overlays the proposed turbines. Section 3.4 discusses alternatives considered including alternative locations, alternative windfarm designs, and alternative processes.
- 11.8.2** The observers to the appeal assert that insufficient detail has been provided in the EIS regarding alternative sites, and indeed the difficulties encountered in preparing the EIS, a required topic.

- 11.8.3** As stated in Section 3.4 of the EIS, EPA guidelines on EIA state that in some instances neither the applicant nor the competent authority can be realistically expected to examine options that have already been previously determined by a higher authority such as a national plan or regional programme for infrastructure. I consider this to be an appropriate standpoint particularly given the nature of wind farm proposals. I consider that the county-level wind energy strategy adequately addresses this issue.
- 11.8.4** I refer the board back to my discussion of potential alternative sites within the 'Strategic' lands of the WES at 11.5.23 above.

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

11.9.1 Haulage routes

- 11.9.2** The EIS states that the haulage route for turbine components would be from Waterford Port along the N25, and around the Dungarvan Bypass to Pulla Crossroads. From here, the route turns to the west along the L2024, takes an acute right turn onto the L8077, and then left onto the L6077, entering the windfarm site at its south-eastern edge.
- 11.9.3** Swept bath diagrams at all junctions and critical pinch-points are included in Appendix 7-3 of the EIS.
- 11.9.4** I note that there is an existing and proven route to the adjacent Woodhouse windfarm, with road widening and junction improvements evident on the local road connecting it to the R671. Fig 1 of Appendix 7-1 shows haulage route for proposed development, as well as those for the existing windfarms at Ballycurreen (N25 to Pulla Crossroads and then east) and Woodhouse (N72 and R671).
- 11.9.5** It would seem relatively easy in engineering terms to connect the subject site to the Woodhouse site way of a temporary access route to utilise the previous route. As with the issue of grid connection as discussed at 11.6.6 above, there is no information that would illuminate the question of why this was not pursued. Again, as with the grid connection issue, there is little point speculating at this juncture. However, it is my opinion that the consequent impacts of implementing two separate access routes, with associated temporary and permanent roadworks, for two immediate adjacent developments would appear to be at best wasteful, and at worst an unnecessary imposition on the receiving environment.

11.9.6 Impacts on roads and required works

- 11.9.7** Chapter 7 of the EIS, in conjunction with its associated appendices outlines the survey work undertaken on the haulage route between the N25 and the subject site. Falling Weight Deflector tests were undertaken, as were studies of a number of culverts. Strengthening works would be needed, as would works to 3 of the 5 culverts studied.
- 11.9.8** The proposed development would require some road widening and indeed completely new temporary roads through the third party lands to accommodate the swept path requirements of the vehicles delivering turbine components. Of note is a major intervention that is required in the townland of Carronahyla to accommodate an existing acute junction between the L2024 and the L8077.
- 11.9.9** Appendix 5 to the 1st party appeal presents additional measures such as the introduction of 33 passing bays, some of which are existing, and some proposed. It also provides additional information such as background traffic volumes and forecasts, and proposes additional mitigation measures such as road cleaning and traffic management.
- 11.9.10** While the engineering requirements are clear, and appear to be a reasonable approach to the task at hand, there is no information presented about how these works might be delivered. There are no consents from affected 3rd parties and no evidence of consultation and/or agreement with the local authority on regarding the works to the public road.
- 11.9.11** One potential mechanism for delivering such works might be a Special Contribution under Section 48(2)(c) of the Planning and Development Act 2000 (as amended). However, input on the matter from the applicant and the planning authority on this matter would be prudent in advance of pursuing this option.
- 11.9.12** To conclude on this issue, the proposals are far from satisfactory, but I do not consider these shortcomings to be an impediment to considering a grant of permission. As stated in section 11.6.1 above, it is my opinion that this matter must be viewed in light of the provisions of Section 34(13) of the Planning and Development Act 2000 (as amended). If the applicant cannot secure the necessary permissions to enable construction access, the development cannot be implemented.
- 11.9.13 Impacts of haulage route on adjacent lands**
- 11.9.14** I note that the planning authority's refusal reason 1(b) cites "transportation and associated impacts on residential properties along haulage routes and the fabric of the public road"

11.9.15 In my opinion, the impacts in terms of residential amenity would be significant, but temporary, and not such that would amount to a reason for refusal. As for the impacts on the fabric of the public road, there are methodologies for capturing the costs of such impacts from the applicant, as discussed above.

11.9.16 Public access

11.9.17 Impacts on public access to and through the site is cited in the planning authority's refusal reason 1(f), and is raised by several of the 3rd parties. I can confirm from my site inspection that I encountered several members of the public when travelling through the site, albeit at a relatively low intensity.

11.9.18 In response to this issue, Appendix 5 of the 1st party appeal (Section 7.2.1) states that to facilitate public access to and through the site, diversions will be put in place along alternate forestry roads away from works areas. Fig 7.2 shows these routes. I consider this to be an acceptable response to the issue.

11.9.19 Irish Aviation Authority

11.9.20 I note that the Irish Aviation authority do not object to the proposed development, but do require a number of conditions to be imposed, should permission be granted.

11.10 EIA – AIR AND CLIMATE (EIS CHAPTER 8)

11.10.1 Chapter 8 of the EIS discusses potential emissions during construction, namely from construction machinery and due to dust arising. The EIS quantifies the resultant emissions as minute. During the operational phase there would be effectively no emissions, with a net benefit due to reduction in dependency on fossil fuels. Construction phase mitigation measures are outlined in Section 8.5.

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

11.11.1 Impacts on tourism

11.11.2 This issue is raised frequently in the 3rd party submissions on file. The issue of recreational amenity of the site itself is linked to the question of public access, which is discussed at Section 11.9.16 above. This is a robust area of working commercial forestry at various stages of maturity, crisscrossed by access tracks for forestry vehicles. The presence of turbines on site will undoubtedly affect the experience of those utilising this forest in a recreational capacity. Some will have a neutral experience of the turbines, some will have a positive experience, and some will have a negative experience. However, for those who will have a negative experience, I do not consider that the recreational

resource is diminished to an extent such that would warrant a refusal of permission for this reason.

- 11.11.3** Impacts on tourism resources in the wider region derives from an interaction of visual impact with visitor attitudes. This is dependent on the magnitude of the visual impact and the nature of that tourism resource. Section 9.7 of the EIS discusses impacts on tourism, but it is with Appendix 4 to the 1st party appeal – a report by ‘Rethink Tourism’ that the issue is explored in depth. It is based on the 9-turbine proposition, but the majority of the information and analysis is directly applicable to the 12-turbine scheme. This comprehensive report consists of a tourism product audit, a tourism impact analysis, and mitigation measures. It draws from Fáilte Ireland’s Tourism Content System.
- 11.11.4** Figure 3 of the report shows the ZTV (zone of theoretical visibility) map overlaid with the designated scenic routes in the Waterford County Development Plans. Figure 4 shows the ZTV with heritage houses, cycling routes, and walking routes. Section 3.1 draws from Fáilte Ireland’s research paper ‘Visitor Attitudes to the Environment’ (2008)
- 11.11.5** All impacts characterised as low except for hiking/walking routes, impacts on protected structures, and scenic routes, which are all classified low-medium, with detailed analysis accompanying these findings.
- 11.11.6** I concur with the findings of the ‘Rethink Tourism’ report. The proposed windfarm would be a new feature that would be a backdrop to many tourism resources in the region. However, I would not characterise these tourism resources as being particularly sensitive to the introduction of this windfarm, nor would I consider the visual impacts of the windfarm on these resources to be large in a quantities sense, given the distances, topography, and screening available.
- 11.11.7** I note that the case was referred to Cork County Council for comment, but that no submission was received.
- 11.11.8** **Wind take**
- 11.11.9** ‘Wind take’ describes the principle whereby a turbine located upwind of an existing turbine will reduce the productivity of the existing turbine. It is a consideration of the DoE Guidelines and is dealt with in Section 6.5.11 of the EIS in relation to Woodhouse. The EIS shows the proposed development to be compliant with the separation distances required under the guidelines. I note that there is no submission on file from the owners/promoters of the Woodhouse windfarm.

