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An Bord Pleanála,
Referrals Section,
64, Marlborough Street,
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17th November, 2023.

Our Ref: D/37/23

AN BORD PLEANÁLA	
LDG-	<u>068171-23</u>
ABP-	
20 NOV 2023	
Fee: € <u>110</u>	Type: <u>CHQ</u>
Time: _____	By: <u>[Signature]</u>

RE/ Application for Referral under Section 5 of the Planning & Development Act, 2000 (as amended) in regard to the replacement of nacelle components on 2 No. wind turbines at Kilvinane Windfarm, Dunmanway, Co. Cork.

Dear Sir/Madam,

I hereby refer the enclosed Application for Declaration under Section 5 of the Planning & Development Act, 2000 as amended to An Bord Pleanála and request the board to determine whether or not the replacement of nacelle components on 2 No. wind turbines at Kilvinane Windfarm, Dunmanway, Co. Cork is or is not development and is or is not exempted development.

I enclose copy report from the Senior Planner, together with €110 fee.

Yours faithfully,

Anne Lorde

pp **KEVIN O'REGAN**
SENIOR EXECUTIVE OFFICER



NAME OF APPLICANT: Cork Sustainable Energy Limited

ADDRESS OF DEVELOPMENT: Dunmanway

DEVELOPMENT: Proposed Application under section 5 of the Planning and Development Act 2000 as amended, for the replacement of nacelle on two Gamesa G80 2 MW turbines with 2 newly refurbished vesta V80 2MW nacelle on two number wind turbines (T3 & T4) at existing wind farm development at Kilvinane wind farm granted permission under a substitute consent application 04.SU.0135.

APPLICATION TYPE:- D37-23 Section 5 - Exempted Development

The applicants are seeking a declaration from the planning authority as to whether the replacement of nacelle on two Gamesa G80 2 MW turbines with 2 newly refurbished vesta V80 2MW nacelle on two number wind turbines (T3 & T4) at the existing Kilvinane Wind Farm granted Substitute Consent under 04.SU.0135 is or is not development or is or is not exempted development within the meaning of the Planning and Development Act, 2000 as amended. The applicants consider the proposal to be exempted development.

I note the reports, including the report of the Area Planner, dated 26/10/23, and concur with the recommendation that the proposed works constitute development and is not exempted development.

However, as a question has arisen as to whether the proposal is or is not development or is or is not exempted development within the meaning of the Planning and Development Act, 2000 as amended, and having regard to the differing of opinion between the applicants and the Planning Authority, I concur with the recommendation of the Area Planner that the question be referred to An Bord Pleanála under s.5(4).

G.O'Mahony
Senior Planner
26/10/23

Planning Department West Cork
Norton House
Cork Road
Gortnacloghy,
Skibbereen
P81 AT28
Co. Cork

29 September 2023

REG. No. _____
PLANNING (WEST) DEPT

29 SEP 2023

CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P81 AT28

Re: Application under Section 5(1) of the Planning and Development Act 2000 (as amended) regarding the replacement of nacelle components on 2 no wind turbines at Kilvinane Windfarm, Dunmanway, Co. Cork.

Dear Sir/ Madam,

McCutcheon Halley Chartered Planning Consultants act on behalf of our client, Cork Sustainable Energy Limited who are the owners of Kilvinane Windfarm, Dunmanway, Co. Cork and submit on their behalf this request for a Declaration under Section 5 of the Planning and Development Act, 2000 (as amended).

This declaration is sought in relation to 2 no turbines of Kilvinane Windfarm and seeks confirmation that:

"This application for a Section 5 Declaration of Exemption Relates to 2 No. existing 2 MW Wind Turbines with a Hub height of 60m and a Rotor Diameter of 80m on the subject windfarm permitted under An Bord Pleanála Substitute Consent Permission Ref. 04.SU.0135, and seeks to clarify whether the proposed substitution of refurbished equivalent 2 MW Nacelles with corresponding external dimensions and operational characteristics (No Change to hub height, blade tip height or power output), is or is not development under the meaning of Section 5 (1) of the Planning and Development Act 2000 (as amended)."

Please find enclosed an application informing the request of a Declaration under Section 5(1) of the Planning and Development Act 2000, as amended, for consideration by Cork County Council, accompanied by the following:

- i. Appropriate fee of €80.00
- ii. 4 no. copies of the completed Section 5 application form (including contact information)
- iii. 4 no. copies of the Planning Statement

- iv. 4 no. copies of the Method Statement - Kilvinane Maintenance Works
- v. 4 no. copies of the Appropriate Assessment Screening
- vi. 4 no. copies of the Ecological Report
- vii. 4 no. copies of the Site location Maps
- viii. 4 no. copies of the Site Layout Plans
- ix. 4 no. copies of the Wind Turbine Elevation Drawing
- x. 4 no. copies of the Gamesa G80 Brochure
- xi. 4 no. copies of the Vesta V80 Brochure

Thank you for taking the time to consider this request, we look forward to a decision on this section 5 referral in due course. Should you require any additional information please do not hesitate to contact the undersigned.

Yours sincerely



Martina Keenan Rivero

McCutcheon Halley Chartered Planning Consultants

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SHIBBEREEN, Co. CORK P81 AT28

Section 5 Declaration Request

In respect of Non-Material Alterations to the Permitted
Kilvinane Wind Farm, Dunmanway, Co. Cork

on behalf of Cork Sustainable Energy Limited

September 2023



McCutcheon Halley
CHARTERED PLANNING CONSULTANTS

REG. No. _____
PLANNING (WEST) DEPT

29 SEP 2023

CORK COUNTY COUNCIL
NORTON HOUSE, BRISBEREEEN, Co. CORK P81 AT28

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Contents

1. Introduction	3
2. Planning History	4
2.1 Substitute Consent (ABP 04.SU.0135)	4
2.2 Section 5 Declaration (Ref D/22/22)	4
3. Overview of Non-Material Alterations	6
4. Planning Assessment	8
4.1 Category of Exempted Development	8
4.2 Materiality of Change	9
4.3 Response to Previous S.5 Decision (D/22/22)	13
5. Environmental Assessments	15
5.1 Appropriate Assessment	15
5.2 Environmental Impact Assessment	16
6. Conclusion	17

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P81 AT26

1. Introduction

McCutcheon Halley Chartered Planning Consultants act on behalf of the Applicant, Cork Sustainable Energy Limited and submit this request for a Declaration under Section 5 of the Planning and Development Act, 2000 (as amended).

This declaration is sought in relation to proposed works at Kilvinane Windfarm, located at Garranure, Kilvinane and Carrigeen, Ballynacarriga, Dunmanway, Co. Cork (refer to the site outlined in red on the enclosed site location map).

Confirmation is sought that replacement of the nacelle components on two existing wind turbines (T3 and T4) previously permitted by way of substitute consent under ABP Ref. 04.SU.0135 fall within the category of exempted development as set out under section 4(1)(h) of the Planning and Development Act 2000 (as amended) which states:

"Development consisting of the carrying out of works for the maintenance, improvement or other alteration of any structure, being works which affect only the interior of the structure or which do not materially affect the external appearance of the structure so as to render the appearance inconsistent with the character of the structure or of neighbouring structures;"

This report is accompanied by 4 copies of the following documents:

- Appropriate fee of €80.00
- Completed Section 5 application form (including contact information)
- Method Statement - Kilvinane Maintenance Works
- Appropriate Assessment Screening
- Ecological Report
- Site location Map
- Site Layout Plan
- Wind Turbine Elevation Drawing
- Gamesa G80 brochure
- Vesta V80 brochure

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, CO. CORK R94 AT28

2. Planning History

2.1 Substitute Consent (ABP 04.SU.0135).

On 2nd March 2017 An Bord Pleanála granted permission by way of Substitute Consent under ABP Ref. SU.04.SU013 for three wind turbines at the subject site, Kilvinane Windfarm. The development subject of the Substitute Consent Application comprises the following:

"3 no. Wind Turbines, a 20 KV substation and all ancillary access tracks, drainage works and site developments works. The turbines include a Gamesa G58 850 kW wind turbine with a hub height of 55 metres, a rotor diameter of 58 metres and a maximum turbine blade tip height of 84 metres and 2 no. Gamesa G80 2 MW turbines with hub heights of 60 metres, rotor diameters of 80 metres and maximum turbine blade tip heights of 100 metres."

The grant of permission included 8 conditions including Condition No. 1 which states:

"This grant of substitute consent shall be in accordance with the plans and particulars submitted to An Bord Pleanála with the application, as amended by further information received by An Bord Pleanála on the 2nd day of August, 2016 and the 23rd day of August, 2016, except as may otherwise be required in order to comply with the following conditions[...]"

A copy of the of the 'as permitted' plans for turbines T3 and T4 which are the subject of this request are enclosed with this application.

2.2 Section 5 Declaration (Ref D/22/22)

In August 2022, the Applicant sought a Section 5 Declaration from Cork County Council (Ref. D/22/22) for proposed works, including the replacement of the existing nacelle and blades on two of the existing turbines (T3 and T4) at Kilvinane Windfarm with two newly refurbished Vesta V80 2MW nacelles and blades.

The two Vestas V80 2MW would have the exact same dimensions and operating parameters as the two Gamesa G80 2MW nacelles and blades installed on the Kilvinane Windfarm development which they would replace. The existing turbine towers and foundations would be retained. No works were proposed to the Gamesa G58 850kW turbine on the site (T1) which would be retained.

The scope of the works proposed was set out as follows:

- Minor remedial works to the existing crane hardstanding areas adjacent to the 2 No. existing Gamesa G80 2MW turbines on the site to facilitate the set up and operation of the large mobile crane required to dismantle the existing rotor/blades and nacelle and install the replacement units;
- Minor earthworks in the vicinity of the existing reinforced concrete turbine foundations to the 2 No. existing Gamesa G80 2MW turbines on the site to expose and facilitate an inspection of the integrity of the

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-

-

3. Overview of Non-Material Alterations

The scope of works which are subject of this request under Section 5 are now significantly scaled back compared with the previous Section 5 application (D/22/22). The proposed works are confined to replacement of the existing nacelle components on the two Gamesa G80 2MW turbines (T3 and T4) with two newly refurbished Vesta V80 2MW nacelles.

The nacelle is found at the top of the turbine tower and accommodates the mechanical and electrical control unit, which generates electricity from the moving blades. The cover contains parts of the turbine such as the gearbox, gears, generator cooler, etc, see Figure 1.

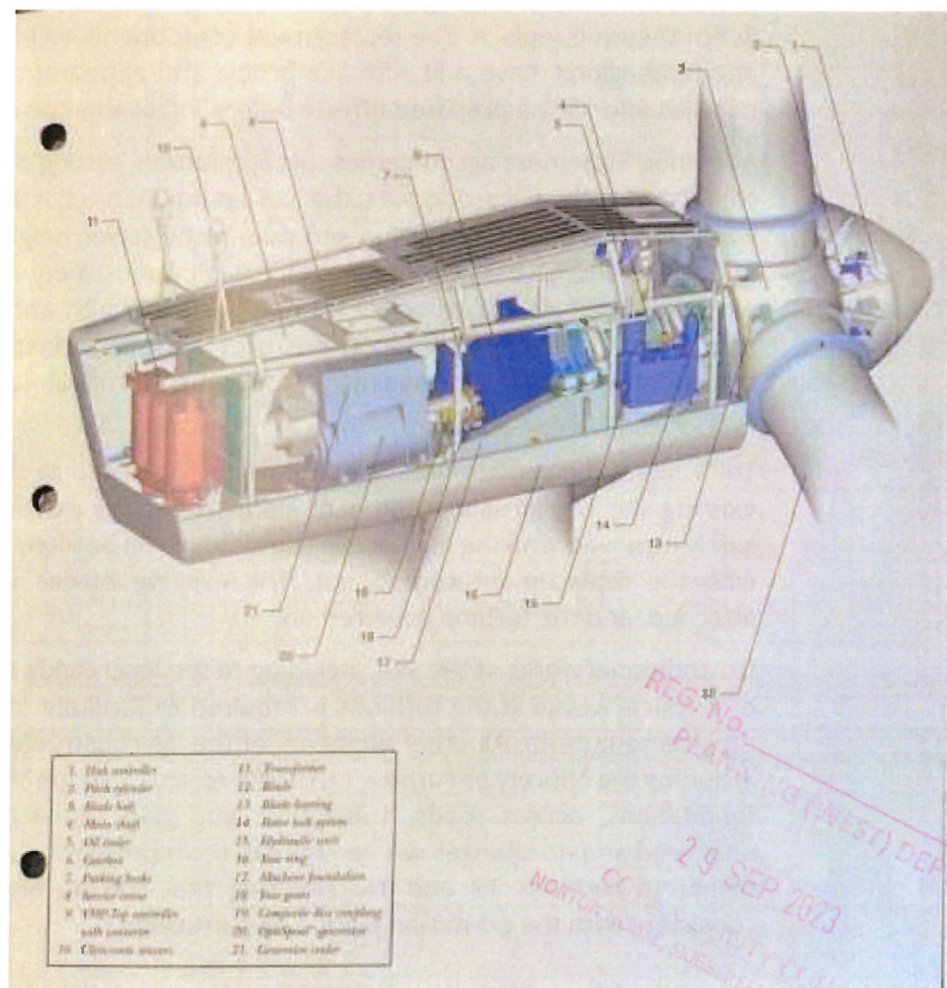


Figure 1 Illustration of a Wind Turbine Nacelle

The existing nacelles in T3 and T4 require replacement as they have become unreliable due to long term operation. The purpose of the proposed works is therefore to facilitate the continued safe and efficient performance of the nacelle components in wind turbine T3 and T4.

It is not uncommon during the life-time of a wind farm that such components may require maintenance or replacement to ensure continued operations. Indeed, this is typical for any mechanical installation as component parts become worn, damaged or approach end of life.

However, the Gamesa G80 2MW wind turbines are no longer supported by the turbine manufacturer and this has presented significant difficulties for windfarm owners and operators, including Kilvinane Windfarm, in sourcing replacement parts required to secure the ongoing operation of these turbines as part of normal maintenance operations on windfarms on which they are installed.

For this reason, Cork Sustainable Energy Ltd intend to replace the existing nacelle on the two Gamesa G80 2MW turbines with two newly refurbished Vesta V80 2MW nacelles. The two Vestas V80 2MW will have the exact same dimensions and operating parameters as the Gamesa G80 2MW nacelles which they will replace. The replacement components will be of equal scale and dimensions, have a like-for-like profile and appearance as the current nacelles and will be prepared off-site before installation on site.

A Method Statement accompanies this application, setting out the manner in which the works are proposed to be carried out. In brief, it identifies that the works cannot be undertaken in-situ due to the tower heights of T3 and T4 and space and access requirements for health and safety reasons. Thus, in order to minimise the work period and reduce health and safety risks for specialists and the environment, it is best practice to install a like for like refurbished nacelle immediately following removal of the existing component.

To facilitate the replacement, a crane will be delivered to the site using the existing site infrastructure and hard stand areas. The existing blades will be safely removed, and the old nacelle component will be lifted off and replaced with the replacement component. The existing blades will then be re-attached, and the turbine powered on.

No additional works at the site, including to the local roads or other external or physical works at the turbines is required to facilitate installation of the replacement parts. All other elements of the 'as constructed' development, including the entirety of Turbine T1, the tower and rotor on T3 and T4, turbine foundations, access roads, substation, and grid connection will remain unaltered and no changes will be made to the hub height, blade length or tip height of turbines T3 and T4, ensuring that the development remains consistent with the permitted plans and particulars.

and no changes will be made to the hub
turbines T3 and T4, ensuring that the
with the permitted plans and particulars.

4. Planning Assessment

4.1 Category of Exempted Development

In order to determine the proposed works are exempted development, the planning authority must first decide that the works are indeed 'development', as per section 5(1) of the Planning and Development Act 2000, as amended ('the Act'):

"If any question arises as to what, in any particular case, is or is not development or is or is not exempted development within the meaning of this Act, any person may, on payment of the prescribed fee, request in writing from the relevant planning authority a declaration on that question, and that person shall provide to the planning authority any information necessary to enable the authority to make its decision on the matter." (emp. added)

Section 3(1) of the Act defines "Development" as, "except where the context otherwise requires, **the carrying out of any works** on, in, over or under land or the making of any material change in the use of any structures or other land". (emp. added)

Section 2(1) of the Act defines "works" as "any act or operation of construction, excavation, demolition, extension, **alteration**, repair or renewal and, in relation to a protected structure, includes any act or operation involving the application or removal of plaster, paint, wallpaper, tiles or other material to or from the surfaces of the interior or exterior of a structure".

"alteration" includes—

- (a) plastering or painting or the removal of plaster or stucco, or
- (b) the **replacement** of a door, window or roof,

that materially alters the external appearance of a structure so as to render the appearance inconsistent with the character of the structure or neighbouring structures;

The term 'alteration' is not expressly defined in the Act or Regulations and it is therefore considered appropriate to rely upon the ordinary meaning¹ a reasonable person would assign to the word. In this respect, the Cambridge Dictionary defines 'alteration' as "a change, usually a slight change, in the appearance, character, or structure of something". Further, as per section 2(1) of Act, the term alteration may also include replacement works in the manner described above and so for this reason too, it is considered appropriate to categorise the proposed replacement of nacelle components as an 'alteration' to the existing wind turbines.

¹ [2017] 2 I.R. 658: The meaning of the term 'alteration' was considered in *Cronin (Readymix). v An Bord Pleanála & Ors*, where it was held by O'Malley J. that given the different ways in which it is used, the word is best taken as simply bearing its ordinary meaning of "change".

turbines T3 and T4 only. Works previously proposed under D/22/22 comprising remedial works to hardstanding areas, minor earthworks in the vicinity of the existing foundations and installation of refurbished blades do not form part of this Section 5 Declaration Request.

In considering 'materiality' we would highlight the decision of the Courts in *Kenny v. Dublin City Council* [IESC 9], *Cork County Council v. Cliftonhall Ltd.* [IEHC 85] and *Cork County Council v. Slattery Pre-cast Concrete Ltd.* [IEHC 291], which found that the question of whether deviations from the terms of an existing permission are material or non-material should be approached from both a practical and common sense perspective. In effect, determination of materiality should be governed by consideration of the impact on the rights or interests of third parties and their effect on planning considerations. In this context, we would argue that there are no such impacts on the rights or interests of third parties or relevant planning considerations.

