An Bord Pleanála

Inspector's Report

ABP-309412-21

Development	Amendments to Knocknamona Windfarm previously authorized under An Bord Pleanala Ref No. PL93.244006. The application is accompanied by an Environmental Impact Assessment Report and Appropriate Assessment Reporting. Revised EIAR and NIS received with appeal.
Location	Knocknaglogh Lower/Barranastook Upper/, Knocknamona/Woodhouse or Tinakilly/, Monageela/Killatoor townlands, Dungarvan Co Waterford.
Planning Authority	Waterford City and County Council
Planning Authority Reg. Ref.	20845
Applicant(s)	Knocknamona Windfarm Limited
Type of Application	Permission
Planning Authority Decision	Refuse Permission
Type of Appeal	First and Third Party

Appellant(s)	Knocknamona Windfarm Limited Michael and Giancarla Alen Buckley Wild Ireland Defence Company
Observer(s)	Tom and Moya Power
Date of Site Inspection	3rd December, 2021.
Inspector	Stephen Kay

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1.0 Site Location and Description

1.1. The appeal site is located c. 12km to the west of Dungarvan, in the Drumhills, an elevated area of largely forested uplands to the west of Dungarvan. The closest settlements to the site are Aglish village that is located c.3km to the west and Villierstown which is located c. 5km to the north west. The site is located a short distance to the east of the R671. The N72 national road is located c.5km to the north.

1.2. The topography of the wider area is dominated by the Knockmealdown Mountains to the north of Tallow/Lismore/Cappoquin and the Commeragh Mountains to the North of Dungarvan. The peaks of both these ranges rise to between 600m and 700m. To the north of these ranges is the valley of the River Suir. The other major topographical feature in the vicinity is the valley of the River Blackwater, which runs north to south to the west of the site at a distance of c.6km at the closest point. Villierstown and Cappoquin are located on or close to the Blackwater and the Blackwater Valley is the location of a number of historic houses, gardens and other historic features.

1.3. The highest peak within the site rises to 206m, whereas Kilnafarna Hill to the southeast rises to 263m and the more isolated Carronadavderg to the south rises to 301m.

1.4. The Goish River drains the valley between the subject site and Carronadavderg to the south. Further to the south again is the catchment of the River Lickey. Both these rivers drain to the Blackwater. To the north of the site, the River Brickey drains in the opposite direction, running east to the sea at a point to the south of Dungarvan

1.5. The wider area in the vicinity of the site is characterised by a rural area with a dispersed population. There are no houses in close proximity to the site, with the main cluster of residential properties located to the west in the vicinity of Woodhouse crossroads and north west in the townland of Keereen Lower and along local roads to the north in the Ballymulalla area.

1.6. The environs of the site are characterised by two existing infrastructure developments, the Woodhouse Windfarm (referred to in this report as the WWF) which is located to the north west of the appeal site and which comprises 8 no. turbines, hardstanding areas, access roads and associated works and the Woodhouse Substation which is located in the townland of Keereen Upper a short distance to the north of the appeal site.

1.7. The site of the proposed development is the subject of an extant permission for the development of an additional 8 no. wind turbines and this permission was granted under Waterford County Council Ref. 14/600109 and An Bord Pleanala Ref. PL93.244006. This permitted windfarm development, Knocknamona windfarm, is referred to hereafter in this report as KWF. A full outline of the planning history of the appeal site and surrounding lands is set out in section 5.0 of this report below. It should also be noted that a grid connection for the permitted Knocknamona Windfarm (An Bord Pleanala Ref. ABP-306497-20) was granted permission by the Board in February, 2021. This permission provides for a connection between the permitted Knocknamona Windfarm (KWF) and the constructed Woodhouse substation as well as for the use of the internal Woodhouse Windfarm access roads to be used for construction access for the Knocknamona windfarm. This grant of permission is the subject of current judicial review proceedings. The planning status of the operational Woodhouse Windfarm is also the subject of ongoing legal proceedings relating to amongst other issues the scale of the turbines installed.

1.8. The site itself comprises largely commercial forestry which are at various stages of maturity and significant areas that have been clear felled. The turbine locations are connected by unsurfaced forestry roads and these forest tracks connect with the public road network to the south of the site at Knocknagolagh Lower, to the west in the vicinity of Woodhouse Crossroads and to the north at Keereen Upper.