11.11.10 Economic Impact

11.11.11 Chapter 9 of the EIS gives information regarding the area's demographics and economic base. Section 7.8.2 of the EIS states that the proposed development would create 7 permanent and 100 temporary jobs.

11.11.12 Section 9.8.3 of the EIS refers to community gain by way of a payment per MW installed, distributed through a combination of annual direct subsidy to the nearest neighbours and annual grants to community and sporting groups in the locality.

11.11.13 In my opinion, the proposed development would be at worst a benign, and at best a positive impact on the locality in economic terms.

11.11.14 Impacts on rural housing

11.11.15 Many of the 3rd parties raise concerns regarding the proposed development's negative impact on house prices in the vicinity. Sections 9.8.5 and 9.8.6 of the EIS makes counter assertions regarding house prices, stating that impacts would be neutral. I also note that the observers to the appeal raise the issue of development potential of surrounding areas for one-off rural housing.

11.11.16 In my opinion, while there is uncertainty in this regard, the range of likely potential impacts on property prices and development potential is not of a magnitude that would contribute to a justifiable reason for refusal on this issue.

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

11.12.1 Proximity of turbines to dwellings

11.12.2 The planning authority cites noise impacts in Refusal reason 1(d). At the outset, it is worth considering the proximity of the proposed turbines to the nearest dwellings in absolute terms before moving on to specific noise and shadow flicker considerations.

11.12.3 The DoE guidelines state that *"In general, noise is unlikely to be a significant problem where the distance from the nearest turbine to any noise sensitive property is more than 500 metres."* The WES in the county plan requires a 400m setback, and this figure is cited by the planning authority in in the pre-planning consultations. The application states that the nearest dwelling – H3 - is 687m (Table 10-8 of EIS). This house is to the southeast of the site, near the site entrance. This figure is consistent with measurements I have made based on available mapping. The nearest house to the south – H7 – is 772m from the nearest turbine. The nearest house to the west – H14 – is 779m from the nearest turbine, whereas the

nearest house to the north – H2 – is 888m from the nearest turbine.

- 11.12.4** There is no information on file that would illuminate the question of which (if any) of the houses covered in the applicants' studies have made 3rd party submissions to the application/appeal.
- 11.12.5** **Noise modelling methodology and baseline survey**
- 11.12.6** EIS appendix 10.1 consists of a "Noise and Vibration Impact Assessment". Observers criticize a lack of detail of the noise modelling, but in my opinion, the methodology is clearly set out, and I have no cause to query the assumptions or methodology of the modelling.
- 11.12.7** In order to derive baseline sound profiles for varying windspeeds, three Noise Monitoring Locations (NMLs) were selected. These appear to be relatively representative of the surrounding clusters of houses, although the western cluster at H11-H14 is not covered. NML3 to the north of the site is used as a proxy. This is notable as these houses have the highest modelled noise levels aside from H1. There is no reasoning offered as to why this omission has occurred. It might reasonably be expected that its omission might have been covered under a 'difficulties encountered' section as per EIS best practice.
- 11.12.8** In terms of background noise, NML1 to the south and NML3 to the north are found to be 'low noise environments' as per the terms of the DoE guidelines (below 30dBA at low wind speeds), whereas NML2 is found to represent general conditions (above 30dBA background noise at all windspeeds.) I note that NML2 is adjacent to a through-road, whereas NML1 and NML3 are at the 'heads' of cul-de-sacs. As such, the use of NML3 as a proxy for the H11-H14 cluster would appear reasonable. Appendix A of Appendix 10-1 shows the resulting background results plotted against windspeed, along with the interpolated curves used later.
- 11.12.9** The observers note that H15 and H16 have been omitted from the noise assessment. The applicant state that this is because these properties are associated with the Woodhouse windfarm. Given their location at the centre of the windfarm this appears eminently plausible, and their omission is reasonable, in my opinion.
- 11.12.10** **Applicable noise standards**
- 11.12.11** One of the findings of the O'Grianna judgement referred to at 11.6.6 above was that the board is not bound by the standards set out in the DoE Guidelines. Nevertheless, it remains the case that it is established practice that these standards are at the very least applied as a 'yardstick' against the modelled performance of windfarms. Indeed, it is against these standards that all parties to

the appeal state their case for or against the proposed development.

11.12.12 I will proceed to assess the proposed development against the DoE guidelines, being mindful, as is the case with all ministerial guidance, that it is within the board’s jurisdiction to refuse permission on the issue of noise for modelled impacts that fall short of the DoE threshold values, or indeed to grant permission where these threshold values are modelled as being exceeded.

11.12.13 The thresholds are set out in Section 5.6 of the DoE guidelines, and are presented in simplified form in Table 10-4 of the EIS. These limits can be summarised as follows:

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

Table 5

11.12.14 The applicant has interpreted these limits by way of red lines in the plots in Appendix B to Appendix 10-1. The main ‘flat’ section represents the limit in column 2, whereas the rising section to the right represents column 4, where the limit rises above the increasing background noise level at higher wind speeds. [I consider that there is an alternative interpretation of these standards. See section 11.12.28 below, but will proceed on the basis of the applicant’s interpretation for the time being]

11.12.15 For daytime conditions at NML1 and NML3, the ‘low noise environment’ conditions at low windspeeds means the red line takes a step down to the left of the graph, where the background noise level is below 30dB. I note that the graph also takes a ‘step’ for NML2, although this would appear to be an error. The step appears to shadow the predicted noise levels rather than the (higher) background noise levels in this instance. I note that the applicant has chosen to apply the higher (40dB) end of the threshold for the 35-40dBA ‘low noise environment thresholds, which is of course easier to comply with.

11.12.16 I also note that the applicant has applied the ‘or 5dB above background’ rising portion of the noise limits for the red lines in

the night-time scenarios rather than the flat 43dB required by the guidelines. This is a moot point as the modelled noise output of the guidelines plateaus at higher windspeeds.

11.12.17 I note that the applicant uses the dB weighting stipulated in the DoE guidelines.

11.12.18 Noise modelling results

11.12.19 Appendix B shows the modelled results for each of the NMLs plotted against the derived noise limits. Table 10-8 shows the predicted noise levels at each of the nearby houses arising from the proposed development, and table 10-9 shows the cumulative figures in conjunction with Woodhouse.

11.12.20 Figures 10-2 and 10-3 show noise contour maps, although there is no associated windspeed. Crosschecking against Table 10-9, it appears that this represents the sound levels at which the turbine-generated noise plateaus; above 8m/s.

11.12.21 Modelled performance - Non-critical points of concern

11.12.22 The night-time noise limits shown in Appendix B should use the flat 43 limit, but they add the 'background+5dB' rising section at the upper windspeeds. This is a moot point though, as modelled noise profiles plateau at 4-5m/s in all instances.

11.12.23 The planning authority's 1st party response queries noise levels at windspeeds above 12m/s. At this point turbine noise output has plateaued, but the DoE threshold tracks a level 5dBA above the increasing background noise. Above 7-10m/s (Beaufort Force 4) the modelled noise and noise limit plots diverge.

11.12.24 Modelled performance - Critical points of concern

11.12.25 The Appendix B plots include a 'step' in noise limits where the background noise level crosses 30dB. However, these are incorrectly depicted

NML1 – Steps 'early'. If correctly plotted, would show a convergence of noise limit with modelled noise.

NML2 – should not step at all. The 'step' incorrectly follows the predicted noise level curve as opposed to the background levels. The modelled output, however, does not fall foul of the correct representation of the noise limit in this instance.