Set out below is an assessment of the 'materiality' or significance of the proposed works having regard to a range of relevant planning considerations as follows:

- **The context/need for change.**

The proposed works form part of the commonplace and routine maintenance regime that is necessary for the windfarm to continue to operate safely and efficiently. Additionally, such works are required to ensure that the individual component parts continue to perform in accordance with their relevant technical specifications and within the parameters of the 'as permitted' development.

- **How the proposed replacement components relate to the information submitted to and approved by An Bord Pleanála.**

The development will continue to operate in full compliance with the permission granted under ABP Ref. SU.04.SU0135, including Condition No. 1 which requires that the development shall be in accordance with the approved plans and particulars. As set out, the proposed replacement of the nacelles with like for like refurbished components will ensure that the development and associated operations at the windfarm remain consistent with the permission granted. It is of note:

- The proposed replacement apparatus will ensure that the generating capacity / energy output remains consistent with that being replaced (2 MW); and
- The existing blades will be re-used following installation. The two permitted Gamesa G80 2MW turbines (T3 and T4) have a hub height of 60m and rotor diameter of 80m, giving a maximum turbine blade tip height of 100m which will not be altered by installation of the proposed replacement parts.

Following replacement of the nacelle components, there will be no alteration to the turbine sound power level or noise emissions.

In terms of the replacement nacelle components, their scale, dimensions, materiality and the colour of the nacelle covers will be visually consistent with those being removed. The performance of the replacement components will be consistent with the technical specifications of those being replaced.

Furthermore, the Applicant has sought and obtained approval from ESB Networks DAC to carry out the proposed replacement. ESB has approved the proposed works and confirmed that, as the replacement refurbished nacelle is the best available like for like equivalent on the market, there are no changes to the network connection or infrastructure required to facilitate the works.

- **Potential Impacts**

Potential impact on third parties (including public safety)

The proposed works will not impact on third parties as the installation of the replacement nacelle components will be confined to the two existing turbines (T3 and T4) contained within the existing windfarm site. No works are proposed to a public road or vehicular access and as such, the proposed works will not impact on public safety or cause an obstruction to road users.

Whether there is any visual impact from the proposed change

The existing windfarm forms part of the established landscape at this location and as no change is proposed to the visual appearance of the existing turbines (T3 and T4), no interference with the established character of the landscape will result.

In respect of the existing windfarm (ABP Ref. 04.SU.0135), the Board concluded that the development *"has not adversely affected and does not adversely affect the landscape"*. The scale, size and dimensions of the existing nacelle components proposed to be replaced will not be altered by the installation of replacement parts, and as such no adverse impacts to the character of the landscape, views or prospects will arise from the proposed works.

Whether there is any traffic impact

The proposed works will not alter traffic conditions at the site. There will be no change to the public road, vehicular access arrangements or traffic movements.

Whether there is a material change or increase in intensity of use

Not relevant to the proposed development which will allow for the continued operation of the existing permitted windfarm in a manner compliant with the permission granted. As has been set out earlier, the replacement parts will not result in a change to the electrical power generating capacity / energy output which remains consistent with that being replaced (2 MW).

Potential impact on the general amenities of the area

As reflected by the information presented in this report, there will be no impact on the general amenities of the area by virtue of the fact that there will be no change to the external appearance and visual character of the turbines, no additional noise emissions or change to traffic movements associated with the development.

Other impacts

The proposed works do not involve the excavation, alteration or demolition of places, caves, sites, or any features of geological, historical, scientific or ecological interest.

The proposed works do not involve the excavation, alteration or demolition of any archaeological monument included in the Record of Monuments and Places.

The site of the proposed development is not located within or proximate to an architectural conservation area (ACA).

There will be no adverse environmental impacts associated with the proposed works, including to ecology.

Given the scope of works associated with the proposed nacelle replacement on the two existing turbines which is minor in nature, it is concluded that the proposal will have no significant effects on the integrity of Designated Sites.

There are no natural heritage areas (NHAs) proximate to the site, with the nearest being Bandon Valley South of Dunmanway (Site Code: 001035), approx. 4.8km to the west. Given the minor nature of the works proposed and distance of the site to this NHA, the habitats present and species for which the area has been designated for protection will not be adversely impacted.

- **Whether the change is a 'de minimus' or immaterial departure from the approval granted by An Bord Pleanála.**

With respect to section 4(1)(h) which provides for exempted development where the proposed works would affect only the interior of the structure or would not materially affect the external appearance of the structure so as to render the appearance inconsistent with the character of the structure or of neighbouring structures, as is evidenced by this submission, we are of the professional opinion that the proposed works will not result in a material change to the character of the existing turbine structures as permitted.

The existing blades are to be re-used and subsequently, there will be no change to the turbine sound power level and no change to noise emissions.

In terms of the nacelle component replacement, the scale, dimensions, materiality and colour of the replacement nacelle covers will be visually consistent with those being removed. The performance of the

replacement components will be consistent with the technical specifications of those being replaced.

Arguably, this position is also supported by case law wherein alterations to the character of a structure were considered by the Courts for a range of development types.

In *Cronin (Readymix) v An Bord Pleanála & Ors*², the Supreme Court heard an appeal in relation to a yard on a quarry site that had been extended to facilitate the manufacturing of cement blocks. In considering whether such extension constituted an alteration, O'Malley J concluded that *"at least for some purposes of the Act an "alteration" may involve something that changes the external appearance in a way that is inconsistent with the character of the structure in question, or with the character of the neighbouring structures. However, for the purposes of the exemption an "alteration" must not have that effect."*

In *McCabe v CIE*³ the issue of whether reconstruction works carried out to a bridge were exempted development under the provisions of section 4(1)(h) of the Act was considered. It was argued that they did not materially affect the character, design and external appearance of the bridge. Herbert J held that the Court must assess the character of the structure by looking objectively at the entity as a whole, including overall dimensions, location, and materials used. Considering all of these factors he found that the works to the bridge did not render the appearance inconsistent with the character of the bridge and accordingly found the development in question was exempted development.

In *Dublin Corporation v Lowe and Signways Holdings Limited*⁴, the question arose as to whether an advertising hoarding removed from a building for a few days amounted to an abandonment of use. The High Court initially held that the use had been abandoned where there was no evidence of an intention to resume the use. However the matter was remitted to the High Court (after an appeal) which held that since the replacement hoarding was erected within a short period of time of the removal of the previous hoarding, and of particular relevance to the present section 5 referral, was of the same dimensions and erected in the same location, it was exempted development. The Supreme Court agreed that the replacing of the hoarding with another of identical dimensions was an alteration which did not materially affect the external appearance of the premises and was therefore exempted development.

4.3 Response to Previous S5 Decision (D/22/22)

While the scope of works proposed in this application are significantly reduced from those that were set out in the August 2022 Section 5

² [2017] 2 I.R. 658

³ [2006] IEHC 356

⁴ [2004] IESC 106

Declaration Request, we feel it is important to respond to the reasons for the previous decision. Following is a response to the individual items.

- (a) *The replacement of the existing nacelle and blades on two 2 MW wind turbines at the existing Kilvinane windfarm constitutes 'works' as defined in Section 2(1) of the Planning and Development Act, 2000, as amended and is, therefore, development,*

In respect to item (a) we concur the proposed replacement of nacelle components (including replacement of the outer cover) in Turbines T3 and T4 constitutes 'works' and is, therefore, development.

- (b) *There is no provision for exemption for the said replacement of the existing nacelle and blades on two 2 MW wind turbines provided for in either Section 4 of the Planning and Development Act 2000, as amended, or Article 6 of the Planning and Development Regulations 2001, as amended.*

We note that this position was also reached previously by the Board in its determination of section 5 requests dealing with proposed alterations to wind turbine specification and locations, including for example, in ABP Case Ref. Ref. 88.RL.2891 (Kilvinane Windfarm), ABP-304496-19 (Castlewaller, Newport, County Tipperary) and ABP- 306388-20 (Curraghmarky, Birchgrove, Moanvaun, Tooreen, Garracummer, Cummer More, Cummer Beg, Turraheen Upper and Rossmore, Hollyford, Co. Tipperary).

In the latter Tipperary cases, the Board cited the earlier Kilvinane Windfarm referral (Ref. Ref. 88.RL.2891) as a precedent case, concluding, *inter alia*, as follows:

Tipperary Case (ABP-304496-19):-

"(c) there is no provision for exemption for the said relocation and alterations to turbines provided for in either Section 4, as amended, of the said Act or Article 6 of the Planning and Development Regulations 2001,"

Tipperary Case (ABP-306388-20):-

"(b) there is no relevant express exemption provided for in either section 4, Planning and Development Act, 2000 (as amended) or Article 6, Planning and Development Regulations, 2001 (as amended)"

In these cases, however, the circumstances of the referrals were materially different as the requests sought a declaration of exempted development where there were changes proposed to the location and/or dimensions of the permitted turbines. This is not the case in the current referral, where the intention of the applicant is to replace nacelle components with 'like for like' parts. It is therefore considered that section 4(1)(h) of the Act can be relied upon in the present circumstances, unlike that of the examples cited above.

- (c) *The proposed replacement of the existing nacelle and blades on two 2 MW wind turbines at the existing Kilvhane windfarm would be a material departure and would contravene Condition no. 1 of the Substitute Consent granted under ABP Ref. no. 04.SU.0135.*

As set out in section 4.2 of this report, the proposed works will not result in a material departure from the 'as constructed' turbines and will therefore not contravene Condition No. 1 of the permission granted.

Installation of the replacement nacelle components will not alter the sound levels or energy output from the existing turbines.

The works will principally affect the interior of part of the structure and the external appearance and character of the structure will remain consistent with the existing turbines in terms of their scale, dimensions, materiality and colour of the replacement nacelle covers. Accordingly, we are of the view that the proposed works do not represent a material departure and would not contravene Condition No. 1 of the permission granted.

A copy of the permitted plans for the two wind turbines subject to the referral is included with the suite of drawings, demonstrating that the proposed works will not alter the 'as constructed' turbines, and as such, there shall be no change to the approved plans and particulars.

5. Environmental Assessments

Section 4(4) of the Act sets out provides that development shall not be exempted development if an Environmental Impact Assessment and or an Appropriate Assessment is required.

"(4) [...] development shall not be exempted development if an environmental impact assessment or an appropriate assessment of the development is required."

As set out in sections 5.1 and 5.2 below, it has been determined that Appropriate Assessment and Environmental Impact Assessment are not required for the proposed works.

5.1 Appropriate Assessment

An Appropriate Assessment (AA) screening in respect of the proposed replacement of two nacelle components on turbines T3 and T4 at Kilvinane Windfarm accompanied this application and should be referred to for full details of the assessment undertaken.

The report concludes that based on the scale and short-term duration of the works and the distance between the windfarm and the Designated Sites, the proposed works will not cause adverse direct impacts on the conservation objectives and qualifying interests of any SACs or SPAs assessed.

It further finds that considering potential indirect impacts and potential in-combination effects, it is considered that there will be no impacts on these designated Natura 2000 sites, thus, no further assessment is required.

5.2 Environmental Impact Assessment

Wind turbines fall within the development type captured under Class 3 (i) 'Energy Industry' in Part 2 of Schedule 5 of the Planning and Development Regulations, 2001 (as amended), which provides that EIA is mandatory for:

(i) Installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts.

A remedial EIS (rEIS) was submitted with the substitute consent application (ABP Ref. 04.SU.0135). The Board considered the rEIS and the following determination was made:

"The Board completed an Environmental Impact Assessment and assessed the likely significant effects of the development including the potential impacts of the turbines and the grid connection, and concluded that the mitigation measures proposed and residual effects were acceptable. The Board considered that, subject to the implementation of the mitigation measures proposed, the effects on the environment of the proposed development have been and continue to be acceptable."

The proposed works will not alter the development as permitted, will not affect the nature or scale of the existing development, do not result in an intensification of the existing windfarm operations and therefore do not trigger any threshold for mandatory EIA set out in Part 2 of Schedule 5 of the Regulations.

For the reasons set out in the planning assessment and in particular, in section 4.2 of this report, it is concluded that the proposed works will not give rise to likely significant environmental effects.

It is therefore concluded that there is no real likelihood of significant effects on the environment arising from the proposed works and, accordingly, the proposed works do not trigger a requirement for a sub-threshold Environmental Impact Assessment.

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P81 AT26

6. Conclusion

Having regard to the contents of this report and the relevant provisions of the Planning and Development Acts 2000, as amended, we submit that the proposed works are development but that they are exempted development for the following reasons:

- The proposed development falls within the category of exempted development set out in Section 4(1)(h) of the Act, given that the works proposed are for the maintenance, improvement or other alterations of the two wind turbine structures, and will not materially affect the external appearance of the structure so as to render the appearance inconsistent with the character of the structure or of neighbouring structures.
- The proposed development will not trigger any of the restrictions to exempted development set out under section 4(4) of the Act in respect of Appropriate Assessment and Environmental Impact Assessment.
- The proposed works would not result in a material change to the permitted windfarm development, by virtue of the fact that it would not alter the scale, dimensions, location, visual impact or operational parameters of the existing turbines granted permission under ABP. Ref. 04.SU.0135.
- We draw attention to the decisions of the Courts which provide for a practical and common sense approach by the Planning Authority when determining the question of 'materiality'.
- The proposed works do not contravene a condition attached to the extant permission granted under ABP Ref. 04.SU.0135, including Condition No. 1 of the consent which requires that the proposed development shall be carried out in accordance with the plans and particulars approved by An Bord Pleanála.

REG. No. _____
 PLANNING (WEST) DEPT
 29 SEP 2023
 CORK COUNTY COUNCIL
 NORTON HOUSE, SNIBBEEHILL, Co. CORK P61 AT2E



CORK COUNTY COUNCIL APPLICATION FOR SECTION 5 DECLARATION OF EXEMPTION

APPLICANT CHECKLIST

(Please tick ✓)

- 4 No. Copies of Application Form:**
- 1 No. Copy of Contact Details:**
- 4 No. Copies 6" O.S. Maps:**
- 4 No. Copies 25" O.S. Maps:**
- 4 No. Copies of Site Layout Plan:**
- 4 No. Copies Scaled Drawings of Development:**
- €80 Application Fee:**

✓
✓
✓
✓
✓
✓
✓

FOR OFFICE USE ONLY

Receipt No.	
Cash/Cheque/ Credit Card	
Date	
Declaration Ref. No.	

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SMIBBEREEN, CO. CORK P81 AT26

DATE STAMP HERE

You should make sure that you are satisfied that any information/documentation that you submit is appropriate to be viewed by the public. Please do not submit any information that you do not want 3rd parties to view.

In the case of a Declaration of Exemption for Land Reclamation, the following additional information is required:

- A copy of the details submitted to the Council's Environment Department (Inniscarra) for a Waste Licence Permit
- Correspondence from Teagasc (detailing how the land reclamation would benefit the land in question for agricultural purposes)
- Details of existing and proposed levels
- Details of fill material and duration of fill.

DATA PROTECTION

The planning process is an open and public one. In that context, all applications for Declarations of Exemption are made available for public inspection.

Personal information collected by Cork County Council is done so in order for us to process your application for a Section 5 Declaration of Exemption. Legally we can process this information as it is necessary for us to comply with our statutory/legal obligations. The protection of our personal data is a key priority for the Council and your data will be processed in line with our Privacy policy which is available at <http://www.corkcoco.ie/Privacy-Policy> or hardcopy from our offices at County Hall, Carrigrohane Road, Cork, Ireland. Should you have any questions about our privacy policy or the information we hold about you, please contact us by email to dpo@corkcoco.ie or write to us at Data Protection Officer, Cork County Council, County Hall, Carrigrohane Road, Cork, Ireland.

1. NAME OF APPLICANT: (ADDRESS TO BE SUPPLIED AT QUESTION A – CONTACT DETAILS)

Cork Sustainable Energy Limited

2. POSTAL ADDRESS OF LAND OR STRUCTURE FOR WHICH DECLARATION OF EXEMPTION IS SOUGHT:

Kilvinane Windfarm,
 Garranue, Kilvinane and Carigeen, Ballynacarriga,
 Dunmanway,
 Co.Cork

3. QUESTION/DECLARATION DETAILS:

Please state the specific question for which a Declaration of Exemption is sought

Note: Only works listed and described under this section will be assessed under the Section 5 Declaration of Exemption

This application for a Section 5 Declaration of Exemption Relates to 2 No. existing 2 MW Wind
Turbines with a Hub height of 60m and a Rotor Diameter of 80m on the subject windfarm permitted
under An Bord Pleanála Substitute Consent Permission Ref. 04.SU.0135, and seeks to clarify
whether the proposed substitution of refurbished equivalent 2 MW Nacelles with corresponding
external dimensions and operational characteristics (No Change to hub height, blade tip height or
power output), is or is not development under the meaning of Section 5 (1) of the Planning and
Development Act 2000 (as amended).

4. APPLICATION DETAILS:

Answer the following if applicable. Note: Floor areas are measured from the inside of the external walls and should be indicated in square metres (m²)

(a) Floor area of existing/proposed structure(s):	N/A
(b) If a domestic extension is proposed, have any previous extensions/structures been erected at this location after 1 st October, 1964 (including those for which planning permission has been obtained):	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, please provide floor areas (m ²) and previous planning reference(s) where applicable: N/A
(c) If a change of use of land and/or building(s) is proposed, please state the following: Existing/previous use _____ _____ _____	Proposed use _____ _____ _____ N/A
(d) Are you aware of any enforcement proceedings connected to this site?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, please state relevant reference number(s):

5. LEGAL INTEREST OF APPLICANT IN THE LAND/STRUCTURE:

Please tick appropriate box to show applicant's legal interest in the land or structure:	A. Owner <input checked="" type="checkbox"/>	B. Other <input type="checkbox"/>
Where legal interest is "Other", please state your interest in the land/structure:		
If you are not the legal owner, please state the name of the owner/s (address to be supplied at Question C in Contact Details):		

6. PROTECTED STRUCTURE DETAILS / ARCHITECTURAL CONSERVATION AREA:

Is this a Protected Structure/Proposed Protected Structure or within the curtilage of a Protected Structure: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If yes, has a Declaration under Section 57 of the Planning & Development Act 2000 been requested or issued for the property by the Planning Authority: Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, please state relevant reference No. _____
Is this site located within an Architectural Conservation Area (ACA), as designated in the County Development Plan? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

7. APPROPRIATE ASSESSMENT:

Would the proposed development require an appropriate assessment because it would be likely to have a significant effect on the integrity of a European site (SAC, SPA etc)? Yes ☐ No ☒

8. DATA PROTECTION DECLARATION:

In order for the Planning Authority to process the personal data you have provided, your consent is required. By ticking the box below, you consent to the Planning Authority processing the personal data provided by you in line with the terms of Cork County Council's Privacy Policy available at <http://www.corkcoco.ie/privacy-statement-cork-county-council> or in hardcopy from any Council office; and to having your information processed for the following purposes:

Processing of your Declaration of Exemption application by the Planning Authority

☒ I give permission for my personal information to be processed for the purpose stated above.