1.9. The stated area of the appeal site as per the planning application form on file is 70.5 ha. It is noted that this stated site area is approximately 5.4 ha. larger than the area indicated for the previous application (ABP Ref. PL93.244006).

2.0 **Proposed Development**

2.1. The proposed development comprises amendments to the Knocknamona Windfarm permitted under An Bord Pleanala Ref. PL93.244006 consisting of

(a) An increase in the tip height of the 8 no. previously permitted wind turbines from 126 metres to 155 metres.

(b) Amendment to the height and design of the previously permitted meteorological mast from a tubular tower mast up to 80 metres in height to a lattice tower mast of up to 99 metres in height.

The application is accompanied by an Environmental Impact Assessment Report and a Natura Impact Statement.

2.2. As is detailed in Section 6.1 of this report below which summarises the grounds of appeal, as part of the first party appeal a reduction in the height of the turbines is presented as an option for consideration by the Board and the appeal is accompanied by an amended EIAR and by an Appropriate Assessment. The following table summarises the information presented regarding the turbine dimensions as per the permitted development, the proposed amendment and then the revised amendment put forward as part of the first party appeal.

	Overall Height (metres)	**Hub Height (metres)**	**Rotor Diameter (metres)**	**Met Mast Height (metres)**
Extant Permission (ABP Ref. PL93.244006)	126	81.6	90	80
Proposed Amendment (e.g. Vestas V126)	155	86 – 95	112 – 126.7	99
Revised Proposal as per First party Appeal (e.g. Vestas V117)	146.3		117	

2.3. The description of the proposed development states that the works relate solely to the changes to the height of the turbines and the meteorological mast on the site. Stated that no changes to the location of the turbines are proposed and that the foundation footprints would remain the same.

2.4. The EIAR indicates that the purpose of the proposed development is to increase the energy output to that which was originally proposed on the site under Ref. 14/600109 / ABP PL93.244006 (12 no. turbines) prior to the revisions to the layout on foot of the appeal with the omission of 3 no. turbines and the omission of a further 1 no. turbine in the grant of permission issued by the Board.

2.5. A letter of consent from Coilte and Mr Anthony Shalloe to the making of the application was submitted.

3.0 Planning Authority Decision

3.1. Decision

The Planning Authority issued a Notification of Decision to Refuse Permission for two reasons which can be summarised as follows:

1. That, notwithstanding the location of the development within a strategic area for wind energy, the applicant has failed to demonstrate that the proposed development would not have a detrimental impact on the visual and residential amenities of the local area and the wider 'visual catchment' and would not conflict with the policies and objectives of the plan with regard to landscape protection including the location of the site within an area identified as visually sensitive and visually vulnerable with protected views. The proposed development would therefore have negative impacts on the built and natural heritage of the area and would be contrary to the proper planning and sustainable development of the area.

2. That the Planning Authority have serious concerns with regard to the adequacy and robustness of the EIAR and AA Screening reports submitted with the application. In particular, the EIAR has been prepared and is predicated on amendments to the original grid connection and haul routes which have not been authorised by a grant of planning permission and the EIAR and AA Screening both contain gaps which mean that it is not possible to conclude that the proposed development would not adversely affect the receiving environment or have potential for significant effects on the Natura 2000 Network.

3.2. **Planning Authority Reports**

3.2.1. Planning Reports

The report of the planning officer notes the significant planning history to the site and environs and also the significant number of third party appeal submissions received. The internal and external specialist reports received are also noted in particular that from the Heritage Office which highlights potential issues regarding ex situ impacts on birds arising from the increased height / scale of the turbines. The report of the Planning Officer highlights a number of areas of concern regarding he EIAR submitted. Specifically, the reports notes the fact that the alternative grid connection via Woodhouse Windfarm and haul route which are incorporated into the EIAR were not permitted at the time of assessment. Regarding visual impacts, the method of presentation of the information in the EIAR is questioned by the Planning Officer and it is not agreed that the proposed development would result in unchanged visual impacts locally and within the Blackwater Valley given the scale of increase proposed. Given the fact that the proposal is based on a grid connection and haul route that was not permitted, the development is considered to be at best premature or at worst misleading.