NML3 – Steps 'early' and also uses a slope instead of a step. If correctly plotted, would show an exceedance of modelled noise over noise limit at 4m/s

11.12.26 As raised by the observers, the applicant uses the highest end of the 35-40dB range for ‘low noise environment’ situations. Had they used 35dB, there would be a daytime exceedance at NML1 between 2.5m/s and 5m/s (Beaufort Force 2-3, a common windspeed) and at NML3 between 2 and 4m/s.

11.12.27 Turning to the plots for individual houses, as set out in Table 10-9, H1, H2, and H11-H14 come very close to night-time limits above 8m/s. In this regard, the applicant discusses factors of safety in the modelling such that a house cannot be downwind (worst case scenario) of all turbines. However, non-quantified write-downs of quantified modelling results cannot give much in the way of comfort.

11.12.28 Contrary interpretation of DoE noise limits

11.12.29 The applicant has interpreted the two-part daytime standards of the DoE guidelines (45dB OR background + 5dB – see Table 5 above) as being ‘whichever is higher’. However, the contrary interpretation is that it should be ‘whichever is lower’. In graphical terms, and scanning from left to right across the windspeeds, instead of being a flat line followed by a rising section, it would be a rising section followed by a flat line.

11.12.30 There are a number of factors that would support this contrary interpretation.

1. This is consistent with the next of the DoE guidelines in relation to the special considerations for ‘low noise environments’ where it states that...

“.. in very quiet areas, the use of a margin of 5dB(A) above background noise at nearby noise sensitive properties is not necessary to offer a reasonable degree of protection and may unduly restrict wind energy developments which should be recognised as having wider national and global benefits. Instead, in low noise environments where background noise is less than 30 dB (A), it is recommended that the daytime level of the LA90, 10min of the wind energy development noise be limited to an absolute level within the range of 35-40 dB (A).”

Under the applicant’s interpretation, without the ‘low noise environment’ dispensation, a flat 45dB limit would otherwise be applicable at lower windspeeds. As such, there is no need to introduce this dispensation so as not to ‘unduly restrict wind energy developments. Indeed, by *dropping* the limit to 35-40dB, the opposite of this objective would be achieved. It is only when the contrary interpretation is considered – i.e. the limit shadowing the background noise at +5dB – that the dispensation to *raise* the limit to 35-40dB makes sense.

2. The shape of the contrary interpretation – an S-curve – is a comparable shape to the modelled turbine noise outputs. It would make sense that this is the case, rather than the two plots being unnecessarily divergent at very low and high windspeeds.
3. The contrary interpretation is used in other windfarm EISs, such as under PL17.PA0038 (Emlagh Windfarm), which is currently before the board, with the EIS publically available online.

11.12.31 I have assessed the NML plots against this contrary interpretation. Issues arise against daytime limits for NML1 in the 2.5-7m/s range and for NML3 in the 2-9m/s range. In both these instances, compliance with DoE noise limits is dependent on the 'low noise environment' dispensation. However, at the upper bound of this dispensation – 40dB – the modelled noise output is right on the cusp of exceedance. If any lower figure in the 35-40dB range is used, there would be a definite exceedance.

11.12.32 The NML plots only show performance against noise limits for the noise monitoring locations, not for the actual houses. Modelled noise levels at 14 houses are presented in Table 10-9, but in order to compare them against the noise limit for the corresponding background noise, it is necessary to cross reference against the curves in Appendix B. In the interests of clarity, I have presented my findings in this regard alongside those for the 9-turbine proposal in Table 6 below.

11.12.33 Impacts of 9-turbine proposition

11.12.34 I consider that it is valid to consider the impacts of omitting Turbines T5, T9, and T12, as per the applicant's proposition in their appeal, and to investigate whether this might address my concerns.

11.12.35 Appeal appendix 7 consists of an examination of this question. Table 10.2 is effectively a revised version of Table 10-9 of appendix 10-1 of EIS. Minor reductions are evident; 1dBA for some of the worst affected (H11-H14) residential properties in the critical noise output 'plateau' range above 7/m/s. There are no reductions for the other worst affected properties H1 and H2. There are larger reductions for the properties that were less badly impacted to begin with.

11.12.36 As stated above, in order to assess compliance with DoE standards for each of the houses, it is necessary to derive noise limits from the measured background noise levels for the proxy NMLs and to compare these to the noise levels given at EIS Table

10-9 (in respect of the 12-turbine proposal) and Appeal Appendix 7 Table 10-2 (in respect of the 9 turbine proposition). Having undertaken this analysis, my findings are as follows. It should be noted that the limits I have used are derived from the interpretation of the DoE guidelines that is contrary to that presented by the applicant. See Section 11.12.28 above

		Complies with DoE noise levels limit													
		Equals or within range of DoE noise level limit													
		Exceeds DoE noise level limit													
		House number													
Wind speed	Turbine layout	1	2	3	4	5	6	7	8	9	10	11	12	13	14
3m/s	12 9	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
4m/s	12 9	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
5m/s	12 9	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow
6m/s	12 9	Red	Red	Red	Green	Green	Green	Green	Green	Green	Green	Red	Red	Red	Red
7m/s	12 9	Red	Red	Green	Green	Green	Green	Green	Green	Green	Green	Red	Red	Red	Red
8m/s	12 9	Red	Red	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow
9m/s	12 9	Red	Red	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow
10m/s	12 9	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
11m/s	12 9	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
12m/s	12 9	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

Table 6

11.12.37 As can be seen, and might have been anticipated, to remove 3 turbines would result in fewer exceedances of the DoE noise level limits. However, I would not characterise the net improvement as being significant. Modelled exceedances occur under both proposed layouts.

11.12.38 Conclusion on operational impacts

11.12.39 The applicant does not propose any mitigation. Exceedances of the noise level limits in the DoE guidelines are indicated by my analysis for the proposed development (7 houses) and for the 9-turbine proposition presented in the first party appeal (6 houses). I consider that the proposed development is unacceptable in terms

of noise impacts on surrounding residences. I note that the planning authority response to the appeal states that they are satisfied with the revised noise assessment, and consider that it is consistent with applicable guidance.

11.12.40 Noise during construction

11.12.41 Table 10-5 of the EIS suggests construction-phase limits from National Roads Authority Standards. I consider it reasonable that the acceptable levels of noise during construction phase should be higher than during the operational phase. I consider the proposed development to be acceptable in this regard.

11.12.42 Cumulative impacts

11.12.43 Throughout the EIS and the appeal submission, the applicant has presented modelling figures in respect of the subject proposal alone, and the subject proposal along with the Woodhouse windfarm. My assessment above is based solely on the cumulative impacts.

11.12.44 I note that observers have asserted that no permission should be granted until Condition 9 of the Woodhouse Permission is complied with. This condition requires that the developer arrange for the monitoring of noise levels within 3 months of the commissioning of the development. I do not consider that permission in this instance should be withheld until this condition is complied with. It would not appear that the Woodhouse windfarm has been commissioned at this time.

11.12.45 Performance in relation to standards in DoE consultation document

11.12.46 The Department of Enrolment Community and Local Government issued a document entitled “Proposed Revisions to Wind Energy Development Guidelines 2006 Targeted Review in relation to Noise, Proximity and Shadow Flicker” in December 2013. The status of this discussion document is discussed at Section 11.5.12 above, but to reiterate, they have no status whatsoever. I present them here for information and comparative purpose only.

11.12.47 The discussion document proposes a limit of 40dBAL_{A90 10min} across the board, which takes account of WHO guidelines. Applying this threshold to the proposed development (12 turbines – Table 10-9), there would be no additional houses where exceedances would occur, although the limits would be met or breached over a wider range of windspeeds for the 7 properties affected. It is notable that the introduction of a flat threshold means that the exceedances are greater in some scenarios and lesser in others.