Signed (By Applicant Only)	DocuSigned by: <i>Euan McGregor</i> F5428B98AE3647D
Date	29-09-2023

GDPR Special Categories of data / Sensitive Personal data - Explicit Consent

Where Special Categories of personal data / sensitive personal data are provided as part of / in support of a declaration application, **explicit consent** to the processing of the special categories of data must be given by the person to whom the data refers, namely the Data Subject.

Special Categories of data / Sensitive Personal data include:

- Race
- Ethnic origin
- Political opinions
- Religion
- Philosophical beliefs
- Trade union membership
- Genetic data
- Biometric data
- Health data
- Concerning a natural person's sex life
- Sexual orientation

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P814422

In order for the Planning Authority to process the sensitive personal data you have provided, your consent is required. By ticking the box below, you consent to the Planning Authority processing the personal data provided by you in line with the terms of Cork County Council's Privacy Policy available at <https://www.corkcoco.ie/privacy-statement-cork-county-council> or in hardcopy from any Council office; and to having your information processed for the following purposes:

Sensitive personal data being submitted in support of Declaration of Exemption Application

☐ I give permission for my sensitive personal data submitted to the Planning Authority to be processed for the purpose stated above.

Signed	Not Applicable
Date	

You have the right to withdraw your consent by contacting the Planning Department, Ground Floor, County Hall, Carrigrohane Road, Cork. Tel: (021) 4276891 Email: planninginfo@corkcoco.ie or by contacting the Planning Department, Norton House, Cork Road, Skibbereen, Co. Cork. Tel: (028) 40340 Email: westcorkplanninginfo@corkcoco.ie. However if consent to the use of personal data is withdrawn during the declaration of exemption decision-making process this information cannot be considered as part of the decision making process. Once a decision has been made, an applicant is not entitled to withdraw consent, as the right of erasure does not apply to a situation where processing is required for compliance with a legal obligation or for the performance of a task carried out in the public interest.

Please note that all information / supporting documentation submitted will be available publicly to view at the Planning Authority offices.

ADVISORY NOTES:

The application must be accompanied by the required fee of €80

The application must be accompanied by a site location map which is based on the Ordnance Survey map for the area, is a scale not less than 1:1000 and it shall clearly identify the site in question.

Sufficient information should be submitted to enable the Planning Authority to make a decision. If applicable, any plans submitted should be to scale and based on an accurate survey of the lands/structure in question.


The application should be sent to the following address:

The Planning Department, Cork County Council, Floor 2, Co. Hall, Carrigrohane Road, Cork, T12 R2NC; or for applications related to the Western Division, The Planning Department, Cork County Council, Norton House, Cork Road, Skibbereen, Co. Cork, P81 AT28.

- The Planning Authority may require further information to be submitted to enable the authority to issue a decision on the Declaration of Exemption application.
- The Planning Authority may request other person(s), other than the applicant; to submit information on the question which has arisen and on which the Declaration of Exemption is sought.
- Any person issued with a Declaration of Exemption may on payment to An Bord Pleanála refer a Declaration of Exemption for review by the Board within 4 weeks of the date of the issuing of the Declaration of Exemption decision.
- In the event that no Declaration of Exemption is issued by the Planning Authority, any person who made a request may on payment to the Board of such a fee as may be prescribed, refer the question for decision to the Board within 4 weeks of the date that a Declaration of Exemption was due to be issued by the Planning Authority.

The application form and advisory notes are non-statutory documents prepared by Cork County Council for the purpose of advising the type of information which is normally required to enable the Planning Authority to issue a Declaration of Exemption under Section 5. This document does not purport to be a legal interpretation of the statutory legislation nor does it state to be a legal requirement under the Planning and Development Act 2000 as amended, or Planning and Development Regulations, 2001, as amended.

9. I hereby declare that, to the best of my knowledge and belief, the information given in this form is correct, accurate and fully compliant with the Planning and Development Acts 2000, as amended and the Regulations made thereunder:

Signed (Applicant or Agent as appropriate)	 Martina Keenan Rivero (Agent)
Date	29-09-2023

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, CO. CORK P81 AT2E

Cork Sustainable Energy Limited
38 Upper Mount Street
28/09/2023

Method Statement - Kilvinane Nacelle Replacement Works

The application relates to an existing wind farm development, Kilvinane Windfarm at Garranure, Kilvinane and Carrigeen, Ballyncarriga, Dunmanway, Co Rock. Kilvinane is currently owned by Cork Sustainable Energy limited. The turbine is operated by our O&M provider, Rengineers.

Please find below a description of the existing permitted windfarm development, and an outline proposal of the proposed works with respect to the Section 5 Declaration of Exemption being sought.

Description of existing Permitted Windfarm Development

The existing development comprises permitted development by way of Substitute Consent granted by An Board Pleanála on 20th of March 2017 (ABP Ref. No. 04.SU.0135). The permitted development includes three existing wind turbines, 2 x 2MW (T3 & T4) and 1 x 0.85 MW turbines (T1). The 2MW turbines have a permitted hub height of 60m and a rotor diameter of 80m giving a turbine blade tip height of 100m. The 0.85MW turbine has a hub height of 55m and a rotor diameter of 58m giving a maximum turbine blade tip height of 84m.

The development permitted under An Board Pleanála Substitute Consent Ref No. 04.SU.0135 also includes the existing substation building, grid connection, site entrance, roads, crane hard standing area and drainage. There are approximately 18 years remaining on the granted planning permission. Presently, all planning conditions of ABP Ref. No. 04.SU.0135 are satisfied.

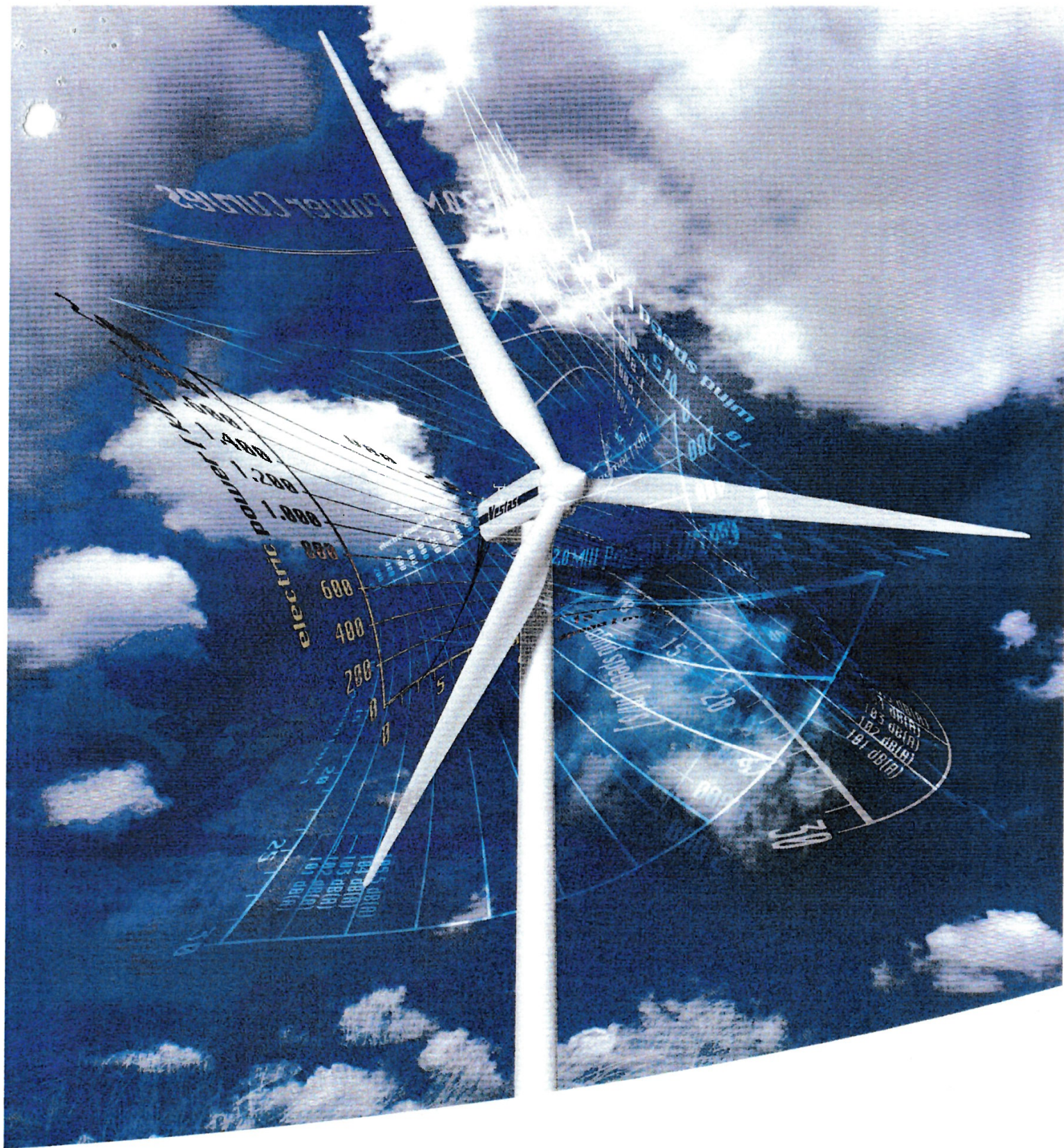
Description of Proposed Works

The objective of the proposed works is to complete replacement -works on the wind turbine nacelle for T3 and T4. The Nacelle is the electrical control plant situated at the top of the turbine tower which generates electricity from the moving blades. The nacelle cover houses parts of the turbine such as the gearbox, gears, generator cooler etc. Our O&M operator has advised the nacelle components are at the end of their life and require replacing. Presently, the wind turbine is underperforming as a consequence of the end of life nacelle.

It is not possible to reuse the existing nacelle as the maintenance cannot be carried out in situ for health and safety reasons. A like for like nacelle is prepared off site and replaced during the same works as taking the existing nacelle down. This is the typical process for nacelle works as the process reduces the time spent working at heights which reduces health and safety risks.

To undertake these replacement works a crane will be delivered to site using the existing site infrastructure and hard stand. The existing blades will be safely removed and the old nacelle component will be lifted off and replaced with a reconditioned nacelle which is the best available nearest equivalent on the market and will be of a like-for-like scale and dimensions as the current Nacelle. It will have a like-for-like profile & appearance and the existing nacelle support frame will be reused. The existing blades will then be reattached to the hub and the turbine powered on. No physical works are required to accommodate this replacement works on site or to the local roads.

The work is forecast to take 12-14 days followed by approximately 16 days for completing all mechanical and electrical testing, cleaning and a full service of both turbines. The work is to be conducted during standard business hours on week days.



V80 – 2.0 MW
with OptiTip® and OptiSpeed™

REG. No.

PLANNING (WEST) DEPT

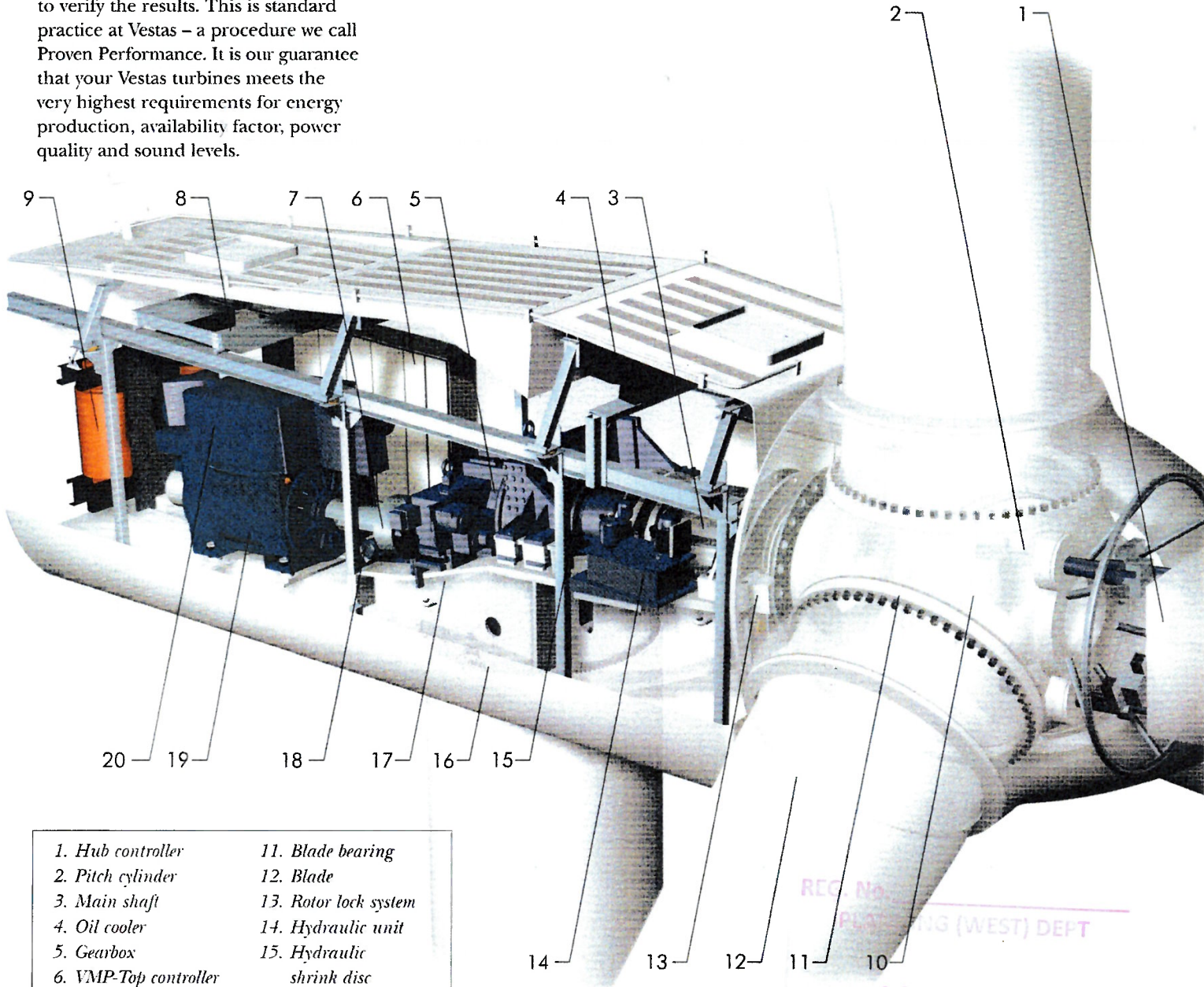
29 SEP 2023

CORK COUNTY COUNCIL

NORTON HOUSE, SKIBBERELN, Co. CORK P81 AT2E

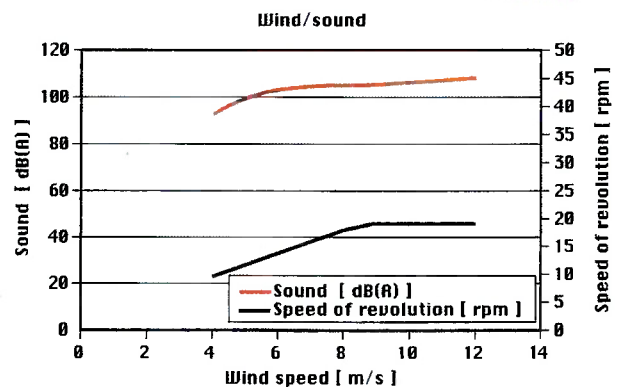
Proven Performance

We spend many months testing and documenting the performance of the Vestas turbines. When we are finally satisfied, we run one last check by allowing an independent organisation to verify the results. This is standard practice at Vestas – a procedure we call Proven Performance. It is our guarantee that your Vestas turbines meets the very highest requirements for energy production, availability factor, power quality and sound levels.



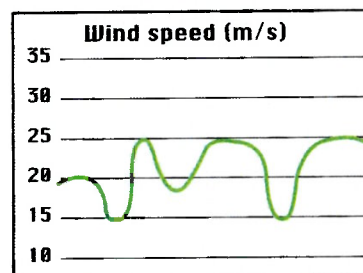
- | | |
|--------------------------------------|---------------------------|
| 1. Hub controller | 11. Blade bearing |
| 2. Pitch cylinder | 12. Blade |
| 3. Main shaft | 13. Rotor lock system |
| 4. Oil cooler | 14. Hydraulic unit |
| 5. Gearbox | 15. Hydraulic shrink disc |
| 6. VMP-Top controller with converter | 16. Yaw ring |
| 7. Parking brake | 17. Machine foundation |
| 8. Service crane | 18. Yaw gears |
| 9. Transformer | 19. Optispeed generator |
| 10. Blade hub | 20. Generator cooler |

The figure illustrates the relationship between wind and sound levels and the speeds of revolution for turbines equipped with OptiSpeed™. It clearly shows the sound level advantage of lower speeds of revolution, as the turbine's sound level will be approx. 15 dB(A) lower at 4 m/s than at 8 m/s.