The overall robustness of the application / EIAR is also questioned and it is stated that the applicant was advised at pre application stage that a single application for the overall development should be submitted. Also stated that the method of assessment is considered to be inadequate and that the

references to no change in previous impact are frequently not adequately supported. Refusal of permission consistent with the Notification of Decision which issued is recommended.

3.2.2. Other Technical Reports

Environment Section – Report notes that the application documentation makes frequent references to changes in turbine technology since the date of the original application on the site but notes that no reference is made to the evolving noise environment and specifically the 2019 draft planning guidelines. These guidelines reference background noise and it is noted that while the HSE recommended that a baseline noise assessment be undertaken no such assessment has been undertaken since 2014. Stated that it is not therefore considered possible to assess the application.

Transportation / District Engineer – Report raises a number of issues including road and bridge condition surveys, submission of a traffic impact assessment, requirement for a road safety audit and road bond as well as surface water requirement. Stated that surface water requirements for windfarms to be assessed and submitted for review and approval and that the impact of surface water requirements on roads to be assessed and submitted for approval. Sightlines at the site entrance to be demonstrated in accordance with the requirements of the development plan.

Heritage Officer – Report notes that the conclusion of the AA Screening prepared for the proposed development is that the proposed amendments to the permitted development would not be such as to have likely significant effects on any European site. Noted that the Heritage Office assessment of the original application concluded that the proposed development would not give rise to significant effects on flora or fauna and the natural environment. Mitigation measures in the EIS were considered appropriate and sufficient to address the potential for adverse impacts on risk of collision to local bat populations and risk of runoff.

States that the conclusions of the 2014 NIS are reasonable and that the no adverse impacts on the integrity of any European sites are expected to arise.

On an ex situ basis, the proposed development could however have impacts on larger bird species such as whooper swan arising from the increased rotor diameter and the increased risk of bird strikes. Noted that the Section 5.35 of Annex II in Chapter 8 of the EIAR states that no whooper swans were recorded flying within 500 metres of the windfarm site and that there is no suitable roosting or foraging habitat within the windfarm site. Given the occurrence of the species in proximity to the site, and the known presence of the species along the River Suir in the Coolfin and Derrigal Marshes near Portlaw and also in the Tramore area it is concluded that further information is required on the movement of the species in County Waterford before concluding that there is no risk of bird collision from the increased hub height and rotor diameter.

3.3. **Prescribed Bodies**

Development Applications Unit – Regarding archaeology recommended that a condition relating to archaeological monitoring of groundworks be attached to any grant of permission. There is no record of comments from the DAU relating to nature conservation.

An Taisce – Submission received which raises issues regarding landscape impact on the Blackwater Valley and demesne landscapes, cumulative impact with the Woodhouse windfarm, impacts on bats and birds and cumulative impacts with the Woodhouse windfarm which was identified in the Board inspectors report on Ref. PL93.244006 as a significant issue (specifically under the heading of noise).

Irish Georgian Society – requests that permission would be refused on the basis of the development would have a significant detrimental effect on this picturesque landscape. Views from Strancally Castle, Tourin House and headborough House are particularly noted and would be impact the landscape setting of these protected structures. The proposal would be contrary to the conservation objectives of the County Development Plan (see 8.30) and scenic routes, two of which would be directly impacted by the proposed development.

Irish Aviation Authority – Details conditions to be attached in the event of a grant of permission.

HSE Environmental Health Services Office – stated that what was assessed by the office was restricted to the changes arising from the proposed increase in turbine height. Issues relating to the protection of surface and ground water and emissions to air are not considered likely to change. Noted that additional mitigation relating to shadow flicker and specifically a shadow flicker control module to shut down turbines that potentially impacting houses within ten rotor diameters. Noted that predicted noise would be within the permitted noise limits as per PL93.244006. Overall not considered that the proposed alterations would have any likely significant public health impacts.