- 11.12.48** A similar pattern is reflected under the 9 turbine proposition, with just one additional house where limits are met or breached. The 40dB threshold is met at 7m/s and above for houses H11-H14 and H3, and exceeded by just 1dB for H1 and H2.

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

11.13.1 Shadow flicker standards

- 11.13.2** Limits for shadow flicker are set out in Section 5.12 of the DoE guidelines. Before continuing, it is worth noting my assessment of the status of the 2006 guidelines, as discussed in sections 11.5.12 and 11.12.10 above. As was the case with the issue of noise, I propose to apply these standards for assessment purposes.
- 11.13.3** Section 5.12 of the guidelines recommends *“that shadow flicker at neighbouring offices and dwellings within 500m should not exceed 30 hours per year or 30 minutes per day”*.
- 11.13.4** The applicant asserts in Section 6.4.1 of the EIS that as there are no houses proposed within 500m that this standard is not applicable. While this is perhaps true in a strict interpretation of the guidelines, I note that Section 5.12 goes on to state that *“At distances greater than 10 rotor diameters from a turbine, the potential for shadow flicker is very low.”* In this instance, that equates to 900m, with the implication being that at less than 900m, the potential for shadow flicker is *not* low. The nearest houses to the west, north, and south are all within 900m of the nearest turbine, as highlighted by the observers.
- 11.13.5** It should be noted that the DoE guidelines, while still in force, were written nearly 10 years ago, when most turbines were significantly smaller than those proposed and constructed these days. The guidelines state that at the time, turbines of less than 60m to blade tip are considered short, 75-100m medium and over 100m tall. The subject proposal is for 126m-to-tip turbines. As such the 500m and 10 rotor diameter indicative ‘buffers’ must be viewed in this context. It is appropriate that shadow flicker modelling be undertaken in this instance, and indeed the applicant has undertaken just such an exercise.

11.13.6 Shadow flicker modelling

- 11.13.7** The applicant’s methodology is set out in Section 10.2 of the EIS. It is based on the ‘hours per year’ parameter, and does not include the ‘minutes per day’ parameter also required by the guidelines, as highlighted by the observers. I consider this to be a shortcoming in the modelling.

- 11.13.8** I note that the modelling does not appear to contain a ‘write down’ for metrological conditions, vegetation, etc., which is an appropriate interpretation of the guidelines, in my opinion.
- 11.13.9** The methodology used is not as evident as with the topic of noise, as pointed out by observers. Section 3.4 of the 1st party appeal says that ‘WindFarmer’ design and optimisation software was used.
- 11.13.10 Shadow flicker impacts**
- 11.13.11** Shadow flicker in ‘hours per year’ is mapped in Fig 10.2 of the EIS. It is predicted that there would be zero hours per year at all houses in the vicinity. The planning authority in their submission state that they are satisfied with the appeal submission. Appeal Appendix 10 consists of a revision of the mapping of Fig 10.2 for the 9 turbine layout. As would be expected there remains zero hours of shadow flicker predicted.
- 11.13.12** The planning authority in their response to the appeal state that they are satisfied with the appeal submission on the issue of shadow flicker.
- 11.13.13** In my opinion, and given experiences of other wind farm applications, I consider it surprising that a figure of zero has been modelled for all nearby dwellings. However, I have no cause to bring any of the information on file into question. However, modelling for the ‘minutes per day’ parameter should have been undertaken.
- 11.13.14 Performance in relation to standards in DoE consultation document**
- 11.13.15** As with the issue of noise in the previous section, it is worth considering briefly the standards set out in the DoECLG’s consultation document on the issue of noise and shadow flicker.
- 11.13.16** The consultation document recommends zero shadow flicker at sensitive receptors. Zero shadow flicker is presented by the applicant. As such the proposed development would comply with the standards within the consultation document.

11.14 LANDSCAPE AND VISUAL (EIS CHAPTER 11)

11.14.1 Receiving landscape

- 11.14.2** There is some disagreement between the parties to the appeal as to whether the appropriate ‘baseline’ should include the Woodhouse windfarm or not, with consequent discussion as to what this might mean for the scheme’s policy context. In my opinion, the receiving landscape undoubtedly does include

Woodhouse, although this could reasonably be seen as working for or against the proposed development.

11.14.3 By way of a clarification, note that some 3rd parties have asserted that the proposed turbines would be larger than those at Woodhouse. Having viewed documentation relation to PA Ref. 10/45, it would appear that the permitted turbines at Woodhouse are 126m to their tip, which is the same height as those currently proposed. The 3rd parties may have been looking at older planning histories relating to this site (see Section 6.2 above)

11.14.4 Turning to landscape character type, the DoE guidelines present 6 broad categories as follows, with differing recommended responses for each.

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

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

Parameter	DoE guidance (summarised)	Scheme’s performance
Location	Ridges and plateaux are preferred.	Compliant
Spatial extent	Limited	Compliant
Spacing	Regular, responding to the underlying pattern field pattern.	Compliant
Layout	Linear, and staggered linear on ridges and hilltops	The layout proposed is more of a ‘Random’ layout as set out in the guidelines.

Height	Will tend not to be tall. Except where they are on a high ridge or hilltop of relatively large scale.	The turbines proposed are tall (126m is greater than 100m). The dispensation for 'high ridge or hilltop of relatively large scale' is a matter of judgement in this instance. While this hill is not large scale in a wider context, within the landscape type 'hilly and flat farmland', it is in relative terms. Compliant.
Cumulative effect	Visibility of two or more wind energy developments is usually acceptable.	Compliant.

Table 7

- 11.14.6** On the issue of context, the planning authority's response to the appeals states that there are only 3 windfarms in the county, and that the proposed development represents a 100% increase. To the best of my knowledge, the existing windfarms area at Woodhouse (8 turbines), Ballycurreen (2 turbines) and GSK in Dungarvan (1 turbine). These are covered in Section 6.0 above, and are shown in the mapping submitted by the applicant
- 11.14.7** The observers assert that the proposed development is premature pending the adoption of the National Landscape Strategy (see section 7.1 above). I consider that the board is obliged to determine the proposed development under the current policy context. While the NLS would indeed inform the determination of the subject proposal, it is my understanding from the draft document that this will be akin to a broad overarching policy document rather than a plan with a spatial component.
- 11.14.8 Theoretical visibility**
- 11.14.9** The applicant has produced a series of 'Zone of Theoretical Visibility' maps. These are theoretical because they estimate exposure of turbines based upon landform data only and take no account whatsoever of intermittent screening by vegetation or structures. I refer the board to Figure 11.1 of the EIS in the first instance. As can be seen, most turbines would be visible from Dungarvan, 8km away, and part of the scheme would be visible from Ring, 12km away. Parts of Youghal Co. Cork would have views to the proposed development. Most of the immediately surrounding area has theoretical visibility of the proposed development, except for Ardmore and the Youghal-Ring coastline.