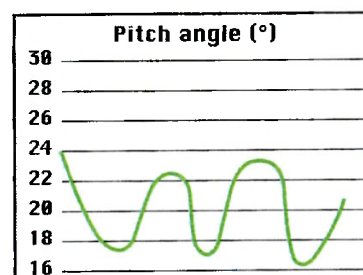


ROTOR				
Diameter:	80 m			
Area swept:	5,027 m ²			
Speed of revolution:	16.7 rpm			
Operational interval:	9-19 rpm			
Number of blades:	3			
Power regulation:	Pitch/OptiSpeed™			
Air brake:	Three separate pitch cylinders			
TOWER				
Hub height (approx.):	60 - 67 - 78 - 100 m			
OPERATIONAL DATA				
Cut-in wind speed:	4 m/s			
Nominal wind speed (2,000 kW):	15 m/s			
Stop wind speed:	25 m/s			
GENERATOR				
Type:	Asynchronous with OptiSpeed™			
Nominal output:	2,000 kW 2,000 kW			
Operational data:	50 Hz 60 Hz			
	690 V 690 V			
	905- 1,090-			
	1,915 rpm 2,300 rpm			
GEARBOX				
Type:	Planet/parallel axles			
CONTROL				
Type:	Microprocessor-based control of all the turbine functions with the option of remote monitoring. Output regulation and optimisation via OptiSpeed™ and OptiTip® pitch regulation.			
WEIGHT (approx.)				
	(60 m)	(67 m)	(78 m)	(100 m)
Tower:	110 t	130 t	170 t	220 t
Nacelle:	61 t	61 t	61 t	61 t
Rotor:	34 t	34 t	34 t	34 t
Total:	205 t	225 t	265 t	315 t

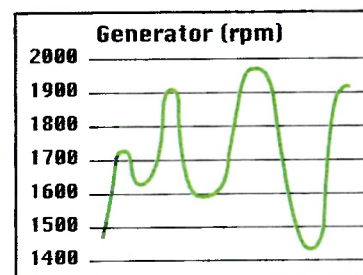
Vestas V80-2.0 MW turbine with OptiSpeed™



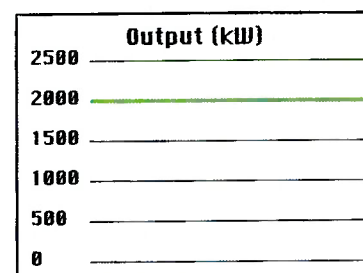
Time



Time

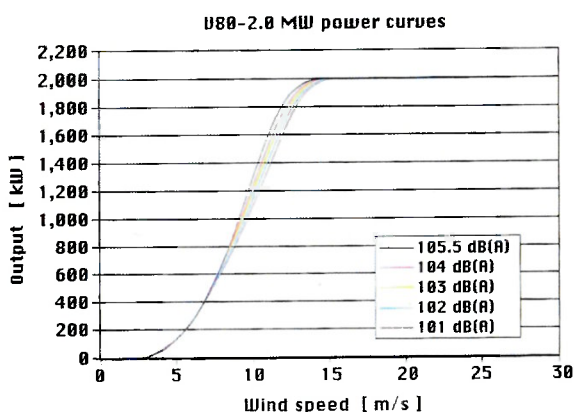


Time



Time

The sound output level can be adjusted by varying the speed of revolution and the pitch angle of the turbine as illustrated in the figure below. In practice, this means that the sound level recorded at a distance of 340 m (hub height 78 m), for example, can be reduced from 44.9 to ± 0.4 dB(A).



OptiSpeed™ allows the speeds of revolution of both the rotor and the generator to vary by approx. 60%. This reduces fluctuations in the grid system as well as minimises the loads on the vital parts of the turbine.

PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, CORK P61 AT2E



G80-2,0 MW

Máxima potencia unitaria con excelentes prestaciones en emplazamientos de alta y media exigencia

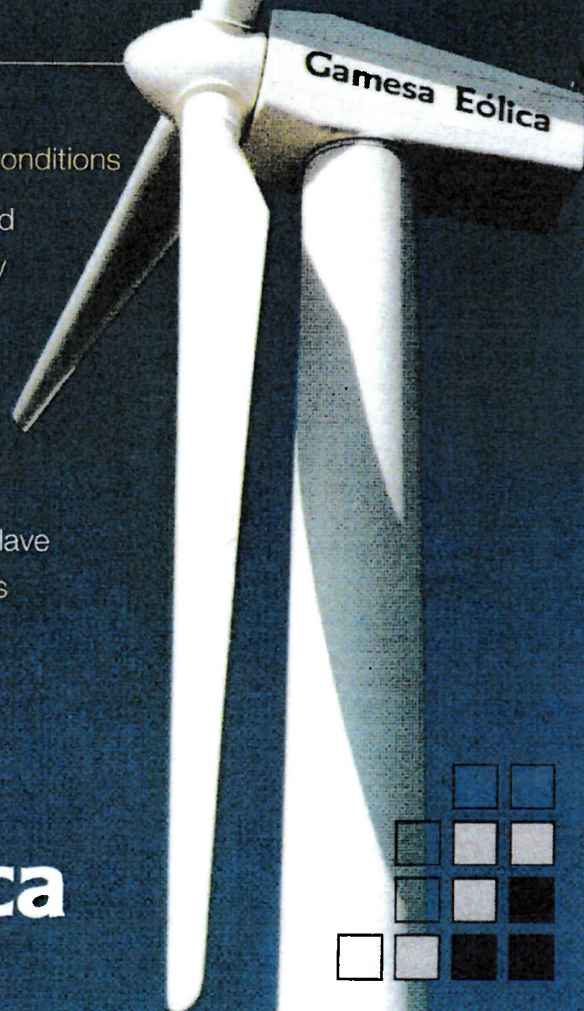
Maximum unit power with excellent performance in high and medium demand wind sites

Ventajas / Advantages

- Paso variable para dominar vientos variables
Variable pitch for enhanced control in unstable wind conditions
- Velocidad variable: máxima energía de la mejor calidad
Variable speed: maximum power of the highest quality
- Diseño de pala, tecnología punta de fabricación
Blade design using state-of-the-art technology
- Amplia experiencia en terreno complejo
Extensive experience in complex terrain
- Gran capacidad industrial con todas las tecnologías clave
Large industrial capacity applying all core-technologies



Gamesa Eólica



Rotor / Rotor

Diámetro Diameter	80 m.
Área de barrido Swept area	5.027 m²
Velocidad de giro Rotational speed, rotor	9,0 - 19,0 r.p.m.
Sentido de giro Rotational direction	Agujas del reloj (vista frontal) Clock Wise (front view)
Peso (incl. Buje) Weight (incl. Hub)	37,2 T
Peso nacelle Nacelle weight	61,2 T

Multiplicadora G80-2,0 MW / Gearbox G80-2,0 MW

Tipo Type	1 etapa planetaria / 2 etapas helicoidales 1stage planetary / 2 stage helical
Ratio Ratio	50 Hz 1:100,5
Refrigeración Cooling	Bomba de aceite con intercambiador Oil pump with oil cooler
Calentamiento aceite Oil heater	2,2 kW

Generador 2,0 MW / Generator 2,0 MW

Tipo Type	Generador doblemente alimentado Doubly fed machine
Potencia nominal Rated power	2,0 MW
Tensión Voltage	690 V ac
Frecuencia Frequency	50 Hz
Clase de protección Protection class	IP 54
Número de polos Number of poles	4
Velocidad de giro Rotational speed range	900:1.900 r.p.m. (nominal/ rated 1.680 r.p.m.)
Intensidad nominal Rated current	
Estator Stator	1.500 A @ 690 V
Factor de potencia (defecto) Rated power factor, default	1,0
Rango factor de potencia Power factor range	0,98 CAP - 0,96 IND (opción/option)

Protección contra rayos / Lightning protection

El aerogenerador G80 utiliza el sistema "protección total contra rayos" siguiendo la normativa IEC 1024-1. Este sistema conduce el rayo desde ambas caras de la punta de la pala hasta la raíz y desde ahí a través de la nacelle y de la estructura de la torre hasta el sistema de puesta a tierra de las cimentaciones.

The G80 wind turbine generator uses the "total lightning protection" system, according to IEC 1024-1 standard. This system conducts the lightning from both sides of the blade tip down to the root joint and from there to the nacelle, tower and earthing system.

Palas / Blades

Número de palas Number of blades	3
Longitud Length	39 m
Perfil Airfoils	NACA 63.XXX + FFA-W3
Material	Fibra de vidrio preimpregnada de resina epoxy Epoxy reinforced glass fibre
Peso pala completa Whole blade weight	Aprox. 6.500 kg

Torre Tubular / Tubular Tower

Tipo modular Modular type	Altura Height	Peso Weight
3 secciones 3 sections	60 m	120 T
3 secciones 3 sections	67 m	135 T
4 secciones 4 sections	78 m	190 T
5 secciones 5 sections	100 m	231 T

Sistema de control / Control System

Generador doblemente alimentado, controlado en velocidad y potencia mediante convertidores IGBT's y control electrónico PWM (modulación por ancho de pulso).

Ventajas:

- Control de potencia reactiva
- Bajo contenido en armónicos y mínimas pérdidas
- Aumento de la eficiencia y de la producción
- Mejora de la vida útil de la máquina

The Generator is a doubly fed machine (DFM), controlled in speed and power through IGBT's converters and PWM (Pulse Width Modulation) electronic control.

Advantages:

- Reactive power control
- Low harmonics content and minimum losses
- Increase of efficiency and production
- Increase in the working life of the turbine

Sistema de Telecontrol / Remote Control System

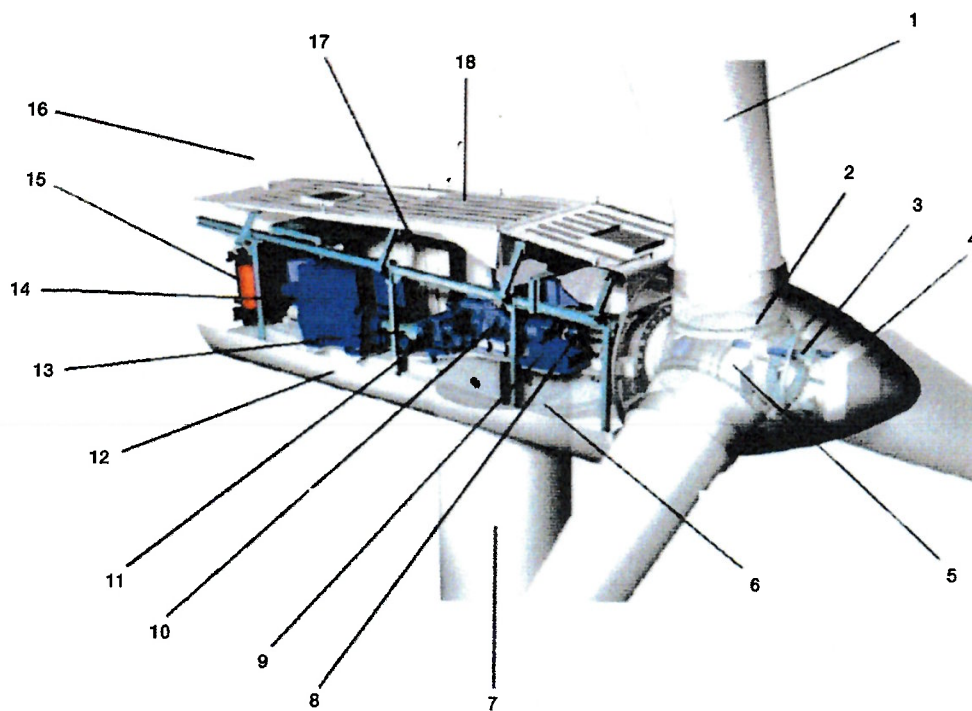
Sistema de telemando que permite un seguimiento en tiempo real de los parámetros de las máquinas y la comunicación con las estaciones meteorológicas y la subestación eléctrica del parque desde un puesto central o remoto.

Remote control system which allows an "on line" follow-up of the parameters of the turbine and also the monitoring and control of the meteorological mast and the electrical sub-station.

Freno / Brake

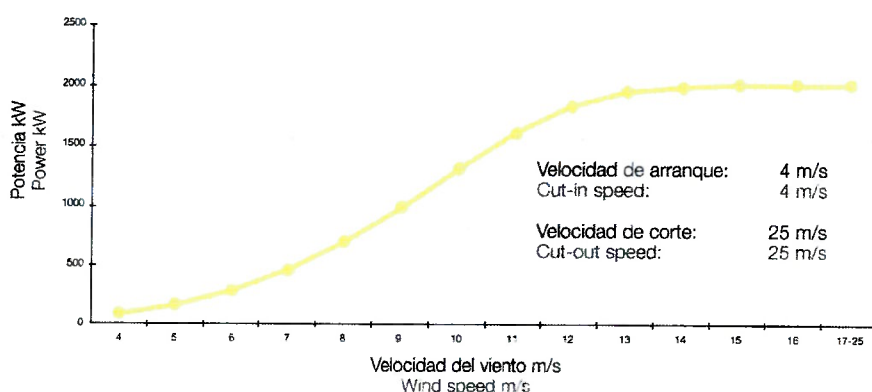
Freno primario aerodinámico por puesta en bandera de las palas. Adicionalmente freno mecánico de disco hidráulicamente activado de emergencia situado en la salida del eje de alta velocidad de la multiplicadora.

Aerodynamic primary brake by full-feathering blades. In addition, mechanical emergency disc brake hydraulically activated mounted on the gearbox high speed shaft.



- | | | | |
|----|---|-----|--|
| 1. | Pala / Blade | 10. | Multiplicadora / Gearbox |
| 2. | Rodamiento pala / Blade bearing | 11. | Freno de disco principal / Main disc brake |
| 3. | Actuador del pitch / Pitch actuator | 12. | Soporte de la nacelle / Nacelle support frame |
| 4. | Cubierta del buje / Hub cover | 13. | Eje cardan o composite / Cardan or composite shaft |
| 5. | Buje / Hub | 14. | Generador / Generator |
| 6. | Control orientación / Yaw control | 15. | Transformador / Transformer |
| 7. | Torre / Tower | 16. | Anemómetro y veleta / Anemometer and wind vane |
| 8. | Alojamiento cojinete principal / Main bearing house | 17. | Armario de control / Top controller |
| 9. | Amortiguadores / Gear tie rod | 18. | Cubierta de la nacelle / Nacelle cover |

Curva de Potencia G80-2,0 MW (para una densidad del aire de 1.225 kg/m³) Power Curve G80-2,0 MW (for an air density of 1,225kg/m³)



V/speed m/s	Potencia en kW Power in kW
4	66,3
5	152
6	280
7	457
8	690
9	978
10	1.296
11	1.598
12	1.818
13	1.935
14	1.980
15	1.995
16	1.999
17-25	2.000

Curva de potencia calculada con base a datos de perfiles aerodinámicos NACA 63.XXX y FFA-W3 (perfiles de pala).

Parámetros de cálculo: 50Hz de frecuencia de red; ángulo de calado de pala variable (control tipo pitch); intensidad de turbulencia del 10% y una velocidad variable del rotor de 9,0 - 19,0 r.p.m..

Power curve calculation based on NACA 63.XXX and FFA-W3 airfoil data.

Calculation parameters: 50 Hz grid frequency; pitch regulated tip angle (pitch control), a 10% turbulence intensity and a variable rotor speed ranging from 9,0 - 19,0 r.p.m..

REG. No. PLANNING (WEST) 29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P81 AT2E

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Appropriate Assessment Screening: Kilvinane Wind Farm, County Cork



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REC. NO. _____
29 SEP 2023
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Introduction

The Habitats Directive (Council Directive 92/43/EEC) requires that all plans and projects must be screened for potential impact on Special Areas of Conservation (SACs) or Special Protection Areas (SPAs). This process aims to establish whether a full Appropriate Assessment as required by Article 6 of the Directive is required in any particular case.

This report presents a screening assessment for proposed turbine nacelle replacement & maintenance work at two turbines at Kilvinane Wind Farm, located approximately 7 km east of Dunmanway in County Cork.

This report has been prepared by Colin Barton (BSc Hons Biology [Ecology]) of Cork Ecology, in accordance with Articles 6(3) and 6(4) of the Habitats Directive.

Background - The Habitats and Birds Directives

The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the EU. Under the Directive, member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a European Union context. The Birds Directive (Council Directive 79/409/EEC on the conservation of wild birds), is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention. Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs. Article 6(3) and 6(4) of the Directive set out key elements of the system of protection including the requirement for Appropriate Assessment of plans and projects. Article 6(3) of the Habitats Directive requires an appropriate assessment of any plan or project likely to have a significant effect on an SAC or SPA.

Habitats Directive Project Screening Assessment

Screening has been undertaken in fulfillment of the requirements of the Habitats Directive and taking into account the Department of the Environment, Heritage and Local Government's Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

Screening involves the following:

1. Description of plan or project, and local site or plan area characteristics;
2. Identification of relevant Natura 2000 sites, and compilation of information on their qualifying interests and conservation objectives;
3. Identification and description of individual and cumulative impacts likely to result from the Project;
4. Assessment of the significance of the impacts identified on the conservation objectives of the site(s);

5. Exclusion of sites where it can be objectively concluded that there will be no significant impacts on conservation objectives.

Description of the project and proposed nacelle replacement & alteration works

The permission granted under 01/980 comprised four turbines with a hub height of 65m and a rotor diameter of 57m, anemometer, substation and associated roadways and crane-hardstanding areas. The permission was amended to a hub height of 60m and a rotor diameter of 56m for turbine T1 and to a hub height of 60m and a rotor diameter of 80m for turbines T3 and T4, all three of which have been erected and are operational on site. Turbine T2 has not been constructed to date. The remainder of the site comprises farmland.

A 20 KV overhead cable connects the wind farm to a substation at Enniskeane. The cable route is approximately 7 km in length.

The objective of the proposed works is to complete replacement works on the wind turbine nacelle for T3 and T4. The Nacelle holds the mechanical and electrical control plant situated at the top of the turbine tower which generates electricity from the moving blades. The nacelle cover houses parts of the turbine such as the gearbox, gears, generator cooler etc. Cork Sustainable Energy Limited has been advised by the turbine O&M operator that the nacelle components require replacement.

It is not possible for the works to be carried out in situ due to the space and access required and for health and safety reasons. A like for like refurbished nacelle is prepared off-site and will be installed during the same works as taking the existing nacelle down. This is the typical process for nacelle maintenance works as the process reduces the time spent working at heights which reduces health and safety risks. To undertake these replacement works a crane will be delivered to site using the existing site infrastructure and hard stand areas. The existing blades will be safely removed, and the old nacelle component will be lifted off and replaced with a reconditioned nacelle which will be of a like-for-like scale and dimensions as the current nacelle. It will have a like-for-like profile & appearance and the existing nacelle support frame will be reused. The existing blades will then be reattached to the hub and the turbine powered on. No physical works are required to accommodate this works on site or to the local roads.

The nacelle replacement maintenance work programme is forecast to take 12-14 days. The work is to be conducted during standard business hours on weekdays.

Identification of Natura 2000 sites

No conservation designation applies to the site or the associated cable route. Thus this area does not form part of any Natural Heritage Area (NHA), Special Protection Area (SPA), Special Area of Conservation (SAC), Statutory Nature Reserve or National Park.

There are eight designated Natura 2000 sites located within a 15 km radius of Kilvinane Wind Farm. These are listed in Table 1 below, along with a summary of the relevant site synopses from NPWS (2023), where available.