3.4. Third Party Observations

A significant number of third party observations were submitted to the Planning Authority. The following is a summary of the main issues raised in these submissions:

- Visual impact and impact on sensitive landscapes and views,
- The visual assessment / photomontages submitted are misleading.
- Noise nuisance and disturbance,
- Shadow flicker,
- Health implications,
- Outstanding legal issues relating to Woodhouse Windfarm, Barnafaddock Windfarm and the Knocknamona grid connection.
- Issues regarding the validity of the application,
- Inadequate EIAR and AA screening and requirement for Stage 2 appropriate assessment,
- Precedent that would be created,

- Legal issues relating to the lack of a grid connection permission, ability to implement any permission given that the grid connection application assessed cumulative impacts with the original windfarm.
- Impact on tourism and culture,
- Negative impact on ecology including birds,

4.0 Planning History

The following planning history is noted:

Knocknamona Wind Farm

Waterford City and County Council Ref. 14/600109; ABP Ref. PL93.244006 – Permission refused by the Planning Authority but granted on appeal by the Board to Eco Power Developments Limited for the construction of a windfarm development comprising 8 no. wind turbines (reduced by Condition No.2 from 12 to 8), overall height of up to 126.6 metres, 1 no. meteorological mast up to 80 metres in height with wind measuring equipment attached, access roads, electrical substation compound, equipment and control building and ancillary site works all on lands in the townlands of Knocknaglogh Lower / Barranastook Upper / Knocknamona / Woodhouse or Tinakilly / Monageela / Killatoor, Dungarvan, Co. Waterford. Prior to the issuing of its decision, the Board requested further information relating to three items as follows:

- Further consideration of the potential environmental impacts arising from the road widening works required to facilitate construction access to the site,
- The method of assessment of shadow flicker,
- The absence of the identification of a specific grid connection corridor / options and method and that, having regard to the judgement of the High Court in O'Grianna and others v An Bord Pleanala, details of a grid connection and the potential cumulative impacts

It is noted that this permission relates to the development within the windfarm site and not specifically a grid connection

In the context of the current appeal, the following conditions attached to this grant of permission are also noted:

- Condition No.2 attached to the grant of permission requires the omission of 4 no. turbines (T5, T9, T11 and T12) with the stated reason being the prevention of injury to residential amenities of dwellings in the vicinity and to protect these dwellings from excessive noise and / or shadow flicker.
- Condition No.7 requires, inter alia, that noise from the development would be restricted to 5 dB(A) above background noise levels or 43 dB(A) L90,10min when measured externally at dwellings or other sensitive receptors and that prior to commencement of development, the developer shall submit to and agree in writing with the planning authority a noise compliance monitoring programme for the subject development, including any mitigation measures such as the de-rating of particular turbines.
- Condition No.8 restricts shadow flicker to 30 hours per year or 30 minutes per day and also requires that prior to the commencement of development a report shall be prepared by a suitably qualified person in accordance with the requirements of the planning authority, indicating compliance with the above shadow flicker requirements at dwellings, with further such reports within 12 months of commissioning of the proposed wind farm, and at reasonable intervals thereafter when requested by the planning authority.
- Condition No.10 relates to roads and requires information to be submitted for the agreement of the Planning Authority including, inter alia, a transport management plan and a road condition survey of the proposed haul route.
- Condition No.11 requires the submission and agreement of a detailed site restoration plan.

Knocknamona Wind Farm Grid Connection

An Bord Pleanala Ref. 24.VC0112 – Pre application consultation determined by the Board that development comprising underground 110kv cabling and ancillary works to connect the permitted Knocknamona Windfarm substation to the existing Woodhouse Transmission System 110kv station at Knocknamona and Keereen Upper Td, County Waterford did not come within the scope of s.182A of the Act and that the application should therefore be made to the Planning Authority in the first instance.

Waterford City and County Council Ref. 19/369; An Bord Pleanala Ref. ABP-306497-20 – Permission granted by the Planning Authority and decision upheld on appeal for the development of a grid connection to serve the Knocknamona Windfarm permitted under ref. PL93.244006. The grid connection route permitted under this permission is via the existing Woodhouse substation that is located in the townland of Keereen Upper a short distance to the north of the Knocknamona Windfarm site. The permission also included for a construction access route to the Knocknamona Windfarm site via the constructed Woodhouse windfarm access roads with construction access coming from the R.671 via Clogh Cross roads to the west of the site. This permission is currently the subject of judicial review proceedings.

Woodhouse Wind Farm

Waterford City and County Council Ref. 04/1788 – Permission granted by the Planning Authority to Hibernian Wind Power for the development of an 8 no. turbine wind farm in the townlands of Woodhouse / Tinakilly, Keereen Upper, Ballygambon Upper and Knocknamona. The permitted turbines had a tower / hub height of 70 metres and blades of 42 metres in length, with an overall structure height of 112 metres. This grant of permission was not the subject of appeal, and the application was accompanied by an EIS. The development is known as the Woodhouse wind farm.