- 11.14.10** The 3rd parties criticise the methodology employed in generating this mapping. I consider it sufficient for this stage of the assessment process.
- 11.14.11 Sensitive locations**
- 11.14.12** The county development plan includes a ‘Scenic Landscape Evaluation’. Figure 5.2 of the EIS shows the subject site overlaid on these designations. Only 1 proposed turbine is in the ‘sensitive’ lands (T5). A visually vulnerable ridge is shown running between the proposed development and woodhouse, as highlighted by observers.
- 11.14.13** The Scenic Landscape Evaluation also includes ‘scenic routes’ - The Ring-Clashmore local road running between the site and Carronadavderg is designated as such a route.
- 11.14.14** The two nearest settlements to the proposed development are Villierstown and Aglish. Section 5.4 of the EIS asserts that the proposed development would not be visible from these villages. I note that the county development plan includes two ‘scenic views’ for Villierstown, none of which are in the direction of the proposed development (see section 7.4.1 above). There are no protected views for Aglish
- 11.14.15** There are a number of protected structures in the wider area. A characteristic of the Blackwater valley to the west is the pattern of demesnes and country houses along both banks of the river. Details in this regard are set out in the EIS and discussed by the parties to the appeal.
- 11.14.16 Visual impact**
- 11.14.17** The visual impact of the proposed development is perhaps the predominant issue raised by the 3rd parties to the appeal, and indeed is the predominant issue raised as a concern in the planning officer’s report. The planning officer consider that the proposed development would be visible from wide area and scenic routes, asserts that the area is designated as ‘visually vulnerable’ in the development plan, that the proposed development would contribute to visual disharmony, and that it would result in an unacceptable cumulative effect.
- 11.14.18** The applicant’s methodology set out in Chapter 11 of the EIS. Central to the Landscape and Visual Assessment (LVIA) are a series of photomontages. The observers say LVIA viewpoints are selective. In my opinion they are quite representative of middle-distance and long distance views. Some additional viewpoints from nearby dwellings would have been helpful, but the ‘LC’ set give a good impression in this regard.

- 11.14.19** The EIS characterises different types of receptor, and groups the viewpoints accordingly. Table 11.7 presents a breakdown of the sensitivity at each of the viewpoints across a range of categories, resulting in an overall aggregate sensitivity value (high, medium, low) for each viewpoint. This classification follows through to the photomontages which are accompanied by commentary and analysis. I note that the planning officer disagrees with these classifications.
- 11.14.20** The significance of the visual impact in each instance is a product of the sensitivity of the receptor and the visual impact magnitude. A summary is given at Table 11.11. I note that the highest visual impacts are a 'Substantial-Moderate impact' on the scenic route to south (DR8) and a 'Moderate' impact at a residential area on high ground above Youghal, Co. Cork (CP4).
- 11.14.21** On the issue of cumulative impact, all photomontages submitted in the EIS are cumulative, showing both the subject proposal and the Woodhouse windfarm. Cumulative ZTVs are included. Notable is the unnumbered map with green, blue and yellow shading which show the additional areas of visibility on foot of the subject proposal. These areas are quite limited. Of course, the magnitude of the impact on currently affected areas would increase. In my opinion, if the proposed development were to be constructed, anyone viewing these turbines would consider them to be a single windfarm rather than two adjacent windfarms.
- 11.14.22** In my opinion, the EIS presents a robust analysis of the proposed development's likely visual impact on the surrounding areas. The turbines would undoubtedly be a significant new feature in the visual environment of the surrounding area. While vegetation and buildings would of course screen the turbines from many viewpoints, any person moving through the surrounding areas would, though intermittent views, be fully aware of the windfarm's existence in the Drumhills. However, in my opinion, the visual impact of the proposed development would not be so injurious as to warrant a refusal of permission in this instance. The receiving landscape is relatively robust, with a good assimilative capacity.
- 11.14.23** **Impact of construction access route and grid connection**
- 11.14.24** The proposed construction access route would involve some road widening and, significantly, a new section of roadway through 3rd party lands at the L2024/L8077 junction to accommodate an acute bend. This is a designated 'scenic route' in the county development plan. There are insufficient details to allow for an informed assessment of this issue.
- 11.14.25** The details of the proposed grid connection are not known. The visual impact of the connection was raised as an issue in the planning officer's report, but the planning authority observations

state that these facilitating works would be acceptable in visual terms as the applicant proposes to underground the grid connection.

11.14.26 Additional material at appeal stage

11.14.27 Significantly, Appendix 2 to the appeal is an entire revision of Chapter 11 of the EIS. It relates to the 9-turbine proposition, but contains some useful information relevant to both layouts. It includes Fig 11.6, which is a useful map of scenic routes, cycling routes, walking routes, and heritage houses.

11.14.28 The revised LVIA includes a significant number of additional viewpoints, particularly in the category of 'Amenity and Heritage Views'. This is on foot of the planning authority's Conservation Officer's report (see Section 4.2.1 above). The new set of photomontages also includes a full set of views showing just the Woodhouse windfarm. New viewpoints are

- AV3-AV8: Villierstown Village, Aglish Village, Cappagh House, Cappelquin house, Tourin House, Headborough House.
- DR11: Knockmealdown Mountains
- DR12: Copper Coast
- LC6: Ballynaparka

11.14.29 Impacts of 9-turbine proposition

11.14.30 The 1st party appeal asserts that the omission of 3 turbines would reduce the intensity and lateral extent of development along the ridge. The turbines omitted were found to be the ones that contributed most to visual clutter by overlapping.

11.14.31 The planning authority response to the appeal notes the proposition to reduce the scheme by 3, but considers that there remains a negative visual and landscape impact.

11.14.32 In my opinion, omitting these 3 turbines would reduce the visual clutter of the scheme as proposed. By way of comparison, the photomontages for the location deemed to represent the most significant visual impact - DR8 on the scenic route to the south – is illustrative of this point.

11.15 EIA – CULTURAL HERITAGE (EIS CHAPTER 12)

11.15.1 Archaeology

11.15.2 Chapter 12 of EIS consists of a report from Kilkenny Archaeology. Figure 12.3 shows heritage sites in the vicinity of the subject site, which are assessed in detail in the accompanying text. Impacts and mitigation are discussed in sections 12.6 and 12.7. No direct

or indirect impacts are envisaged. Archaeological monitoring is proposed due to the possibility of previously unknown sub-surface archaeological materials.

- 11.15.3** The Department of Arts, Heritage, and the Gaeltacht recommend conditions in relation to archaeological monitoring. I do not consider there to be any significant disagreement between the appeal parties in this issue. I consider the applicant's approach to be appropriate. This matter could be addressed by way of condition requiring archaeological monitoring during construction.
- 11.15.4 Visual impacts on heritage**
- 11.15.5** This issue follows on from the issue of visual impact, as discussed in the previous section. All impacts on heritage items derive in the first instance from a visual impact. This issue is cited in the planning authority's refusal reason 1(a).
- 11.15.6** Protected structures and national monuments listed in the development plan are referenced in Section 7.4.4 above.
- 11.15.7** Impacts on demesne lands and country houses feature heavily in 3rd party responses. The Alen-Buckleys' response to 1st party appeal contains information in this regard, including photographs
- 11.15.8** The planning authority's Conservation Officer in their report cites potential impacts on Aglish and Villierstown as well as demesnes, protected structures, and country houses in the vicinity. In the planning authority response to the 1st party appeal, the Conservation Officer criticises the fact that the applicant's focus is on Archaeology, whereas the Conservation Officer's original concerns related to built heritage. The Conservation Officer maintains a critical position on the proposed development's impact on Villierstown and Aglish.
- 11.15.9** Appeal appendix 3 (revised Chapter 12) does in fact include consideration of impacts on demesnes and country houses that had not previously been included in the EIS. This relates to the 9-turbine proposition, but is almost entirely applicable to the 12-turbine proposal.
- 11.15.10** I note in particular Figure 12, which shows the proposed development's viewshed overlain with the National Inventory of Architectural Heritage record, the Record of Protected Structures, the Record of Monuments and Places, and the outline of 7 demesnes – Ballynatray, Strancally, Headborough, Dromana, Tourin, Cappoquin, and Cappagh. Section 3.1 includes a visual impact assessment from Country Houses and demesnes along the river Blackwater, as well as Villierstown and Aglish. This material should be read in conjunction with appeal appendix 2

(revised Chapter 11) includes additional photomontages from viewpoints at country houses.

- 11.15.11** In my opinion, the proposed development's potential impact on heritage items in the viewshed has been adequately assessed and documented in the EIS, as supplemented by the information provided at appeal stage. It is my opinion that while the proposed development would have impacts on the historic villages, demesnes, protected structures, and country houses in the vicinity, that the impact would not be so significant as to warrant a refusal of permission in this instance.