Table 1 Designated conservation sites within 15km of Kilvinane Wind Farm

Appropriate Assessment Screening: Kilvinane Wind Farm

Site	Code	Distance
Bandon River SAC & pNHA	002171	4.8 km West
Killaneer House Glen pNHA	001062	9.1 km North-west
Bateman's Lough pNHA	001037	10.5 km South-east
Gallanes Lough pNHA	001052	11.4 km South-east
Clonakilty Bay SAC & pNHA	000091	12.3 km South-east
Clonakilty Bay SPA	004081	12.3 km South-east
Bandon Valley west of Bandon pNHA	001034	13.9 km North-east
Rosscarbery Estuary pNHA	001075	14.8 km South

Site description summaries

Bandon River SAC and pNHA (Site code 002171)

The site consists of relatively short adjoining stretches of the Bandon and Caha Rivers. These rivers flow in a southerly direction to the east of Dunmanway, Co. Cork. Towards the southern end of the site the Bandon River takes an easterly course. The predominant rock formations are Old Red Sandstone to the north and Carboniferous Slate stretching south of Dunmanway. Soils in the northern section consist of peats, podzols and skeletal soils. The southern section consists of alluvial soils and Brown Podzolics.

The east-west exposure of Old Red Sandstone to the north of Dunmanway displays distinct ridgelines of bare rock with poor pasture and scrub. In this area around Lovers Leap the Bandon River cuts a narrow channel southwards, cascading over a series of rock steps through a narrow valley. Below this and above Long Bridge the river widens and meanders through a fertile floodplain. Immediately south of the Long Bridge the reduced flow gradient and broad, flat valley permit the main channel to split and extend into a network of braided streams forming islands.

The site is important for a number of reasons. It contains a small though very important example of the Annex I priority habitat Alluvial Forest as well as good examples of another Annex I habitat - Floating River Vegetation. The Annex II animal species Otter, Salmon (*Salmo salar*), Brook Lamprey (*Lampetra planeri*) and Freshwater Pearl Mussel (*Margaritifera margaritifera*) occur. The populations of the Mussel are thought to be nationally important. The Kingfisher, listed under Annex I of the E.U. Birds Directive, breeds along the river. Wet broadleaved semi-natural woodland is found in an undisturbed area of braided river channels and islands below Dunmanway.

The NPWS list the qualifying habitats as *Water courses of plain to montane levels with the Ranunculus fluitantis and Callitriche-Batrachion vegetation* and *Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* and the qualifying species as *Lampetra planeri* and *Margaritifera margaritifera*.

Killaneer House Glen pNHA (Site code 001062)

Killaneer Glen is a linear wooded stream-valley and is one of several steep-sided valleys cut by tributaries of the Bandon River. Goodwillie (1986) described the site as being “ a relatively natural wood in an agricultural area and is of local value for this reason”.

This is a small fluctuating lake north of Clonakilty. It has a firm shoreline, mostly of grassland, and little marginal vegetation except for some *Equisetum* sp (horsetails) and *Juncus* (rushes). Much *Apium inundatum* (marshwort) grows on temporarily flooded ground, however, and this provides a food source either directly or indirectly for wildfowl and invertebrates.

Gallanes Lough pNHA (Site code 001052)

Clonakilty Bay SAC & pNHA (Site code 000091)

Sand flats dominate the intertidal area, although mudflats occur at the sheltered upper end of the inlets. The vegetation consists of algal mats (*Enteromorpha* spp.), with brown seaweeds (*Fucus* spp.) occurring where the coast is rocky. The invasive Cord-grass (*Spartina* sp.) occurs in places. The intertidal flats have a typical diversity of macro-invertebrates, including *Arenicola marina*, *Scrobicularia plana*, *Hediste diversicolor*, *Nephtys hombergii*, *N. cirrosa*, *Hydrobia ulvae* and *Cerastoderma edule*.

Sand dunes grade from a strandline, colonised by Frosted Orache (*Atriplex laciniata*), Sea Sandwort (*Honkenya peploides*) and Sea Rocket (*Cakile maritima*), through to fixed dunes vegetated by grasses, small herbs and several species of orchid. They support an interesting array of plants, amongst which Great Mullein (*Verbascum thapsus*), Viper's-bugloss (*Echium vulgare*) and Teasel (*Dipsacus fullonum*) are some of the most noticeable. Embryonic shifting dunes and white Marram (*Ammophila arenaria*) dunes are also represented. Of particular interest is a small area of decalcified dune heath with some Gorse (*Ulex europaeus*).

This site is of considerable scientific interest because it contains a good diversity of coastal habitats. These habitats show a succession from salt to freshwater influences and include six which are listed on Annex I of the E.U. Habitats Directive.

Clonakilty Bay SPA (Site code 004081)

Appropriate Assessment Screening: Kilvinane Wind Farm

Clonakilty Bay, which is located in west County Cork, is a wetland complex that stretches from the town of Clonakilty to the open sea. It comprises two small estuarine bays, Clonakilty Harbour and Muckross Strand, separated by Inchydoney Island and its empoldered isthmus. Several small rivers flow into the site, notably the Fealge River. At low tide, substantial areas of sand and mud flats are exposed.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Shelduck, Dunlin, Black-tailed Godwit and Curlew. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Clonakilty Bay SPA is of high ornithological importance, particularly for its internationally important population of Black-tailed Godwit. In addition, there are four species with populations of national importance. The presence of the E.U. Birds Directive Annex I species, Golden Plover, Bar-tailed Godwit, Little Egret and Short-eared Owl is of note.

Bandon Valley west of Bandon pNHA (Site code 001034)

This site is important as it contains remnants of broadleaved oak woodland. The Bandon Valley is especially valuable for its woodlands and unmodified river bed.

Rosscarbery Estuary pNHA (Site code 001075)

Rosscarbery Estuary stretches from the south-western end of the beach northwards to the causeway which runs across Rosscarbery Estuary to the south of Rosscarbery village.

Full site synopses, where available, are included in Appendix A.

Table 2 below considers the Natura 2000 sites within 15 km radius which could have potentially been impacted by the proposed development.

Table 2: Identification of Natura 2000 Sites (SACs and SPAs) which may be impacted by the development

Appropriate Assessment Screening: Kilvinane Wind Farm

Impacts on SACs		
1	<p>Impacts on habitats</p> <p><i>Is the development within a Special Area of Conservation, or in the catchment of same?</i></p> <p><i>Sites to consider:</i> Bandon River SAC (Site code 002171); Clonakilty Bay SAC (Site code 000091)</p>	No
Impacts on SPAs		
2	<p>Impacts on birds</p> <p><i>Is the development within a Special Protection Area, or within 1km of same?</i></p> <p><i>Sites to consider:</i> Clonakilty Bay SPA (Site code 004081);</p>	No

Identification of potential impacts to Natura 2000 sites & assessment of significance

Direct impacts

Given the scale and short-term duration of the proposed replacement activities at Kilvinane Wind Farm and the distance to the designated sites, it is considered that there will be no direct impacts on the designated sites from these replacement activities or from the future operation of the replacement nacelles.

Indirect impacts

Given the scale and short-term duration of the proposed replacement activities at Kilvinane Wind Farm and the distance to the designated sites, it is considered that there will be no indirect impacts on the designated sites from these replacement activities or the from the future operation of the replacement nacelles.

In-combination effects

Appropriate Assessment Screening: Kilvinane Wind Farm

The nearest existing wind farm at Coomatalin is approximately nine km south-west of Kilvinane Wind Farm. As no impacts on designated Natura 2000 sites listed in Table 2 are predicted to have arisen from Kilvinane Wind Farm, it is also considered that there will be no in-combination effects on these conservation sites as a result of these activities.

Habitats Directive Screening Concluding Statement

It is considered that the proposed activities at Kilvinane Wind Farm will not cause adverse direct impacts on the conservation objectives and qualifying interests of any SACs or SPAs listed in Table 2 above, based on the scale and short-term duration of the activities and the distance between the wind farm and the designated sites.

Considering potential indirect impacts and potential in-combination effects, it is considered that there will be no impacts on these designated Natura 2000 sites.

No further assessment is therefore required.

A finding of no significant effects report is presented in Appendix B in accordance with the EU Commission's methodological guidance (European Commission, 2001).

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P81 AT28

Appendix A
Natura 2000 Site Synopses

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P81 AT2E

SITE NAME: BANDON RIVER

SITE CODE: 002171

The Bandon River SAC consists of relatively short adjoining stretches of the Bandon and Caha Rivers. These rivers flow in a southerly direction to the east of Dunmanway, Co. Cork. Towards the southern end of the site the Bandon River takes an easterly course. The predominant rock formations are Old Red Sandstone to the north and Carboniferous slate stretching south of Dunmanway. Soils in the northern section consist of peats, podzols and skeletal soils. The southern section consists of alluvial soils and Brown Podzolics.

The east-west exposure of Old Red Sandstone to the north of Dunmanway displays distinct ridgelines of bare rock with poor pasture and scrub. In this area around Lovers Leap the Bandon River cuts a narrow channel southwards, cascading over a series of rock steps through a narrow valley. Below this and above Long Bridge the river widens and meanders through a fertile floodplain. Immediately south of Long Bridge the reduced flow gradient and broad, flat valley permit the main channel to split and extend into a network of braided streams forming islands.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[3260] Floating River Vegetation

[91E0] Alluvial Forests

[1029] Freshwater Pearl Mussel (*Margaritifera margaritifera*)

[1096] Brook Lamprey (*Lampetra planeri*)

Wet broadleaved semi-natural woodland is found in an undisturbed area of braided river channels and islands below Dunmanway. The river channels are well defined and the islands appear solid. Canopy dominants are Hazel (*Corylus avellana*) and Sessile Oak (*Quercus petraea*), with scattered Downy Birch (*Betula pubescens*), Ash (*Fraxinus excelsior*), Rusty Willow (*Salix cinerea* subsp. *oleifolia*) and Alder (*Alnus glutinosa*). There is a very sparse understorey composed of Hawthorn (*Crataegus monogyna*), Holly (*Ilex aquifolium*) and saplings of Hazel and Sessile Oak. Epiphytes are abundant on trees, including species such as Ivy (*Hedera helix*), Honeysuckle (*Lonicera periclymenum*) and bryophytes such as *Isoetecium myosuroides*. The ground flora is dominated by Ramsons (*Allium ursinum*), Wood Anemone (*Anemone nemorosa*) and Ivy, along with Lesser Celandine (*Ranunculus ficaria*) and Irish Spurge (*Euphorbia hyberna*). Goldilocks Buttercup (*Ranunculus auricomus*), a very rare plant in Co. Cork, has been recorded from this woodland.

Floating river vegetation is found along the length of the river and is dominated by water-crowfoots (*Ranunculus* spp). Other aquatic plants found include Alternate Water-milfoil

(*Myriophyllum alterniflorum*), Broad-leaved Pondweed (*Potamogeton natans*) and at least four water-starwort species (*Callitriche* spp.). Mosses present on rocks and attached to tree roots include *Fontinalis antipyretica* in slack flow areas, and *Fontinalis squamosa*, *Rhynchostegium riparioides* and *Amblystegium riparium* in moderate flows. The landward fringe of deep pools supports Yellow Water-lily (*Nuphar lutea*), Bogbean (*Menyanthes trifoliata*), Marsh-marigold (*Caltha palustris*), Water Mint (*Mentha aquatica*) and Fool's Water-cress (*Apium nodiflorum*). Shoreweed (*Littorella uniflora*) and Six-stamened Waterwort (*Elatine hexandra*) are two species of local importance which are found in the river. In moderate current flow below the Long Bridge, the larger stones are covered by the moss *Brachythecium rivulare* and the liverwort *Chiloscyphus polyanthos* var. *polyanthos*. Boulders covered in *Nostoc* algae are probably of local occurrence in Ireland. The liverwort *Riccardia chamaedryfolia* and the moss *Fissidens crassipes* found under the Long Bridge are considered to be rare in Ireland.

Heath in mosaic with wet grassland, exposed rock, scrub and improved grassland covers up to 30% of the site north of Long Bridge. Typical heath plants growing in association with the rocks are abundant Western Gorse (*Ulex gallii*), Heather (*Calluna vulgaris*), Bell Heather (*Erica cinerea*), Cross-leaved Heath (*Erica tetralix*), Tormentil (*Potentilla erecta*), Heath-grass (*Danthonia decumbens*), stonecrops (*Sedum* spp.), small amounts of St Patrick's-cabbage (*Saxifraga spathularis*) and many lichen species.

Some small areas of woodland occur within the site north of Long Bridge. Tree species such as Sessile Oak, Beech (*Fagus sylvatica*), Scots Pine (*Pinus sylvestris*) and Downy Birch are found with an understorey of Holly, Hazel, Rowan and Rusty Willow.

Two Red Data Book plant species have been recorded in the past from within or close to the site - Greater Broomrape (*Orobanche rapum-genistae*), a species that grows on the roots of legumes, and Small-white Orchid (*Pseudorchis albida*), a species of upland pastures and heaths that is protected under the Flora (Protection) Order, 1999.

The river below Long Bridge is an important inland site in Cork for Mute Swan and approximately 20 individuals are present throughout the year along this stretch. Several hundred Snipe use the site during the winter. Other birds seen regularly within the site are Grey Heron, Cormorant and Mallard, while low numbers of Lapwing and Teal visit during the winter. The Kingfisher, listed under Annex I of the E.U. Birds Directive, breeds along the river.

A population of Freshwater Pearl Mussel is found in the river. This species is listed on Annex II of the E.U. Habitats Directive. The river also supports populations of protected fish species, notably Brook Lamprey and Salmon (*Salmo salar*), both of which are also listed on Annex II of the E.U. Habitats Directive.

The site also supports many of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Badger, Irish Hare, Daubenton's Bat and Pipistrelle bat. The two bat species can be seen feeding along the river and roosting under the old bridges. Otter, another species listed on Annex II of the E.U. Habitats Directive, is also found within the site.

Land use at the site consists mainly of sheep grazing in the northern section and cattle grazing on improved grasslands below Lovers Leap and further south. In the area between Milleenanannig and Bealaboy Bridge land reclamation and drainage is taking place. In the area of exposed rock on the higher terrain above Ardcahan Bridge some land reclamation and forestry is carried out.

This site contains good examples of two habitats listed on Annex I of the E.U. Habitats Directive - alluvial forest and floating river vegetation - and supports populations of four Annex II species - Otter, Salmon, Brook Lamprey and Freshwater Pearl Mussel. The presence of a number of Red Data Book plant and animal species adds further interest to the site.

16/12/2013

Site Name: Clonakilty Bay SAC

Site Code: 000091

Clonakilty Bay in west Cork is an intertidal expanse that stretches from Clonakilty to the open sea, and comprises two small estuaries separated by Inchydoney Island. The site also includes adjacent sand dunes and inland marshes, and therefore is a coastal complex with a good diversity of habitats.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [1140] Tidal Mudflats & Sandflats
- [1210] Annual Vegetation of Drift Lines
- [2110] Embryonic Shifting Dunes
- [2120] Marram Dunes (White Dunes)
- [2130] Fixed Dunes (Grey Dunes)
- [2150] Decalcified Dune Heath

Sand flats dominate the intertidal area, although mudflats occur at the sheltered upper end of the inlets. The vegetation consists of algal mats (*Enteromorpha* spp.), with brown seaweeds (*Fucus* spp.) occurring where the coast is rocky. The invasive Cord-grass (*Spartina* sp.) occurs in places. The intertidal flats have a typical diversity of macro-invertebrates, including *Arenicola marina*, *Scrobicularia plana*, *Hediste diversicolor*, *Nephtys hombergii*, *N. cirrosa*, *Hydrobia ulvae* and *Cerastoderma edule*.

Sand dunes grade from a strandline, colonised by Frosted Orache (*Atriplex laciniata*), Sea Sandwort (*Honkenya peploides*) and Sea Rocket (*Cakile maritima*), through to fixed dunes vegetated by grasses, small herbs and several species of orchid. They support an interesting array of plants, amongst which Great Mullein (*Verbascum thapsus*), Viper's-bugloss (*Echium vulgare*) and Teasel (*Dipsacus fullonum*) are some of the most noticeable. Embryonic shifting dunes and white Marram (*Ammophila arenaria*) dunes are also represented. Of particular interest is a small area of decalcified dune heath with some Gorse (*Ulex europaeus*).

Inland of the western estuary, an extensive area of wetland occurs, which in itself contains a fine range of habitats from saline lagoons, to brackish grasslands, open freshwater marsh and Alder (*Alnus glutinosa*) scrub. Species found here are characteristic of marshy areas and include Creeping Bent (*Agrostis stolonifera*), Water Horsetail (*Equisetum fluviatile*), Marsh Cinquefoil (*Potentilla palustris*) and Marsh Willowherb (*Epilobium palustre*). The saline influence is evident by the occurrence of species such as Saltmarsh Rush (*Juncus gerardi*) and Sea Rush (*J. maritimus*).

The site contains a good diversity and density of waterfowl, with over 7,000 waders and wildfowl occurring regularly. Seven species have populations of national importance: Shelduck (168), Grey Plover (76), Lapwing (2,509), Dunlin (1,508) Curlew (1,231), Redshank (263) and Greenshank (27). The site is most noted, however, for its population of Black-tailed Godwit (866), which is of international importance and comprises over 10% of the national total. Amongst the other species which occur, there are notable populations of Golden Plover and Bar-tailed Godwit, both of which are listed on Annex I of the E.U. Birds Directive. All counts given are average winter peaks over either two or three seasons from 1994/95 to 1996/97.

Hérons commonly use the site and a heronry exists in the trees near Clonakilty.

Otter spraints were found frequently during a recent survey of the marsh area. This species is listed on Annex II of the E.U. Habitats Directive.

The site is under pressure from a number of sources, notably recreation and tourism developments and agricultural improvements, including drainage and fertiliser application.

This site is of considerable scientific interest because it contains a good diversity of coastal habitats. These habitats show a succession from salt to freshwater influences and include six which are listed on Annex I of the E.U. Habitats Directive. Its value is enhanced considerably by the birdlife it supports. The occurrence of Black-tailed Godwit in internationally important numbers is particularly significant. The site also supports nationally important numbers of seven other species of waterfowl as well as two species listed on Annex I of the E.U. Birds Directive.

CLONAKILTY BAY SPA

SITE CODE: 004081

PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P81 AT28

Clonakilty Bay, which is located in west County Cork, is a wetland complex that stretches from the town of Clonakilty to the open sea. It comprises two small estuarine bays, Clonakilty Harbour and Muckcross Strand, separated by Inchydoney Island and its empoldered isthmus. Several small rivers flow into the site, notably the Fealge River. At low tide, substantial areas of sand and mud flats are exposed. The construction of a causeway across the inner part of Muckcross Strand created an extensive wetland complex known as Cloheen Strand Intake. The site also includes a well-developed sand dune system, with embryonic dunes, marram dunes, fixed dunes and decalcified dune heath all represented. The dune types, as well as the intertidal sand and mud flats, are habitats that are listed on Annex I of the E.U. Habitats Directive.