Waterford City and County Council Ref. 10/45 – Permission granted by the Planning Authority to ESB Wind Development Limited for modifications to the wind farm permitted under Ref. 04/1788 comprising an increase in permitted tower height (70m to 80m) and blade length (42m to 45m) minor re-alignments of internal access tracks: relocation of four turbines.

Neither Refs. 04/1788 nor 10/45 were the subject of appeal to An Bord Pleanala.

Waterford City and County Council Ref. 10/175 – Permission granted by the Planning Authority to ESB Wind Development Limited for extension of duration of permission Ref. 04/1788. Permission extended up to 23rd May 2015.

Woodhouse Sub Station

Waterford City and County Council Ref. 09/642 – Permission granted by the Planning Authority to ESB Wind Development Limited for the construction of a 110kv electrical transformer station on a site of 3.6 hectares located adjacent to a previously approved wind farm development (Reg. Ref. 04/1788). This substation is the Woodhouse substation into which the Woodhouse Wind Farm (constructed) and the Knocknamona Wind Farm (consented) are both proposed to connect.

Waterford City and County Council Ref. 11/355 – Permission granted by the Planning Authority to ESB Wind Development Limited for alterations to the previously permitted Woodhouse substation.

Neither Refs. 09/642 nor 11/355 were the subject of appeal to An Bord Pleanala.

Other Notable Planning Applications

An Bord Pleanala Ref. ABP-309121-21 – Current application for the construction of a 17 turbine windfarm on a site In the townlands of Lyrenacarriga, Co. Waterford and the townlands of Lyremountain, Co. Cork, approximately 12km to the south west of the KWF site. This application is currently the subject of a request for further information and no decision has issued from the Board.

Waterford City and County Council Ref. An Bord Pleanala Ref. ABP-314219-22 – Permission granted by the Planning authority and decision the subject of a current third party appeals to the Board for junction and bend widening works and ancillary works to facilitate the delivery of wind turbine blades at Carronahyla and Knocknaglogh townlands, Dungarvan, County Waterford. The location of these works is to the south east of the KWF site.

5.0 Policy Context

5.1. National Policy

The ***Climate Action Plan 2021*** provides a plan for achieving a 51% reduction in overall greenhouse gas emissions by 2030 and a path to reach net-zero emissions by no later than 2050. The plan sets out measures to cut emissions; create a cleaner, greener economy and society; and mitigate the impacts of climate change. Under the heading of Electricity, the share of renewable electricity is identified as up to 80 percent from renewable sources with indicative onshore wind capacity of up to 8GW. A number of measures to achieve these targets are identified and include Action 100 '*Ensure supportive spatial planning framework for onshore renewable electricity generation development'.*

The EU has set binding targets for Member States to reduce greenhouse gas (GHG) emissions by 20% by 2020. In addition, under the EU Renewable Energy Directive (2009/28/EC) Ireland is committed to produce from renewable sources at least 16% of all energy consumed by 2020. Ireland has committed to meet this national target through 40% renewable electricity, 12% renewable heat and 10% renewable transport.

Ireland's National Policy position is to reduce CO2 emissions in 2050 by 80% on 1990 levels across the Energy Generation, Built Environment and Transport sectors, with a goal of Climate neutrality in the Agriculture and Land-Use sector.

National Planning Framework

National Policy Objective 55 stated that it is an objective to:

'*Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.'*

5.2. **Regional Spatial and Economic Strategy (RSES) for the Southern Region**

The recently adopted RSES for the Southern region contains a number of provisions of relevance to consideration of this appeal:

RPO 95 related to Sustainable Renewable Energy Generation states that:

'It is an objective to support implementation of the National Renewable Energy Action Plan (NREAP), and the Offshore Renewable Energy Plan ……'

RPO 99 related to Renewable Wind Energy states that:

'It is an objective to support the sustainable development of renewable wind energy (on shore and offshore) at appropriate locations and related grid infrastructure in the Region in compliance with national Wind Energy Guidelines.'

RPO 100 related to Indigenous Renewable Energy Production and Grid Injection states that:

'It is an objective to support the integration of indigenous renewable energy production and grid injection.'