11.16 EIA – ECOLOGY (EIS CHAPTER 13)

11.16.1 Overview

- 11.16.2** Chapter 13 of the EIS consists of an 'Ecological Impact Assessment'. There are 7 appendixes (including the NIS) as set out in Table 3 above.

11.16.3 Habitats on site

- 11.16.4** Habitat survey methodology set out in Section 13.3, with the hydrology of the site is set out in Section 13.4.1.1. Habitats found within the site are discussed in Section 13.4.2.2, and mapped in the final (unnumbered) map in Appendix 13.3.

- 11.16.5** There is no rare or protected flora expected, nor found on the site. Wet willow-alder ash woodland and eroding upland rivers are identified as ecological receptors in Table 13-19, with the remainder being effectively 'screened out'.

11.16.6 Impacts on habitats

- 11.16.7** The main impacts identified in the EIS relate to habitat loss (mainly existing conifer plantation due to permanent clear-felling around turbines), disturbance to fauna during construction phase of the development, risk of collision for the local bat population, and the polluting of waterways.

- 11.16.8** 0.65ha of the Wet willow-alder-ash woodland habitat to the south of turbine T5 would be clear felled. This would have impacts on bat habitat.

- 11.16.9** Without protective construction methodologies, There is some potential for limited indirect impacts on habitats by means of adverse water quality impacts on the adjacent streams. These are identified in detail in EIS Section 13.6.2.2 and relate to suspended solids, nutrients, and hydrocarbons entering the surface water systems.

- 11.16.10** Residual impacts on the two identified ‘ecological receptor’ habitats are set out in Table 13-30. None are envisaged.
- 11.16.11 Non-avian fauna on the site and surroundings**
- 11.16.12** The EIS draws on a number of resources for desktop studies in the first instance. Surveys show evidence of badger and fallow deer on site. There may be otter.
- 11.16.13** Otter, Red Squirrel, Irish Hare, Stoat, Pine Marten, Brown long-eared bat, Natterer’s bat, Daubenton’s bat, Common and Soprano pipistrelle, Leisler’s bat and Badger are identified as ecological receptors in Table 13-20, with the remainder being effectively ‘screened out’.
- 11.16.14** Table 13-10 documents bat roots within 10km. Table 13-13 is a summary of bat species monitored on site with audio equipment.
- 11.16.15** Observers assert that there are a number of additional species of fauna present in the area.
- 11.16.16 Impacts on Non-avian fauna**
- 11.16.17** Just a slight impact on non-avian fauna is predicted for the construction phase, as summarised in Table 13-23. The significance of these impacts are summarised in Table 13-24. In all instances, the EIS considers that it is unlikely that there would be a significant negative impact on the species.
- 11.16.18** During the operational phase, there would be no significant impacts to the land-based non-avian fauna, but the rotating blades present a potential collision hazard to local bat species. The EIS states that bats rarely fly at heights that intersect with the blades. Data from European wide studies of wind turbine related mortality includes high number of pipistrelle species. Of the 10 bat species in Ireland, all apart from one – Leisler’s bat – are normally low fliers that forage and commute at heights of less than 10m. Leisler’s bat have been recorded on the subject site. Section 13.6.3.3 contains a risk analysis individual bat species.
- 11.16.19** Operational phase impacts and their significance are summarised in table 13-27 and 13-28. In all instances, the EIS considers that it is unlikely that there would be significant negative impacts on the species.
- 11.16.20** Residual impacts on the identified ‘ecological receptor’ species are set out in Table 13-31. None are envisaged.
- 11.16.21** The planning authority’s Heritage Officer’s report (see Section 4.2.5 above) identifies Leisler’s bats as the species at highest risk of impact and recommends moving the location of T5 to avoid having to clear-fell the adjacent wet woodland. This

recommendation is incorporated in the 9-turbine proposition contained in the first party appeal.

11.16.22 Birds on the site and surroundings

11.16.23 Table 13-15 shows that in surveys there was one red-listed species surveyed, and seven amber listed species in the winter surveys, and three red listed and nine amber listed species surveyed in the summer surveys. The red listed species were Curlew, Meadow Pipit, and Woodcock.

11.16.24 There were no hen harrier sightings within the site. Other raptor sightings are documented. I note that the observers contest these findings.

11.16.25 Impacts on birds

11.16.26 Constriction-stage impacts summarised in Table 13-23. The significance of these impacts are summarised in Table 13-24. In all instances, the EIS considers that it is unlikely that there would be a significant negative impact on the species.

11.16.27 Operational phase impacts and their significance are summarised in table 13-27 and 13-28. In all instances, the EIS considers that it is unlikely that there would be significant negative impacts on the species.

11.16.28 The EIS asserts that the site is not used by raptors, and that the sighting of a Curlew was incidental.

11.16.29 Appendix 13.6 consists of a separate Ornithology Impact assessment. There are three sub-appendices attached showing Transect and Vantage point locations, flight path maps, and NPWS Hen Harrier Survey Methodology. Appendix 13.6 backs up the information given in the main EIS chapter, and reflects its findings.

11.16.30 Water Quality and aquatic ecology

11.16.31 Section 13.4.5, as supplemented by Appendix 13.4 covers water quality with both desktop surveys and field surveys. Figure 1 of appendix 13.4 shows that the development straddles 4 river subcatchments, not surprising for an upland area. The rivers are Finisk, Ballynaparka, Goish, and Kilmurry. The former 3 flow to the Blackwater, whereas the latter flows to the sea at Dungarvan.

11.16.32 Proposed mitigation by design

11.16.33 A summary of mitigation measures is set out in Section 13.8 of the EIS. I consider these measures to be 'mitigation by design' inherent to the proposal. Some of the main points of note are as follows

- A comprehensive Sediment and Erosion/Storm Water Control Plan has been developed.
- A fulltime Environmental Manager would be employed to implement the fuel management plan, control the wheel wash, etc.
- Post-construction monitoring.
- The avoidance of white lights on turbines, which would attract insects, and consequently bats.
- No residual impacts are expected.

11.16.34 An additional ‘mitigation by design’ measure proposed at appeal stage by the applicant is the omission of T5 to address concerns regarding loss of habitat and impacts on bats.

11.16.35 Ecological Appraisal of the Construction Traffic Haul Route

11.16.36 Appendix 6 of the appeal submission covers this topic, detailing the proposed road widening and road strengthening works, and their impacts in ecological terms. No significant adverse impacts to any identified ecological receptor are expected.

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

11.17.1 Geotechnical context and surveys

11.17.2 Chapter 14 sets out the geological context of the site. Thirteen trial pits were excavated throughout the site. These are detailed in the ‘trial pit logs and photographs’ at Appendix C of this chapter. Each trial pit corresponds to a turbine location, the substation, or one of the two borrow pits.

11.17.3 Geotechnical Impacts

11.17.4 Table 14.2 gives the quantities of topsoil, subsoil, and rock to be excavated in the case of the 12 turbines, the substation, and road works. In total, 10,244m³ of topsoil, 21,699m³ of subsoil, and 2,597m³ of rock would need to be excavated. Borrow pits are proposed, and are shown on all drawings.

11.17.5 Aside from the above definite permanent and temporary impacts, there are potential risks arising from fugitive material and hydrocarbons.

11.17.6 Slope stability

11.17.7 Issues of slope stability with windfarms arise largely in locations where there is peat. Section 14.3.4 of the EIS states that no peat deposits were encountered on site visits or during round investigations. This runs somewhat contrary to the townland’s

name of Knocknamona, which presumably means 'hill of the bog', but is nonetheless consistent with the pictures of the trial pits and associated survey records.