Intertidal sand and mud flats occupy the majority of the site area and these provide the main food resource for the wintering waterfowl. Sand flats dominate the inter-tidal area, although mud flats occur at the sheltered upper end of the inlets. The vegetation consists of algal mats (*Enteromorpha* spp.), with brown seaweeds (*Fucus* spp.) occurring where the shore is rocky. The invasive Common Cord-grass (*Spartina anglica*) occurs in places. The intertidal flats have a typical diversity of macro-invertebrates, including Lugworm (*Arenicola marina*), Peppery Furrow-shell (*Scrobicularia plana*), Ragworm (*Hediste diversicolor*), the marine bristle worms *Nephtys hombergii* and *N. cirrosa*, Laver Spire-shell (*Hydrobia ulvae*) and Common Cockle (*Cerastoderma edule*).

The Cloheen Strand Intake wetland contains a fine range of habitats from saline lagoons, to brackish grasslands, open freshwater marsh and wet grassland. The saline influence is evident by the occurrence of species such as Saltmarsh Rush (*Juncus gerardi*) and Sea Rush (*J. maritimus*). This area provides the main roosting area for birds at high tide. Birds also roost elsewhere above the shoreline and on the sandy beach associated with the dune system at Inchydoney Island.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Shelduck, Dunlin, Black-tailed Godwit and Curlew. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site contains a good diversity of wintering waterbirds, with over 8,000 birds occurring regularly. The site is noted for its internationally important population of Black-tailed Godwit (888) - all count data refers to the 5-year mean peak 1994/95- 1998/99. The ecology of this population has been studied in detail in recent years. Four species occur in nationally important numbers: Shelduck (155), Dunlin (1,303), Curlew (848) and Greenshank (31). Other species occurring in significant numbers are Mute Swan (48), Wigeon (530), Teal (192), Oystercatcher (338), Ringed Plover (97), Golden Plover (865), Grey Plover (66), Lapwing (2,135), Knot (158), Bar-tailed Godwit (76) and Redshank (263). The site is also used by Mallard (97), Turnstone (48), Red-breasted Merganser (11) and Cormorant (13).

The regular occurrence of Golden Plover and Bar-tailed Godwit is of note as both are listed on Annex I of the E.U. Birds Directive. An additional species listed on Annex I of this directive that has become regular in small numbers in recent years is Little Egret (average 5, maximum 7). Grey

Appropriate Assessment Screening: Kilvinane Wind Farm

Heron (14) commonly uses the site and a heronry is located in the trees near Clonakilty. Cloheen Strand Inlet is also a regular wintering site for usually up to 3, but occasionally 7, Short-eared Owl, also an Annex I species.

The site is a regular staging post for scarce autumn migrants, especially Little Stint, Curlew Sandpiper and Spotted Redshank. In most years it is also visited by vagrant waders from North America.

Clonakilty Bay SPA is of high ornithological importance, particularly for its internationally important population of Black-tailed Godwit. In addition, there are four species with populations of national importance. The presence of the E.U. Birds Directive Annex I species, Golden Plover, Bar-tailed Godwit, Little Egret and Short-eared Owl is of note. The bird populations have been monitored since the 1970s and the site is counted monthly each winter (September to March) as part of the Irish Wetland Bird Survey (I-WeBS).

30.8.2007

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
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NORTON HOUSE, SKIBBEREEN, Co. CORK P81 AT2E

Appendix B

Finding of No Significant Effects Report

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
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Appropriate Assessment Screening: Kilvinane Wind Farm

Name of Project or Plan: Kilvinane Wind Farm

Name and Location of Natura 2000 sites:

Table 1 Designated conservation sites within 15km of Kilvinane Wind Farm

Site	Code	Distance
Bandon River SAC & pNHA	002171	4.8 km West
Killaneer House Glen pNHA	001062	9.1 km North-west
Bateman's Lough pNHA	001037	10.5 km South-east
Gallanes Lough pNHA	001052	11.4 km South-east
Clonakilty Bay SAC & pNHA	000091	12.3 km South-east
Clonakilty Bay SPA	004081	12.3 km South-east
Bandon Valley west of Bandon pNHA	001034	13.9 km North-east
Rosscarbery Estuary pNHA	001075	14.8 km South

Description of the Project and Proposed Nacelle Replacement Works:

The permission granted under 01/980 comprised four turbines with a hub height of 65m and a rotor diameter of 57m, anemometer, substation and associated roadways and crane-hardstanding areas. The permission was amended to a hub height of 60m and a rotor diameter of 56m for turbine T1 and to a hub height of 60m and a rotor diameter of 80m for turbines T3 and T4, all three of which have been erected and are operational on site. Turbine T2 has not been constructed to date. The remainder of the site comprises farmland.

A 20 KV overhead cable connects the wind farm to a substation at Enniskeane. The cable route is approximately 7 km in length.

Prior to the construction of the Kilvinane Wind Farm, the site was a tillage and dairy cattle farm. Apart from the presence of three turbines and associated access tracks, the site remains as it was prior to construction. The land use of the majority of the surrounding farmland and along the cable route follows the same usage pattern.

The objective of the proposed works is to complete required replacement works on the wind turbine nacelle for T3 and T4. It is not possible for the maintenance to be carried out in situ due to the space and access required and for health and safety reasons. A like for like refurbished nacelle is prepared off-site and will be installed during the same works as taking the existing nacelle down. To undertake these replacement works a crane will be delivered to site using the existing site infrastructure and hard stand areas. The existing blades will be safely removed, and the old nacelle component will be lifted off and replaced with a reconditioned nacelle which will be of a like-for-like scale and dimensions as the current nacelle. It will have a like-for-like profile & appearance and the existing nacelle support frame will be reused. The existing

Appropriate Assessment Screening: Kilvinane Wind Farm

blades will then be reattached to the hub and the turbine powered on. No physical works are required to accommodate this replacement works on site or to the local roads.

It is concluded that no significant environmental impacts will occur as a result of the proposed activities at Kilvinane Wind Farm. This is due to the scale and short-term duration of the proposed maintenance activities at Kilvinane Wind Farm and the distance to the designated sites.

No conservation designation applies to the site or cable route. Thus this area does not form part of any Natural Heritage Area (NHA), Special Protection Area (SPA), Special Area of Conservation (SAC), Statutory Nature Reserve or National Park.

Is the project or plan directly connected with or necessary to the management of the site(s): No

Are there other projects or plans that together with the projects or plan being assessed could affect the site(s):

No.

The Assessment of significant effects – Describe how the project or plan (alone or in-combination) is likely to affect the Natura 2000 site(s):

It is considered that the proposed activities at Kilvinane Wind Farm will not cause adverse direct impacts on the conservation objectives and qualifying interests of any SACs or SPAs listed in Table 1 above, based on the scale and short-term duration of the proposed activities and the distance between the project and the designated sites.

Considering potential indirect impacts and potential in-combination effects, it is considered that there will not be any significant indirect impacts or in-combination effects on these designated Natura 2000 sites.

Explain why these effects are not considered significant:

These effects are not considered significant due to the scale and short-term duration of the proposed activities at Kilvinane Wind Farm and the distance between the project and the designated sites.

Documentation reviewed for making of this statement

Desk-top Assessment carried out by Cork Ecology.

NPWS Site Synopses for Bandon River SAC, Clonakilty Bay SAC and Clonakilty Bay SPA. These site synopses were downloaded from the NPWS website, available at <http://www.npws.ie/protect/sites> and included in Appendix A of this report.

2016 Ecology Report for Kilvinane Wind Farm Remedial EIS (Cork Ecology, 2016).

2023 Ecology Report for Kilvinane Wind Farm (Cork Ecology, 2023).

Overall Conclusions

Appropriate Assessment Screening: Kilvinane Wind Farm

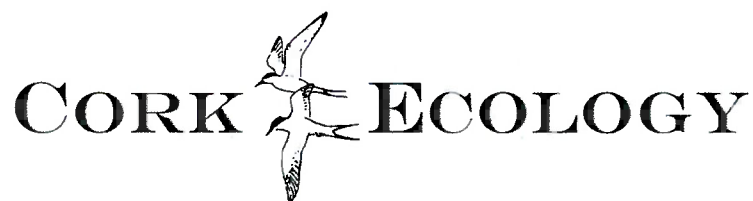
It is considered that the proposed replacement activities at Kilvinane Wind Farm will not cause any adverse direct impacts on the conservation objectives and qualifying interests of any SACs or SPAs listed in Table 1 above, based on the scale and short-term duration of the proposed replacement activities and the distance between the project and the designated sites.

Regarding potential indirect impacts and potential in-combination effects, it is considered that there will not be any significant indirect impacts or in-combination effects on these designated Natura 2000 sites.

REG. No. _____
PLANN. REG (WEST) DEPT
29 SEP 2023
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Ecology Report for

Kilvinane Wind Farm, Co. Cork



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REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
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1 Introduction

This report constitutes a review of the ecology at Kilvinane Wind Farm, Co. Cork as part of a planning submission to undertake replacement activities at two operating turbines. The site visit and report was produced by Colin Barton (BSc Honours Biology [Ecology]) of Cork Ecology.

The site visit for this report was undertaken on 26th May 2023. This follows on from initial site surveys in June, July and August 2010 (Cork Ecology, 2010) and September 2015 (Cork Ecology, 2016).

1.1 Outline of the development

The permission granted under 01/980 comprised four turbines with a hub height of 65m and a rotor diameter of 57m, anemometer, substation and associated roadways and crane-hardstanding areas. The permission was amended to a hub height of 60m and a rotor diameter of 56m for turbine T1 and to a hub height of 60m and a rotor diameter of 80m for turbines T3 and T4, all three of which have been erected and are operational on site. Turbine T2 has not been constructed to date. The remainder of the site comprises farmland.

A 20 KV overhead cable connects the wind farm to a substation at Enniskeane. The cable route is approximately 7 km in length.

1.2 Proposed Replacement Works

The objective of the proposed works is to complete replacement works on the wind turbine nacelle for T3 and T4. The Nacelle holds the mechanical and electrical control plant situated at the top of the turbine tower which generates electricity from the moving blades. The nacelle cover houses parts of the turbine such as the gearbox, gears, generator cooler etc. Cork Sustainable Energy Limited has been advised by the turbine O&M operator that the nacelle components require replacement and refurbishment.

It is not possible for the maintenance to be carried out in situ due to the space and access required and for health and safety reasons. A like for like refurbished nacelle is prepared off-site and will be installed during the same works as taking the existing nacelle down. This is the typical process for nacelle replacement works as the process reduces the time spent working at heights which reduces health and safety risks. To undertake these replacement works a crane will be delivered to site using the existing site infrastructure and hard stand areas. The existing blades will be safely removed, and the old nacelle component will be lifted off and replaced with a reconditioned nacelle which will be of a like-for-like scale and dimensions as the current nacelle. It will have a like-for-like profile & appearance and the existing nacelle support frame will be reused. The existing blades will then be reattached to the hub and the turbine powered on. No physical works are required to accommodate this works on site or to the local roads.

The nacelle replacement maintenance work programme is forecast to take 12-14 days. The work is to be conducted during standard business hours on weekdays.

2 Methods

A site visit was conducted on 26th May 2023. During the site visit, all bird species on site were recorded, along with any evidence of breeding activity. In addition, the habitats present within the site boundary were also recorded, to allow a comparison with habitats recorded on previous site visits in 2010 and 2015. Photographs around the site including access roads, turbine locations and hard stand areas were also taken, to allow visual comparison with photographs from the 2015 site visit.

3 Existing conditions

3.1 General landscape

The project site is located at Kilvinane, approximately 7 km east of Dunmanway, Co. Cork. This lowland landscape is dominated by livestock farming, predominantly cattle, and tillage production. Overall, the vegetation is that of lowland pasture land with limited biodiversity, which is restricted to hedgerows and treelines. The site slopes north towards Bandon River, which runs along the valley floor. Two small fast-flowing streams drain from the site into the Bandon River. The upper reaches are spring fed by non-calcareous springs. The eastern stream has characteristics of an eroding upland stream, while the western stream has been converted in places into a drainage ditch, although it is still classified as an eroding stream (Cork Ecology, 2010).

3.2 Conservation Designations

No conservation designations apply to the project site or the associated cable route to the Enniskeane substation. Thus this area does not form part of any Natural Heritage Area (NHA), Special Protection Area (SPA), candidate Special Area of Conservation (cSAC), Statutory Nature Reserve or National Park. There are eight designated conservation areas located within a 15 km radius of the development site (Table 3.1). A brief summary of the SAC and SPA site synopses are included below (NPWS 2023), while the full site synopses are included in Appendix A. Site synopses are not formally available for proposed Natural Heritage Areas (pNHA).

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P81 AT2E

Table 3.1 Distance to nearest designated conservation sites

Site	Code	Distance
Bandon River SAC & pNHA	002171	4.8 km West
Killaneer House Glen pNHA	001062	9.1 km North-west
Bateman's Lough pNHA	001037	10.5 km South-east
Gallanes Lough pNHA	001052	11.4 km South-east
Clonakilty Bay SAC & pNHA	000091	12.3 km South-east
Clonakilty Bay SPA	004081	12.3 km South-east
Bandon Valley west of Bandon pNHA	001034	13.9 km North-east
Rosscarbery Estuary pNHA	001075	14.8 km South

Bandon River SAC and pNHA (Site code 002171)

The site consists of relatively short adjoining stretches of the Bandon and Caha Rivers. These rivers flow in a southerly direction to the east of Dunmanway, Co. Cork. Towards the southern end of the site the Bandon River takes an easterly course. The predominant rock formations are Old Red Sandstone to the north and Carboniferous Slate stretching south of Dunmanway. Soils in the northern section consist of peats, podzols and skeletal soils. The southern section consists of alluvial soils and Brown Podzolics.

This SAC is important for a number of reasons. It contains a small though very important example of the Annex I priority habitat Alluvial Forest as well as good examples of another Annex I habitat - Floating River Vegetation. The Annex II animal species Otter, Salmon (*Salmo salar*), Brook Lamprey (*Lampetra planeri*) and Freshwater Pearl Mussel (*Margaritifera margaritifera*) occur. The populations of the Mussel are thought to be nationally important. The Kingfisher, listed under Annex I of the E.U. Birds Directive, breeds along the river. Wet broadleaved semi-natural woodland is found in an undisturbed area of braided river channels and islands below Dunmanway.

The NPWS list the qualifying habitats as *Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation* and *Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* and the qualifying species as *Lampetra planeri* and *Margaritifera margaritifera*.

Ecology Report for Kilvinane Wind Farm

Killaneer House Glen pNHA (Site code 001062)

Killaneer Glen is a linear wooded stream-valley, and is one of several steep-sided valleys cut by tributaries of the Bandon River. NPWS (2009) described the site as being “a relatively natural wood in an agricultural area and is of local value for this reason”.

Bateman's Lough pNHA (Site code 001037)

This is a small fluctuating lake north of Clonakilty. It has a firm shoreline, mostly of grassland, and little marginal vegetation except for some *Equisetum* sp (horsetails) and *Juncus* (rushes). Much *Apium inundatum* (marshwort) grows on temporarily flooded ground, however, and this provides a food source either directly or indirectly for wildfowl and invertebrates.

The site is regularly used by wildfowl species in winter, including mallard, wigeon, teal, pochard, tufted duck and whooper swan. Cormorants also sometimes fly in from the coast to fish. In the fields nearby, curlew, lapwing and golden plover occur regularly and black-tailed godwits at certain times of the year. The lake has a surprisingly varied bird fauna in winter and is locally important for this reason (NPWS, 2009).

Gallanes Lough pNHA (Site code 001052)

Gallanes Lough is a small waterbody beside the Clonakilty-Ballinascarty Road that occurs in a flat part of a stream valley. Up to 500 wildfowl having been recorded at times including Mallard, Wigeon, Coot, Mute Swan and sometimes Whooper Swans. Waders, including Snipe, Lapwing and Curlew, also feed on the marshy areas around the lake. This site is of ornithological interest because of the relatively high numbers of birds occurring within a small, easily accessible, site (NPWS, 2009).

Clonakilty Bay SAC & pNHA (Site code 000091)

Clonakilty Bay in west Cork is an intertidal expanse that stretches from Clonakilty to the open sea, and comprises two small estuaries separated by Inchydoney Island. The site also includes adjacent sand dunes and inland marshes, and therefore is a coastal complex with a good diversity of habitats.

Sand flats dominate the intertidal area, although mudflats occur at the sheltered upper end of the inlets. The vegetation consists of algal mats (*Enteromorpha* spp.), with brown seaweeds (*Fucus* spp.) occurring where the coast is rocky. The invasive Cord-grass (*Spartina* sp.) occurs in places. The intertidal flats have a typical diversity of macro-invertebrates, including *Arenicola marina*, *Scrobicularia plana*, *Hediste diversicolor*, *Nephtys hombergii*, *N. cirrosa*, *Hydrobia ulvae* and *Cerastoderma edule*.

Sand dunes grade from a strandline, colonised by Frosted Orache (*Atriplex laciniata*), Sea Sandwort (*Honkenya peploides*) and Sea Rocket (*Cakile maritima*), through to fixed dunes

Ecology Report for Kilvinane Wind Farm

vegetated by grasses, small herbs and several species of orchid. They support an interesting array of plants, amongst which Great Mullein (*Verbascum thapsus*), Viper's-bugloss (*Echium vulgare*) and Teasel (*Dipsacus fullonum*) are some of the most noticeable. Embryonic shifting dunes and white Marram (*Ammophila arenaria*) dunes are also represented. Of particular interest is a small area of decalcified dune heath with some Gorse (*Ulex europaeus*).

This site is of considerable scientific interest because it contains a good diversity of coastal habitats. These habitats show a succession from salt to freshwater influences and include six which are listed on Annex I of the E.U. Habitats Directive.

Clonakilty Bay SPA (Site code 004081)

Clonakilty Bay, which is located in west County Cork, is a wetland complex that stretches from the town of Clonakilty to the open sea. It comprises two small estuarine bays, Clonakilty Harbour and Muckross Strand, separated by Inchydoney Island and its empoldered isthmus. Several small rivers flow into the site, notably the Fealge River. At low tide, substantial areas of sand and mud flats are exposed.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Shelduck, Dunlin, Black-tailed Godwit and Curlew. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Clonakilty Bay SPA is of high ornithological importance, particularly for its internationally important population of Black-tailed Godwit. In addition, there are four species with populations of national importance. The presence of the E.U. Birds Directive Annex I species, Golden Plover, Bar-tailed Godwit, Little Egret and Short-eared Owl is of note.