RPO 221 related to Renewable Energy Generation and Transmission Network states that it is an objective that

'a. Local Authority City and County Development Plans shall support the sustainable development of renewable energy generation and demand centres such as data centres which can be serviced with a renewable energy source (subject to appropriate environmental assessment and the planning process) to spatially suitable locations to ensure efficient use of the existing transmission network;…..'

5.3. Development Plan

The application was determined under the provisions of the *Waterford County Development Plan, 2011 – 2017* and this plan is also referenced in the third party submissions on file and the first party response submissions received. In the interim, a new *Waterford City and County Development Plan, 2022-2028* has been prepared and will come into effect on 20th July, 2022.

5.3.1. Waterford City and County Development Plan, 2022-2028

The following policies relating to renewable energy are cited in Volume 1 of the plan:

Policy Objective UTL 12 Energy Strategy / Masterplan

Undertake a review / update of the Waterford Renewable Energy Strategy during the lifetime of this Development Plan, in order to assist in creating evidence-based, realistic and costed pathways for Waterford to achieve its just transition to carbon emission reduction targets to 2030 and 2050.

Policy Objective UTL 13 Renewable Energy

It is the policy of Waterford City and County Council to promote and facilitate a culture of adopting energy efficiency/ renewable energy technologies and energy conservation and seek to reduce dependency on fossil fuels thereby enhancing the 144 environmental, social and economic benefits to Waterford City and County. The identified actions to achieve this include the following:

- Facilitating and encouraging, where appropriate, proposals for renewable energy generation, transmission and distribution and ancillary support infrastructure facilities in accordance with the Waterford Renewable Energy Strategy, the Waterford Landscape and Seascape Character Assessment undertaken to inform this Development Plan, and the National Wind Energy Guidelines, or any subsequent update/ review of these;

Chapter 10 relates to ***Landscape*** and includes a Landscape and Seascape Character Assessment that was prepared in 2020 and which is illustrated in Figure 10. As per Figure 10, the site is located in an area that is identified as *'Increased Sensitivity'*.

The following Policy objectives relating to landscape and visual impact are cited in the Plan:

Policy Objective L 02 Protecting our Landscape and Seascape

We will protect the landscape and natural assets of the County by ensuring that proposed developments do not detrimentally impact on the character, integrity, distinctiveness or scenic value of their area and ensuring that such proposals are not unduly visually obtrusive in the landscape, in particular, in or adjacent to the uplands, along river corridors, coastal or other distinctive landscape character units.

Policy Objective L 03 Landscape and Seascape Character Assessment

We will assess all proposals for development outside of our settlements in terms of the 2020 Landscape and Seascape Character Assessment (Appendix 8) and the associated sensitivity of the particular location. We will require a Landscape and Visual Impact Assessment (LVIA) for proposed developments with the potential to impact on significant landscape features within the City and County. Proposals for significant development (e.g. renewable energy projects, telecommunications and other infrastructure and the extractive industry) shall be accompanied by a LVIA Figure 10.0 Waterford Landscape and Seascape Character Assessment which includes Zones of Theoretical Visibility (ZTV) which indicate the landscape impact zone within which the proposed development may be seen. There will be a presumption against developments which are located on elevated and exposed sites and where the landscape cannot accommodate such development with reasonable and appropriate mitigation.

Landscape Objective LS 04 Scenic Routes and Protected Views

We will protect the scenic routes and specified protected views identified in our Landscape Character Assessment (Appendix 8), including views to and from the sea, rivers, landscape features, mountains, landmark structures and urban settlements from inappropriate development that by virtue of design, scale, character or cumulative impact would block or detract from such views. Scenic routes and protected views are illustrated on Map 5 of the Plan in Volume 4 of the Development Plan.

Volume 2 of the Plan relates to Development Management Standards and includes the following:

5.24 Renewable Energy Developments

This paragraph includes the following:

'All applications for wind farm and wind energy developments should be compatible with the 2006 Wind Energy Development Guidelines issued by the DoEHLG (or any updated revision of same) and the Waterford Renewable Energy Strategy (Appendix 7), regard should also be had to the Waterford Landscape and Seascape Character Assessment (Appendix 8)……

In general, the Council will support wind energy proposals, provided such developments would not have an adverse effect on residential and rural amenities, special landscape character, views or prospects, Natura 2000 sites, protected structures, aircraft flight paths, or by reason of noise or visual impact. Applications for such developments will not be encouraged in Areas of High Amenity.'