- 11.17.8** Slope measurements at each of the proposed turbine locations and the substation are given in Table 4.1. They range from 1.66^o to 5.71^o. Were these slopes found in areas of peat, this would be a cause for concern, as most bog slippages occur on slopes between 1^o and 3^o
- 11.17.9** Section 14.3.9 states that there is a negligible risk of slippage or landslides because of stable sub-surface ground conditions.
- 11.17.10 Hydrological and hydrogeological context and surveys**
- 11.17.11** Catchments and rivers/streams in the vicinity of the site are set out in Table 1 of Chapter 15, and are mapped in Figure 1 of Chapter 15.
- 11.17.12** Water quality was measured at sampling points on a number of the adjoining streams. Results for the physiochemical and biological water quality are presented. Water quality was deemed to be 'good to high status', and all sample points are currently meeting the objectives of the water framework directive.
- 11.17.13** The extent of relevant groundwater bodies are discussed in section 15.2.3.1 of the EIS. The aquifer is locally important. Groundwater vulnerability is mostly 'high', with significant areas of 'extreme' where there is outcrop and rock close to the surface. There is a small area of 'low' vulnerability to the south.
- 11.17.14 Hydrological and hydrogeological impacts**
- 11.17.15** As with the section on geotechnical impacts, potential impacts under this section are largely due to suspended solids, nutrients, and hydrocarbons escaping during the construction phase.
- 11.17.16** Appendix 15.2 consists of a separate 'Groundwater Risk Assessment and Impact Assessment'. In addition to other issues covered in the main body of the EIS, it looks at potential impacts on the Aghlish Water Supply Scheme, which has an abstraction point in the townland of Curraheen, just 1.2km to the west of T12. The scheme's proximity to dwellings is also examined, but the report concludes that only two dwellings with potential wells are located down-gradient of the proposed development area, and no impacts on these are anticipated. This appendix concludes that the proposed development would not significantly impact on the hydrogeological baseline conditions of the area.
- 11.17.17** Observers assert that the proposed development could have negative impacts on water quality in the area and on shellfish

fisheries in Dungarvan Bay. On the basis of the information available, I consider that the magnitude and likelihood of such an impact is infinitesimal.

11.17.18 Geotechnical, hydrological, hydrogeological Mitigation measures

11.17.19 Mitigation measures are outlined in Section 14.5 and 15.4. These measures focus largely on construction management. I consider them to be 'mitigation by design'.

11.17.20 Appendix 15.1 consists of a Sediment and Erosion/Storm Water Control Plan. This details a system of interceptor drains, settlement ponds, and dispersion zones around the construction areas. Clean water up-slope of works areas is to be intercepted so it does not mix with dirty water down-slope. Figure 1 of the appendix outlines this system.

11.17.21 Further detail of elements of the works are set out in this appendix, along with how these elements would interact with flow of water through and from the site.

11.17.22 No residual impacts are envisaged.

11.17.23 The planning authority's heritage officer notes the mitigation measures and considers that these will be sufficient to protect the Kilmurry and Goish rivers.

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

11.18.1 In my opinion, the main interactions of the foregoing topics can be highlighted as follows

	Alternatives Considered	Construction and Employment, Material Assets	Air and Climate	Socio-Economic Impact	Residential Amenity – Noise	Residential Amenity – Shadow Flicker	Landscape and Visual	Cultural Heritage	Ecology	Geotechnical issues, Hydrology and Hydrogeology
Alternatives Considered	X									
Construction and Employment, Material Assets		X								
Air and Climate			X							
Socio-Economic Impact				X						
Residential Amenity – Noise					X					
Residential Amenity – Shadow Flicker						X				
Landscape and Visual							X			
Cultural Heritage								X		
Ecology									X	
Geotechnical issues, Hydrology and Hydrogeology										X

Table 8

- 11.18.2 However, in my opinion, these interactions have been addressed as they arose in the course of previous sections of this report.

12.0 Screening for Appropriate Assessment under the Habitats Directive (NIS – EIS Appendix 13.7)

- 12.1 The applicant submitted a Natura Information Statement by way of Appendix 13.7 of their EIS and a revised NIS by way of Appendix 8 of their appeal submission. The revised NIS relates to the 9-turbine proposal. I will draw on these documents, where relevant, in this section.
- 12.2 The plan is not directly connected with or necessary to the management of a Natura 2000 site.
- 12.3 The proposed development is for a 12-turbine windfarm in west Waterford as described in detail in sections 2.0 and 3.0 above.
- 12.4 Species, habitats, surface drainage patterns, etc. are all described in full in Chapters 13, 14, and 15 of the EIS and in the Natura Impact Statement (NIS)
- 12.5 In order to screen for appropriate assessment, I will undertake 6 steps, as follows
- 12.6 STEP 1: IDENTIFY EUROPEAN SITES WHICH COULD POTENTIALLY BE AFFECTED (TABLE 1), CONSIDER SOURCE-PATHWAY-RECEPTOR**
- 12.6.1 The NIS considers 13 sites in the first instance (Table 8 of the NIS).
- 12.6.2 The planning officer considers 10 sites, which are summarised in Table 2 above. I have added to and augmented the information provided by the planning officer, where relevant.
- 12.6.3 There is a hydrological connection between the subject site and the Natura 2000 sites associated with Dungarvan Harbour and the Blackwater River/Estuary. All other sites can be excluded given that there is no logical pathway between the subject proposal and the other sites. As such, I propose only to consider 3 European Sites, as per Section 12.7 below.
- 12.6.4 I note that the applicant's assessment in the NIS was more extensive in the sites considered. However, I also note the planning authority's heritage officer's report, which also holds with the position that the site is only hydrologically connect with the Blackwater and Dungarvan sites.

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

12.7.1 Table 9 of the NIS sets out the ‘features of interest’ [or ‘qualifying interests’] for each of the 13 Natura 2000 sites. I note that the ‘site specific’ conservation objectives are referred to in the NIS, but not included. I note that the review of the NIS submitted in the appeal from the Alen-Buckleys cites the lack of specific conservation objectives. I have used the best available information in this section.

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

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

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

12.7.4 The species of qualifying interests are

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

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

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

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

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

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

12.7.8 The species of qualifying interests are

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

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

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

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

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

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

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

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

Table 9

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

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

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

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

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

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

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

Table 10

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

12.8.1 Section 5.5 of the NIS assessed potential impacts from the proposed development in the first instance. I would concur with this assessment. In summary, the impacts relate to the following, with reference to the relevant Natura 2000 sites’ conservation objectives.

- Construction: Run-off of silt, fuels/oils, construction materials to watercourses.

- Operational: Bird/bat collision with turbines.

12.8.2 Section 5.6 of the NIS goes on to assess the significance of these potential impacts with reference to Natura 2000 sites. With reference to this information, I would identify the significance of the potential risks as follows.

	Potential significant impact	Potential receptor
Dungarvan Harbour SPA	Run-off	The Kilmurry Stream skirts the north-eastern boundary of the subject site and drains to Dungarvan harbour.
	Turbine collision	Designated species' flight paths could cross the proposed development.
Blackwater Estuary SPA	Run-off	The subject site drains to the Goish River catchment.
	Turbine collision	Designated species' flight paths could cross the proposed development.
Blackwater River SAC	Run-off	The subject site drains to the Goish River catchment.

Table 11

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

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

12.9 STEP 4: AS ABOVE, CONSIDERING IN-COMBINATION EFFECTS.

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

12.10 STEP 5: EVALUATE POTENTIAL EFFECTS ABOVE

- 12.10.1 Using the source-pathway-receptor model, I do not consider, on the basis of the information submitted, that the proposed development would be likely to impact on the qualifying interests of the Natura 2000 sites in question through the potential mechanisms outlined above.
- 12.10.2 The design of the drainage systems on site, which I consider to be an integral part of the project itself, would be sufficient to prevent run-off of pollutants to the surrounding watercourses, which connect to Natura 2000 sites.
- 12.10.3 It is worth highlighting at this juncture that the proposed development is not upstream of any of the designated catchments for Freshwater Pearl Mussels within the River Blackwater SAC.
- 12.10.4 On the basis of survey information on file relating to bird species present on site, and their patterns of behaviour, there would be no risk to species identified as 'qualifying interests' for any of the relevant Natura 2000 sites.