Bandon Valley west of Bandon pNHA (Site code 001034)

This site is important as it contains remnants of broadleaved oak woodland. The Bandon Valley is especially valuable for its woodlands and unmodified river bed. The upper part of the Bandon River floods occasionally in winter and at such times attracts birds such as Lapwing and Curlew as well as Mallard and Teal. Cormorant and Heron fish throughout the course of the river (NPWS, 2009).

Rosscarbery Estuary pNHA (Site code 001075)

Rosscarbery Estuary stretches from the south-western end of the beach northwards to the causeway which runs across Rosscarbery Estuary to the south of Rosscarbery village. The estuary supports a variety of shorebirds in winter including nationally important numbers of Ringed Plover (average peak 226, 1984/85 - 86/87) and notable flocks of eleven other species, including Black-tailed Godwit (74), Curlew (805), Oystercatcher (94) and Greenhank (14) (NPWS, 2009).

3.3 Terrestrial habitats

The site survey visit was conducted on 26th May 2023, by Colin Barton of Cork Ecology. The weather was sunny, warm and dry, with excellent visibility and 3/8ths cloud.

The initial site survey in 2010 recorded the following habitats within Kilvinane Wind Farm (Cork Ecology, 2010). Habitat codes follow Fossit (2000).

- BC1 Arable crops
- GA1 Improved agricultural grassland
- BL3 Buildings and artificial surfaces
- WL1 Hedgerows
- WN6 Wet willow-alder –ash woodland

These habitats were again recorded within Kilvinane Wind Farm on the May 2023 site visit and are detailed below (Figure 3.1).

3.3.1 BC1 Arable crops

In May 2023, the fields adjacent to T1 had been planted with arable crops (Photo 5, Appendix A).

3.3.2 GA1 Improved agricultural grassland

This habitat type includes both grazing and silage production. Fields adjacent to T3 and T4 were of this habitat type (Photo 11 and Photo 12, Appendix A).

3.3.3 BL3 Buildings and artificial surfaces

This habitat type includes the access tracks, hardstand areas for cranes and the sites of the existing wind turbines (Appendix A)

3.3.5 WL1 Hedgerow

Along the eastern boundary of the wind farm site, adjacent to the access track, there is a mixed hedgerow mainly consisting of willows, alder and hawthorn, with an understory of bramble and occasional gorse (Photo 6, Appendix A).

3.3.6 WN6 wet willow-alder-ash woodland

To the north-east of the site access track between T1 and T3, there is a patch of wet willow–alder-ash woodland that is dominated by alder.

REC. NO. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SHIBDEN, Co. CORK P81 AT2E

Figure 3.1 Habitat map of Kilvinane Wind Farm, May 2023



3.4 Habitat values

The relative values of habitat types are detailed in Table 3.2 and Table 3.6. It should be noted the value of a habitat is site specific and will be partially related to the amount of that habitat in the surrounding landscape. The evaluation scheme used is based on the scheme detailed in the NRA publication *Guidelines for assessment of ecological impacts of National Road Schemes* (NRA 2006a).

REG. No. _____
 PLANNING (WEST) DEPT
 29 SEP 2023
 CORK COUNTY COUNCIL
 NORTON HOUSE, SULLISTRA, Co. CORK P81 AT28

Table 3.2 Habitat values within Kilvinane Wind Farm

Habitat Type	Relative Habitat Value	Comments
BC1 Arable crops	Low value E	This is a highly modified habitat and of little ecological value
GA1 Improved agricultural grassland	Low value E	This is a highly modified habitat and of little ecological value
BL3 Buildings and artificial surfaces	Low value E	This is a highly modified habitat and of little ecological value
WL1 Hedgerow	Moderate value D	Along eastern boundary of the wind farm site, adjacent to the access track, there is a mixed hedgerow mainly consisting of willows, alder and hawthorn.
WN6 wet willow-alder-ash woodland	Moderate value D	This is a natural habitat type that has developed along the streams, and lies to the north-east of the access track between T1 and T3, on the edge of the site. This is a transitional habitat type.

3.5 Mammals

3.7.1 Badger (*Meles meles*)

Signs of badger were noted in the central area of this site on the edges of an arable crop field on surveys on the 2010 survey. Latrines and periodic droppings of dung were recorded along the treelines of the field margins. Feeding signs and runs were also noted. Crossing points of earth banks associated with these runs were also recorded. Although some 500 meters of hedgerow and treeline was searched, no signs of a sett were detected. No evidence of badger activity was recorded on the 2023 site visit, however, as the habitats recorded within the wind farm site on the 2023 survey were similar to habitats recorded in 2010, it is considered badgers may still use the wind farm site.

3.7.2 Bats

The 2010 survey concluded that the wind farm site has hedgerows as well as nearby patches of woodland which may be of value for feeding bats. There are a number of older houses in this general area which could potentially provide roost sites. As the habitats recorded within the wind farm site on the 2023 survey were similar to habitats recorded in 2010, it is considered that the bat species using the site are likely to have remained similar.

3.7.3 Otter (*Lutra lutra*)

The 2010 survey concluded that neither of the streams that flow through the wind farm site were likely to be of any value to otter as they are small and are unlikely to support any prey species (Cork Ecology, 2010). The stream bordering the eastern side of the wind farm site remains small and is therefore considered unlikely to be suitable for otter.

3.7.4 Irish Hare (*Lepus timidus hibernicus*)

Although this species was not recorded within the wind farm site on surveys in 2010, 2015 or 2023, it may occur sporadically within the site.

3.7.5 Other mammals

Other mammals expected to occur within the wind farm site are fox (*Vulpes vulpes*), rabbit (*Oryctolagus cuniculus*), wood mouse (*Apodemus sylvaticus*), pygmy shrew (*Sorex minutus*), bank vole (*Clethrionomys glareolus*) and brown rat (*Rattus norvegicus*).

3.7.6 Other Fauna

Although no amphibians were noted from this site in surveys on the 2010 survey, it was concluded that common frog (*Rana temporaria*) may occur in the wet woodlands and their margins associated with the streams. Pools of standing or very slow flowing water may contain populations of smooth newt (*Triturus vulgaris*). As the habitats recorded within the wind farm site on the 2023 survey were similar to habitats recorded in 2010, it is considered that these species may still occur within the wind farm site.

3.6 Birds

2010 bird surveys

The June 2010 survey recorded a total of 19 species (75 birds) around the corresponding part of the original proposed site. The five most abundant species were House Sparrow (8.0%), Linnet (16.0%), Swallow (8.0%), Yellowhammer (8.0%) and Hooded Crow (6.7%). These five species accounted for 72.0% of all bird species recorded in the vicinity of the proposed site (Table 3.3).

The July 2010 survey recorded a total of 15 species (125 birds) around the corresponding part of the original proposed site. The five most abundant species were Linnet (21.6%), House Sparrow (17.6%), Jackdaw (12.0%), Rook (10.4%) and Wood Pigeon (7.2%). These five species accounted for 68.8% of all bird species recorded in the vicinity of the proposed site.

In addition, two Peregrines, an adult female and a juvenile bird (heard calling/begging), were seen flying west just outside the site on the July 2010 visit. There is no suitable breeding habitat within the site for Peregrine, and no suitable breeding locations were found in the immediate vicinity of the site.

the

May 2023 Survey

A total of 22 species (76 birds) were recorded during the May 2023 survey, within the wind farm site (Table 3.6). Rook was the most abundant species (22.4%), followed by Wren (9.2%), Chaffinch (8.0%) and Linnet (8.0%). Together these four species accounted for 47.4% of all birds recorded in May 2023 (Table 3.3).

A peregrine was seen flying south through the wind farm at turbine height and a Buzzard was recorded gliding through the site, before landing in the crop to the north of T1.

Overall, the numbers and species of birds recorded within the Kilvinane Wind Farm in 2010, 2015 and 2023 were similar, and it is concluded that there have been no substantial changes in species numbers and distribution over the period.

Status of birds of conservation concern within the site

BirdWatch Ireland (BWI) have recently revised their lists of species of high, medium and low conservation priority in Ireland (Gilbert *et al.*, 2021). There are currently 27 breeding species included on the Red List, which signifies species of highest conservation priority, with 13 Red-listed species listed for the winter season only. A further 11 species are Red-listed for both breeding and winter periods, while three species are Red-listed in the passage periods between breeding and winter. Rare and vulnerable bird species are also listed on Annex I of the E.U. Birds Directive (79/409/EEC).

No Annex I species were recorded within the Kilvinane Wind Farm site during breeding bird surveys in June and July 2010, although one Annex I species (Peregrine) was recorded flying west to the south of the site in July 2010. Evidence of a Peregrine kill (wood pigeon) within the site was recorded during the September 2015 survey. One Peregrine was seen flying through the wind farm site at turbine height on the May 2023 survey. The wind farm and immediate vicinity does not contain suitable breeding habitat for Peregrines, however, the site does offer suitable hunting habitat.

Although Peregrine is listed on Annex I of the EU Birds Directive (79/409/EEC), it is currently Green-listed by BWI. Green-listed species are described as having the "least conservation priority" (Gilbert *et al.*, 2021). A national survey of breeding Peregrines in 2002 concluded that the Peregrine population in the Republic of Ireland was at an "all time historic high" (Madden *et al* 2009).

Two BWI Red-listed species (Meadow Pipit and Yellowhammer) were recorded within the site during breeding bird surveys in June and July 2010. A total of 21 Meadow Pipits were recorded within the site on the September 2015 survey. No Yellowhammers were recorded within the site in September 2015. Meadow Pipit was not recorded within the site on the May 2023 survey, however three Yellowhammers were recorded during the survey (Table 3.3).

Ecology Report for Kilvinane Wind Farm

Meadow pipit is currently Red-listed by BWI as the conservation status of this species is considered to be of global conservation concern, however, there are no specific declines noted in Irish terms (Gilbert *et al.*, 2021).

Yellowhammer is currently Red-listed by BWI as the breeding population has declined by more than 50 % since 1980. In addition, there has been a moderate decline in the breeding range of between 35% to 69% since 1968 (Gilbert *et al.*, 2021).

4 Potential impacts of the proposed replacement activities

4.1 Terrestrial and aquatic habitats

Based on the scale and short-term, temporary nature of the proposed replacement activities, it is considered that there will not be any significant impacts on terrestrial and aquatic habitats in the vicinity of Kilvinane Wind Farm as a result.

The habitats in the immediate area of the turbines and access tracks are highly modified habitats with low species diversity and low wildlife value.

There will be no vegetation removal required as part of the replacement activities as the access roads and areas of hard stand are already in situ.

4.2 Mammals (including bats)

Based on the scale and short-term, temporary nature of the proposed replacement activities, it is considered that there will not be any significant impacts on mammals, including bats in the vicinity of Kilvinane Wind Farm as a result.

There will be no vegetation removal required as part of the replacement activities as the access roads and areas of hard stand are already in situ.

There may be some low level disturbance to the site by access vehicles and personnel during the proposed replacement of the turbines. However the disturbance caused by this impact will be of temporary duration and is considered to be an insignificant impact, comparable to regular farm machinery traffic in the vicinity.

4.3 Birds

Based on the scale and short-term, temporary nature of the proposed replacement activities, it is considered that there will not be any significant impacts on birds in the vicinity of Kilvinane Wind Farm as a result.

There will be no vegetation removal required as part of the replacement activities as the access roads and areas of hard stand are already in situ.

Ecology Report for Kilvinane Wind Farm

There may be some low-level disturbance within the site caused by access vehicles and personnel during the proposed turbine replacement activities. However, any disturbance arising from the proposed replacement activities will be of short-term, temporary duration and is considered to be an insignificant impact, comparable to regular farm machinery traffic in the vicinity.

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBERIDG, Co. CORK P61 RT28

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REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SIBBOLLEN, CO. CORK P81 AT26

APPENDIX A

Site Synopses for designated conservation sites

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P81 A2E

Ecology Report for Kilvinane Wind Farm

SITE NAME: Bandon River SAC and pNHA (Site Code 002171)

The Bandon River SAC consists of relatively short adjoining stretches of the Bandon and Caha Rivers. These rivers flow in a southerly direction to the east of Dunmanway, Co. Cork. Towards the southern end of the site the Bandon River takes an easterly course. The predominant rock formations are Old Red Sandstone to the north and Carboniferous slate stretching south of Dunmanway. Soils in the northern section consist of peats, podzols and skeletal soils. The southern section consists of alluvial soils and Brown Podzolics.

The east-west exposure of Old Red Sandstone to the north of Dunmanway displays distinct ridgelines of bare rock with poor pasture and scrub. In this area around Lovers Leap the Bandon River cuts a narrow channel southwards, cascading over a series of rock steps through a narrow valley. Below this and above Long Bridge the river widens and meanders through a fertile floodplain. Immediately south of Long Bridge the reduced flow gradient and broad, flat valley permit the main channel to split and extend into a network of braided streams forming islands.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[3260] Floating River Vegetation

[91E0] Alluvial Forests

[1029] Freshwater Pearl Mussel (*Margaritifera margaritifera*)

[1096] Brook Lamprey (*Lampetra planeri*)

Wet broadleaved semi-natural woodland is found in an undisturbed area of braided river channels and islands below Dunmanway. The river channels are well defined and the islands appear solid. Canopy dominants are Hazel (*Corylus avellana*) and Sessile Oak (*Quercus petraea*), with scattered Downy Birch (*Betula pubescens*), Ash (*Fraxinus excelsior*), Rusty Willow (*Salix cinerea* subsp. *oleifolia*) and Alder (*Alnus glutinosa*). There is a very sparse understorey composed of Hawthorn (*Crataegus monogyna*), Holly (*Ilex aquifolium*) and saplings of Hazel and Sessile Oak. Epiphytes are abundant on trees, including species such as Ivy (*Hedera helix*), Honeysuckle (*Lonicera periclymenum*) and bryophytes such as *Isoetecium myosuroides*. The ground flora is dominated by Ramsons (*Allium ursinum*), Wood Anemone (*Anemone nemorosa*) and Ivy, along with Lesser Celandine (*Ranunculus ficaria*) and Irish Spurge (*Euphorbia hyberna*). Goldilocks Buttercup (*Ranunculus auricomus*), a very rare plant in Co. Cork, has been recorded from this woodland.

Floating river vegetation is found along the length of the river and is dominated by water-crowfoots (*Ranunculus* spp). Other aquatic plants found include Alternate Water-milfoil (*Myriophyllum alterniflorum*), Broad-leaved Pondweed (*Potamogeton natans*) and at least four

water-starwort species (*Callitriche* spp.). Mosses present on rocks and attached to tree roots include *Fontinalis antipyretica* in slack flow areas, and *Fontinalis squamosa*, *Rhynchostegium riparioides* and *Amblystegium riparium* in moderate flows. The landward fringe of deep pools supports Yellow Water-lily (*Nuphar lutea*), Bogbean (*Menyanthes trifoliata*), Marsh-marigold (*Caltha palustris*), Water Mint (*Mentha aquatica*) and Fool's Water-cress (*Apium nodiflorum*). Shoreweed (*Littorella uniflora*) and Six-stamened Waterwort (*Elatine hexandra*) are two species of local importance which are found in the river. In moderate current flow below the Long Bridge, the larger stones are covered by the moss *Brachythecium rivulare* and the liverwort *Chiloscyphus polyanthos* var. *polyanthos*. Boulders covered in *Nostoc* algae are probably of local occurrence in Ireland. The liverwort *Riccardia chamaedryfolia* and the moss *Fissidens crassipes* found under the Long Bridge are considered to be rare in Ireland.

Heath in mosaic with wet grassland, exposed rock, scrub and improved grassland covers up to 30% of the site north of Long Bridge. Typical heath plants growing in association with the rocks are abundant Western Gorse (*Ulex gallii*), Heather (*Calluna vulgaris*), Bell Heather (*Erica cinerea*), Cross-leaved Heath (*Erica tetralix*), Tormentil (*Potentilla erecta*), Heath-grass (*Danthonia decumbens*), stonecrops (*Sedum* spp.), small amounts of St Patrick's-cabbage (*Saxifraga spathularis*) and many lichen species.

Some small areas of woodland occur within the site north of Long Bridge. Tree species such as Sessile Oak, Beech (*Fagus sylvatica*), Scots Pine (*Pinus sylvestris*) and Downy Birch are found with an understorey of Holly, Hazel, Rowan and Rusty Willow.

Two Red Data Book plant species have been recorded in the past from within or close to the site - Greater Broomrape (*Orobanche rapum-genistae*), a species that grows on the roots of legumes, and Small-white Orchid (*Pseudorchis albida*), a species of upland pastures and heaths that is protected under the Flora (Protection) Order, 1999.

The river below Long Bridge is an important inland site in Cork for Mute Swan and approximately 20 individuals are present throughout the year along this stretch. Several hundred Snipe use the site during the winter. Other birds seen regularly within the site are Grey Heron, Cormorant and Mallard, while low numbers of Lapwing and Teal visit during the winter. The Kingfisher, listed under Annex I of the E.U. Birds Directive, breeds along the river.

A population of Freshwater Pearl Mussel is found in the river. This species is listed on Annex II of the E.U. Habitats Directive. The river also supports populations of protected fish species, notably Brook Lamprey and Salmon (*Salmo salar*), both of which are also listed on Annex II of the E.U. Habitats Directive.

The site also supports many of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Badger, Irish Hare, Daubenton's Bat and Pipistrelle bat. The two bat species can be seen feeding along the river and roosting under the old bridges. Otter, another species listed on Annex II of the E.U. Habitats Directive, is also found within the site.

Ecology Report for Kilvinane Wind Farm

Land use at the site consists mainly of sheep grazing in the northern section and cattle grazing on improved grasslands below Lovers Leap and further south. In the area between Milleenanannig and Bealaboy Bridge land reclamation and drainage is taking place. In the area of exposed rock on the higher terrain above Ardcahan Bridge some land reclamation and forestry is carried out.

This site contains good examples of two habitats listed on Annex I of the E.U. Habitats Directive - alluvial forest and floating river vegetation - and supports populations of four Annex II species - Otter, Salmon, Brook Lamprey and Freshwater Pearl Mussel. The presence of a number of Red Data Book plant and animal species adds further interest to the site.

16/12/2013

Killaneer House Glen pNHA (Site code 001062)

Situated approximately 5km north-east of Enniskean, this is one of several steep-sided valleys cut by tributaries of the Bandon River.