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

- 12.11.1 In my opinion, likely significant effects, either individually or in combination with other plans or projects, on the European sites, can be reasonably ruled out on the basis of objective scientific information. The proposed development is not likely to have significant effects on any European Site in light of its conservation objectives.
- 12.11.2 As such, I will not proceed to 'Stage 2' appropriate assessment. I note that the applicant in their NIS did proceed to 'Stage 2' assessment. I would attribute this divergence in approaches to a judgement call on whether the construction methodology proposed forms an integral part of the proposal (my assessment) or mitigation measures (the applicant's approach). I also note that the planning authority proceeded to Stage 2 assessment, and concluded that the proposed development would not adversely affect the integrity of European sites, in light of their conservation objectives.

12.12 AA/SEA OF PLANS AND PROJECTS

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

13.0 CONCLUSION AND RECOMMENDATION

- 13.1** I will structure my conclusions based on the layout used in Sections 11.0 and 12.0 above

13.2 PRINCIPLE OF DEVELOPMENT AND POLICY CONTEXT

- 13.2.1** I have assessed the proposed development in the first instance on the basis of the original 12-turbine proposal, and not the 9-turbine scheme presented as a proposition to the board in the first party appeal. I have however focussed my assessment towards the question of whether the omission of 3 turbines would address any difficulties arising in the course of my assessment. If the board is minded to grant permission, it may be appropriate to require the omission of these 3 turbines by way of condition.
- 13.2.2** The broad national and county-level policy context is supportive of the proposed development in general terms. The subject site lies within the most viable portion (in terms of separation distances to dwellings) of the tip tier of the county's Wind Energy Strategy (WES).
- 13.2.3** The planning authority consider there to be a conflict between the WES and the 'de facto' agricultural zoning of the site, consider that the agricultural zoning takes precedence, and that it does not allow for the subject proposal in this instance. I do not hold with this interpretation, and consider that it is appropriate to give significant weight to the WES on the issue of policy.
- 13.2.4** As per Table 4 above, the WES is effectively conditional on a project's performance across a number of tests. I will now return to these tests based on the intervening assessment in my report

Test		Performance
1	400m buffer	Complies. Nearest dwelling is 687m
2	Impact on Airport	Complies. Irish Aviation Authority have no objections subject to conditions.
3	DoE guidelines	Complies. Scheme assessed against guidelines throughout the assessment above.
4	Appropriate Assessment	Complies. Screened out. See previous section.
5	Visual impacts outside the county	Complies. One view of significance from Youghal. See section 11.14.20 above.

Table 12

13.2.5 In conclusion, the proposed development is acceptable in terms of the principle of development and policy context.

13.3 LEGAL AND PROCEDURAL MATTERS

13.3.1 The proposal from the applicant does not include sufficient details regarding grid connection such that would allow a comprehensive EIA of the overall project. Under the principles set out in the recent O’Grianna judgment, the EIS is therefore deficient.

13.3.2 The board is precluded from granting permission in this instance for this reason. See Section 13.17 below for my recommendations on this matter.

13.4 EIS – COMPLIANCE WITH PLANNING AND DEVELOPMENT REGULATIONS 2001

13.4.1 Aside from the issue of grid connection, the EIS is compliant with statutory requirements.

13.5 EIA – ALTERNATIVES CONSIDERED (EIS CHAPTER 4)

13.5.1 Alternative layouts and turbines are considered in the EIS. I do not consider it appropriate or necessary to exhaustively consider other sites, or indeed other developments on this site.

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

- 13.6.1 The proposed haulage route seems quite wasteful and inefficient given that there is an existing route that has been used to deliver turbine components immediately adjacent to the site.
- 13.6.2 The applicant has not displayed that they have sufficient consents to undertake the roadworks necessary to implement the proposed development. However, I do not propose that this matter be pursued. If the applicant cannot secure the necessary permissions to enable construction access, the development cannot be implemented.

13.7 EIA – AIR AND CLIMATE (EIS CHAPTER 8)

- 13.7.1 The proposed development is acceptable in this regard.

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

- 13.8.1 The proposed development is acceptable in this regard. The turbines would have a visual impact on tourism resources in the vicinity, but the magnitude of that impact would not warrant a refusal of permission, in my opinion.

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

- 13.9.1 The proposed development would result in exceedances of the noise limits set out in the DoE guidelines. While these guidelines are not mandatory, I consider them an appropriate indicator of a scheme's potential impacts on residential amenities. I consider that permission should be refused for this reason.
- 13.9.2 The omission of 3 turbines - as per the applicant's proposition in their first party appeal – would reduce the noise impacts, but the exceedance of the DoE standards would not reduce significantly.

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

- 13.10.1 The proposed development would appear to be compliant with DoE standards on the issue of Shadow Flicker.

13.11 EIA – LANDSCAPE AND VISUAL (EIS CHAPTER 11)

- 13.11.1 The information presented by the applicant on this issue is, in my opinion, robust and objective. Notwithstanding the existence of the adjacent Woodhouse windfarm, the proposed development would be a significant addition to the area in visual terms. However, in the context of the scheme's performance against the recommendations of the DoE guidelines, I consider that the proposed development would not be unacceptable in this regard.

- 13.11.2 I note that the omission of 3 turbines, as per the applicant's proposition in their first party appeal, would improve the scheme's performance in visual terms due to the lack of clutter and visual 'stacking' of turbines.

13.12 EIA – CULTURAL HERITAGE (EIS CHAPTER 12)

- 13.12.1 The proposed development would have impact on heritage items in the wider area by virtue of its visual impact. However, as per my assessment in relation to the wider issue of visual impact, I do not consider that the magnitude of these impacts would warrant a refusal of permission in this instance.

13.13 EIA – ECOLOGY (EIS CHAPTER 13)

- 13.13.1 There is a range of habitats and species on site commensurate with its character as an area of upland commercial forestry.
- 13.13.2 The construction phase would generate a range of potential threats, but these are adequately protected against by virtue of the mitigation designed into the construction phase.
- 13.13.3 I note that the potential impacts on habitat of significance in the vicinity of turbine T5 (due to required clearfelling), along with consequent impacts on bats, would be avoided under the 9-turbine proposition.

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

- 13.14.1 There is no risk of slope failure evident. Surrounding surface water and groundwater systems are well documented and assessed in the EIS. The construction methodology would be sufficient to protect the surface water and groundwater systems.

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

- 13.15.1 Interactions between EIA issues are covered in the course of the main body of the EIA.

13.16 SCREENING FOR APPROPRIATE ASSESSMENT UNDER THE HABITATS DIRECTIVE (NIS – EIS APPENDIX 13.7)

- 13.16.1 There is a pathway from the site to 3 Natura 2000 sites. However, the proposed development is not likely to have significant effects on these European sites in light of their conservation objectives. As such, I have 'screened out' the proposed development, and have not proceeded to Stage 2 Appropriate Assessment.

13.16.2 It should be noted that my approach in this regard differs from that of the applicant and the planning authority, who proceeded to Stage 2.

13.17 RECOMMENDATION

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

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

13.17.3 As for the options open to the board on this issue, I do not consider that a refusal of permission is appropriate. Section 111(2) of the Planning and Development Regulations (as amended) states that

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

13.17.4 I would construe this section as not just an option, but an obligation on the board. If permission is not being refused for any other reason, I consider that it would be appropriate to revert to the applicant by way of further information on this issue.

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

14.0 REASONS AND CONSIDERATIONS

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

G. Ryan
Planning Inspector
10th April 2015