On the west side of the stream a Hazel (*Corylus avellana*)/Ash (*Fraxinus excelsior*) wood has developed on a steep slope. Holly (*Ilex aquifolium*) is frequent and the acidic nature of the soil is shown by the presence of Bilberry (*Vaccinium myrtillus*), a little Great Wood-rush (*Luzula sylvatica*), Hard Fern (*Blechnum spicant*), Broad Buckler-fern (*Dryopteris dilatata*), Scaly Male-fern (*D. affinis*) and Male-fern (*D. filix-mas*). Silt derived from winter flooding occurs close to the stream and on this Hemlock Water-dropwort (*Oenanthe crocata*), Pignut (*Conopodium majus*) and Lesser Celandine (*Ranunculus ficaria*) are conspicuous with Hart's-tongue Thymemoss (*Plagiomnium undulatum*) and Shining Hookeria (*Hookeria lucens*).

To the east of the stream oak (*Quercus* spp.) trees replace the other types and Hayscented Buckler-fern (*D. aemula*) and Soft Shield-fern (*Polystichum setiferum*) become frequent. A small cliff above the stream supports Wilson's Filmy-fern (*Hymenophyllum wilsonii*).

The bird population in such a varied wood is quite rich and would include about 20 regular species.

Much refuse dumping has occurred beside the road and this makes the area unattractive and therefore unappreciated.

This is a relatively natural wood in an agricultural area and is of local value for this reason. Woods nearby have, in many cases, been planted with conifers.

9/12/2009

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SIBBLEHEN, CO. CORK P81 AT23

Bateman's Lough pNHA (Site code 001037)

Bateman's Lough is situated less than 1km south of Ballinascarty in west Cork. It is a small fluctuating lake close to Gallanes Lough but very different in character. It has a firm shoreline, mostly of grassland, and little marginal vegetation except for some horsetails (*Equisetum* spp.) and rushes (*Juncus* spp.). Lesser Marshwort (*Apium inundatum*) grows on temporarily flooded ground, however, and this provides a food source either directly or indirectly for wildfowl and invertebrates.

Wildfowl sometimes number 200 here and include Mallard, Wigeon, Teal, Pochard, Tufted Duck and Whooper Swan. Cormorants also sometimes fly in from the coast to fish here. In the fields nearby Curlew, Lapwing and Golden Plover occur regularly and Black-tailed Godwits at certain times of the year.

Due to the absence of marginal cover, the bird life at Bateman's Lough is very susceptible to disturbance. Any increase in the numbers of people or dogs in the area should be avoided. The lake would be more resistant than most to a lowered water level but, in view of its small size, this also should be prevented.

The lake has a surprisingly varied bird fauna in winter and is locally important for this reason. There are few sites inland in Cork with any numbers of wildfowl.

14/12/2009

Gallanes Lough pNHA (Site code 001052)

Gallanes Lough is situated approximately 1km north-west of Clonakilty, beside the Ballinascorthy road. The following description of the site is based largely upon the 1986 An Foras Forbartha County Report.

Gallanes Lough is a small waterbody occurring in a flat part of a stream valley. Bulrush (*Typha latifolia*), Water Horsetail (*Equisetum fluviatile*), Marsh Cinquefoil (*Potentilla palustris*) and Bottle Sedge (*Carex rostrata*) fringe the lake. Much of this vegetation is in the form of a floating mat which forms a transition zone between open water and wet grassland. This slightly acid grassland is dominated by rushes (*Juncus* spp.) and Creeping Bent (*Agrostis stolonifera*) with Royal Fern (*Osmunda regalis*), Common Sorrel (*Rumex acetosa*) and Ragged -Robin (*Lychnis flos-cuculi*) also common. A small amount of Eared Willow (*Salix aurita*) colonisation occurs.

Waterfowl find this lake attractive, with up to 500 wildfowl having been recorded at times including Mallard, Wigeon and sometimes Whooper Swans. The more recent NHA survey noted two additional species, namely Coot and Mute Swans. Waders, including Snipe, Lapwing and

Ecology Report for Kilvinane Wind Farm

Curlew, feed on the marshy areas around the lake with the recent survey noting Snipe as being particularly common.

An invertebrate of interest, a small water boatman (*Microvelia pygmaea*) has been recorded from the site and is thought to have been introduced by visiting waterfowl.

Improved farmland surrounds the site and fertiliser run-off may be leading to some enrichment of the lake waters. Agricultural improvements have taken place recently, while in the past some infilling of the lake margin has taken place close to the road. Further agricultural improvements, especially drainage, are a threat to the site.

This site is of ornithological interest because of the relatively high numbers of birds occurring within a small, easily accessible, site.

16/11/2009

Site Name: Clonakilty Bay SAC and pNHA (Site Code 000091)

Clonakilty Bay in west Cork is an intertidal expanse that stretches from Clonakilty to the open sea, and comprises two small estuaries separated by Inchydoney Island. The site also includes adjacent sand dunes and inland marshes, and therefore is a coastal complex with a good diversity of habitats.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[1140] Tidal Mudflats & Sandflats

[1210] Annual Vegetation of Drift Lines

[2110] Embryonic Shifting Dunes

[2120] Marram Dunes (White Dunes)

[2130] Fixed Dunes (Grey Dunes)

[2150] Decalcified Dune Heath

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, CO. CORK P81 AT2E

Sand flats dominate the intertidal area, although mudflats occur at the sheltered upper end of the inlets. The vegetation consists of algal mats (*Enteromorpha* spp.), with brown seaweeds (*Fucus* spp.) occurring where the coast is rocky. The invasive Cord-grass (*Spartina* sp.) occurs in places. The intertidal flats have a typical diversity of macro-invertebrates, including *Arenicola*

Ecology Report for Kilvinane Wind Farm

marina, *Scrobicularia plana*, *Hediste diversicolor*, *Nephtys hombergii*, *N. cirrosa*, *Hydrobia ulvae* and *Cerastoderma edule*.

Sand dunes grade from a strandline, colonised by Frosted Orache (*Atriplex laciniata*), Sea Sandwort (*Honkenya peploides*) and Sea Rocket (*Cakile maritima*), through to fixed dunes vegetated by grasses, small herbs and several species of orchid. They support an interesting array of plants, amongst which Great Mullein (*Verbascum thapsus*), Viper's-bugloss (*Echium vulgare*) and Teasel (*Dipsacus fullonum*) are some of the most noticeable. Embryonic shifting dunes and white Marram (*Ammophila arenaria*) dunes are also represented. Of particular interest is a small area of decalcified dune heath with some Gorse (*Ulex europaeus*).

Inland of the western estuary, an extensive area of wetland occurs, which in itself contains a fine range of habitats from saline lagoons, to brackish grasslands, open freshwater marsh and Alder (*Alnus glutinosa*) scrub. Species found here are characteristic of marshy areas and include Creeping Bent (*Agrostis stolonifera*), Water Horsetail (*Equisetum fluviatile*), Marsh Cinquefoil (*Potentilla palustris*) and Marsh Willowherb (*Epilobium palustre*). The saline influence is evident by the occurrence of species such as Saltmarsh Rush (*Juncus gerardi*) and Sea Rush (*J. maritimus*).

The site contains a good diversity and density of waterfowl, with over 7,000 waders and wildfowl occurring regularly. Seven species have populations of national importance: Shelduck (168), Grey Plover (76), Lapwing (2,509), Dunlin (1,508) Curlew (1,231), Redshank (263) and Greenshank (27). The site is most noted, however, for its population of Black-tailed Godwit (866), which is of international importance and comprises over 10% of the national total. Amongst the other species which occur, there are notable populations of Golden Plover and Bar-tailed Godwit, both of which are listed on Annex I of the E.U. Birds Directive. All counts given are average winter peaks over either two or three seasons from 1994/95 to 1996/97.

Hérons commonly use the site and a heronry exists in the trees near Clonakilty.

Otter spraints were found frequently during a recent survey of the marsh area. This species is listed on Annex II of the E.U. Habitats Directive.

The site is under pressure from a number of sources, notably recreation and tourism developments and agricultural improvements, including drainage and fertiliser application.

This site is of considerable scientific interest because it contains a good diversity of coastal habitats. These habitats show a succession from salt to freshwater influences and include six which are listed on Annex I of the E.U. Habitats Directive. Its value is enhanced considerably by the birdlife it supports. The occurrence of Black-tailed Godwit in internationally important numbers is particularly significant. The site also supports nationally important numbers of seven other species of waterfowl as well as two species listed on Annex I of the E.U. Birds Directive.

8/7/2013

Clonakilty Bay SPA (Site Code 004081)

Clonakilty Bay, which is located in west County Cork, is a wetland complex that stretches from the town of Clonakilty to the open sea. It comprises two small estuarine bays, Clonakilty Harbour and Muckross Strand, separated by Inchydoney Island and its empoldered isthmus. Several small rivers flow into the site, notably the Fealge River. At low tide, substantial areas of sand and mud flats are exposed. The construction of a causeway across the inner part of Muckross Strand created an extensive wetland complex known as Cloheen Strand Intake. The site also includes a well-developed sand dune system, with embryonic dunes, marram dunes, fixed dunes and decalcified dune heath all represented. The dune types, as well as the intertidal sand and mud flats, are habitats that are listed on Annex I of the E.U. Habitats Directive.

Intertidal sand and mud flats occupy the majority of the site area and these provide the main food resource for the wintering waterfowl. Sand flats dominate the inter-tidal area, although mud flats occur at the sheltered upper end of the inlets. The vegetation consists of algal mats (*Enteromorpha* spp.), with brown seaweeds (*Fucus* spp.) occurring where the shore is rocky. The invasive Common Cord-grass (*Spartina anglica*) occurs in places. The intertidal flats have a typical diversity of macro-invertebrates, including Lugworm (*Arenicola marina*), Peppery Furrow-shell (*Scrobicularia plana*), Ragworm (*Hediste diversicolor*), the marine bristle worms *Nephtys hombergii* and *N. cirrosa*, Laver Spire-shell (*Hydrobia ulvae*) and Common Cockle (*Cerastoderma edule*).

The Cloheen Strand Intake wetland contains a fine range of habitats from saline lagoons, to brackish grasslands, open freshwater marsh and wet grassland. The saline influence is evident by the occurrence of species such as Saltmarsh Rush (*Juncus gerardi*) and Sea Rush (*J. maritimus*). This area provides the main roosting area for birds at high tide. Birds also roost elsewhere above the shoreline and on the sandy beach associated with the dune system at Inchydoney Island.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Shelduck, Dunlin, Black-tailed Godwit and Curlew. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site contains a good diversity of wintering waterbirds, with over 8,000 birds occurring regularly. The site is noted for its internationally important population of Black-tailed Godwit (888) - all count data refers to the 5-year mean peak 1994/95- 1998/99. The ecology of this population has been studied in detail in recent years. Four species occur in nationally important numbers: Shelduck (155), Dunlin (1,303), Curlew (848) and Greenshank (31). Other species occurring in significant numbers are Mute Swan (48), Wigeon (530), Teal (192), Oystercatcher (338), Ringed Plover (97), Golden Plover (865), Grey Plover (66), Lapwing (2,135), Knot (158), Bar-tailed Godwit (76) and Redshank (263). The site is also used by Mallard (97), Turnstone (48), Red-breasted Merganser (11) and Cormorant (13).

29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, BRIDEWELL, CO. CORK P81 AT2E

Ecology Report for Kilvinane Wind Farm

The regular occurrence of Golden Plover and Bar-tailed Godwit is of note as both are listed on Annex I of the E.U. Birds Directive. An additional species listed on Annex I of this directive that has become regular in small numbers in recent years is Little Egret (average 5, maximum 7). Grey Heron (14) commonly uses the site and a heronry is located in the trees near Clonakilty. Cloheen Strand Inlet is also a regular wintering site for usually up to 3, but occasionally 7, Short-eared Owl, also an Annex I species.

The site is a regular staging post for scarce autumn migrants, especially Little Stint, Curlew Sandpiper and Spotted Redshank. In most years it is also visited by vagrant waders from North America.

Clonakilty Bay SPA is of high ornithological importance, particularly for its internationally important population of Black-tailed Godwit. In addition, there are four species with populations of national importance. The presence of the E.U. Birds Directive Annex I species, Golden Plover, Bar-tailed Godwit, Little Egret and Short-eared Owl is of note. The bird populations have been monitored since the 1970s and the site is counted monthly each winter (September to March) as part of the Irish Wetland Bird Survey (I-WeBS).

30/8/2007

Bandon Valley west of Bandon pNHA (Site code 001034)

The Bandon River flows almost due east for much of its course, following a natural synclinal valley that itself extends to Cloyne in East Cork. At Inishannon however, the river turns abruptly to the south crossing several ridges before reaching the sea at Kinsale. The interest of the valley lies partly in its aquatic habitats since the river has not been deepened artificially as is so often the case. Four Areas of Scientific Interest are located along the river. This site covers a section of river approximately 3km in length running downstream to within 1km west of Bandon. The Castlebernard Estate woodlands run along sections of the bank here.

The banks of the river have old estate woodlands with mature oak (*Quercus* spp.) and some Ash (*Fraxinus excelsior*). Rhododendron (*Rhododendron ponticum*) and Cherry Laurel (*Prunus laurocerasus*) invasion is occurring but as yet is not widespread. Felling of woodlands in this area has recently been widespread and hence greater importance can be placed on the remaining areas.

The 1986 An Forbas Forbatha report notes that the upper part of the Bandon River, before it sinks into a narrow gorge at Bandon, floods occasionally in winter and at such times attracts birds such as Lapwing and Curlew as well as Mallard and Teal. Cormorant and Heron fish throughout the course of the river.

Ecology Report for Kilvinane Wind Farm

The Bandon Valley is reported to have Otters in many places, a species listed on Annex II of the EU Habitats Directive as it is threatened within the EU.

The main land uses within the site are tree felling and clearing. This has much reduced the area of interest in recent years. Fishing is also important in this area. This site is important as it contains remnants of broadleaved oak woodland. The Bandon Valley is especially valuable for its woodlands and unmodified river bed, a rare enough habitat in a European context.

16/11/2009

Rosscarbery Estuary pNHA (Site code 001075)

Rosscarbery Estuary, situated on the west Cork coast, is a sea inlet fed by small rivers from the north and north-west. The northern part of the estuary, above the causeway carrying the Skibbereen road, is maintained as a lake by a weir but the southern empties and fills normally on the tide. The mouth of the inlet is nearly closed by a broad spit of sand behind Creggan Strand but above this there are extensive sand flats where quays and a training wall indicate a former maritime importance. Currently the site is used for growing young oyster stock in cages.

Much of the boundary of the site follows the roads but there are three places where the vegetation of adjacent ground is interesting. One is the Creggan Spit itself where a new dune ridge extends westwards into the channel. Marram (*Ammophila arenaria*) is scattered over this ground with such beach plants as Prickly Saltwort (*Salsola kali*), Frosted Orache (*Atriplex laciniata*) and Sea Bindweed (*Calystegia soldanella*). With stability Kidney Vetch (*Anthyllis vulneraria*), False Oat-grass (*Arrhenatherum elatius*), Bulbous Buttercup (*Ranunculus bulbosus*) and Pyramidal Orchid (*Anacamptis pyramidalis*) occur in noticeably mossy grassland.

Northwards this community runs into a sheltered saltmarsh where Saltmarsh Rush (*Juncus gerardi*) and Sharp Rush (*J. acutus*), or Common Saltmarsh-grass (*Puccinellia maritima*) dominate the ground. There are also sedges such as Distant Sedge (*Carex distans*) and Long-bracted Sedge (*C. extensa*), Common Fleabane (*Pulicaria dysenterica*) and Hard-grass (*Parapholis strigosa*) which is relatively rare on the Cork coast.

The western cliffs around Downeen Point are covered by maritime heath with a high species content. The community varies from a classical Autumn Gorse (*Ulex gallii*) stand with Purple Moor-grass (*Molinia caerulea*), Wood Sage (*Teucrium scorodonia*) and Slender St John's-wort (*Hypericum pulchrum*) to a more open grassy cover of fescues (*Festuca rubra*, *F. ovina*) and Cock's-foot (*Dactylis glomerata*) with Wild Carrot (*Daucus carota*), Common Bird's-foot-trefoil (*Lotus corniculatus*) and sorrels (*Rumex acetosa*, *R. acetosella*) abundant. This is partly subject to spray during storms and Rock Sea-spurrey (*Spergularia rupicola*), Common Centaury (*Centaureum erythraea*), Eyebright (*Euphrasia tetraquetra*) and Common Scurvygrass (*Cochlearia officinalis*)

Ecology Report for Kilvinane Wind Farm

occur at random through the turf because of this input. Red Bartsia (*Odontites vernus*) occurs on maritime rocks in one of its native forms.

The estuary supports a variety of shorebirds in winter like many of the Cork inlets. Only Ringed Plover (average peak 226, 1984/85 - 86/87) reach numbers of national importance but there are notable flocks of eleven other species, among them Black-tailed Godwit (74), Curlew (805), Oystercatcher (94) and Greenshank (14). A feature of the site is the fluctuation of bird numbers recorded, perhaps because of the relatively small size of the estuary and the possibilities of disturbance. For example in the five recent counts (1984-87) there were no Ringed Plover present on three occasions while the total varied between 440 and 11 on the other two. In a previous series of counts the total peak wader number was 1400 in 1971/72 and 400 in 1974/75.

17/11/2009

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SHIBBEREDH, Co. CORK P81 AT28

APPENDIX B

Site photographs

REG. No. _____
PLANNING (WEST) DEPT
29 SEP 2023
CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK P81 AT26

Photograph 1. Location of T1 (with T3 & T4), September 2015



Photograph 2. Location of T1 (with T3 & T4), May 2023



Photograph 3. Location of T1, September 2015



Photograph 4. Location of T1, May 2023



Photograph 5. T1 and adjacent arable fields, May 2023



Photograph 6. Access track on east side of site, looking south to T3 & T4, May 2023



Ecology Report for Kilvinane Wind Farm

Photograph 7. Location of T3 (and T4), September 2015



Photograph 8. Location of T3 (and T4), May 2023



Photograph 9. Location of T4 (and T3), September 2015



Photograph 10. Location of T4 (and T3), May 2023



20 SEP 2023
CORK COUNTY COUNCIL
NORFOLK HOUSE, SKIBBERIDG (WEST) DEPT

Ecology Report for Kilvinane Wind Farm

Photograph 11. Location of T4 (and T3 & T1), May 2023



Photograph 12. T3 and T4 and adjacent arable and grazing fields, May 2023



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