Appendix 7 of the Plan contains a ***Renewable Energy Strategy*** for the county up to 2030. Appendix 2 of this document states that while the previous 2011-2017 County development Plan designated the county into 4 areas of suitability for wind energy development (strategic, preferred, open for consideration and no go areas) that '*These classifications have now been superseded by the new Landscape and Seascape Character Assessment*

which is set out in Appendix 8 of the Waterford City and County Draft Development Plan 2022 - 2028 and the relevant policy objectives of Chapter 6 & 10 of the draft Development Plan.'

Appendix 8 contains a ***Landscape Character Assessment,*** and the appeal site is located within Area 5 which is the foothills LCA and specifically 5E which is the Drumhills.

Section 3 of the LCA sets out a number of criteria which it is stated influence the ability of an area to absorb development. These include:

- Topography and the elevated or otherwise nature of the site,
- Vegetation and the ability of an area to screen development from view.
- New development is '*less likely to be conspicuous in the context of existing development in the landscape'*.

The exact location of the appeal site relative to the Landscape Sensitivity Map indicated in the plan is difficult to establish exactly due to the low sensitivity mapping available in the plan. It would however appear that the bulk if not all of the appeal site is located within an area of High sensitivity. This is supported by Table 2 of the LCA which refers to landscape 5E, the Drumhills and Knocknamona as being within the areas identified as High Sensitivity.

Table 1 states that such areas *'have a distinctive character with some capacity to absorb a limited range of appropriate new developments while sustaining its existing character.*' Section 4 of the LCA states that '*these areas have a distinctive, homogenous character dominated by natural processes. Development in these areas has the potential to create impacts on the appearance and character of a large part of the landscape. Applications for development in these areas must demonstrate an awareness of the inherent limitations by having a very high standard of site selection, siting, layout, selection of materials and finishes.*'

Section 5 of the LCA relates to Scenic Routes and Protected Views. The closest scenic route is located to the south running on a local road that runs east – west at a distance of c.1.5km from the proposed development at the closest point.

The closest protected view to the appeal site is c.6km to the west of the proposed development at the bend in the River Blackwater to the south of Villierstown. Scenic routes and protected views are illustrated on Map 5 of the development plan. Map 5 indicates that neither the view to the south of Villierstown or other views in the general vicinity of the site are in the direction of the KWF site.

5.4. Natural Heritage Designations

The site is not located within any European site.

The closest European sites to the appeal site are as follows:

- River Blackwater SAC site (site code 002170) is located c.3km to the west of the appeal site at the closest point.
- Dungarvan Harbour SPA site is located c.7km to the east of the appeal site at the closest point.
- The Blackwater Estuary SPA is located c.8km to the south west.
- The Helvic to Ballyquin SPA is located c.11.5km to the south east of the appeal site.
- The Glendine Woods SAC is located c.12.5km north east of the appeal site at the closest point.
- The Helvic Head SAC is located c.13km south east of the appeal site.
- The Ardmore Head SAC is located c.14km to the south of the appeal site.

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. First Party Appeal

The following is a summary of the main issues raised in the first party grounds of appeal submitted against the Notification of Decision to Refuse Permission issued by the Planning Authority:

- It is noted that the appeal is accompanied by a revised EIAR and non-technical summary. The appeal states that this Revised EIAR has been prepared in recognition of Reason for Refusal No.1 attached to the Notification of Decision (regarding visual impact of the development) and Reason for Refusal No.2 regarding the robustness of the EIAR. Section 4.2.3 of the EIAR states that the revised EIAR evaluates the proposed development with more clarity '*particularly in the topic chapters'*. The appeal makes reference at 3.3 to the option of reducing the scale of turbine within the ranges originally specified for hub height and rotor diameter and a reduced turbine height of c.145.3 metres tip height. The revised EIAR presents a total of 4 no. alternatives at Paragraph 2.5.1, comprising the extant permitted development (described as the 'do nothing alternative'), the 145.3 tip height option referenced above that falls within the advertised range for the purposes of hub height and rotor diameter, the proposed alternative option of up to 155 metre tip height and a further larger option of up to 170 metre tip height. Chapter 2 of the Revised EIAR under the heading of alternatives undertakes a brief assessment of each of these 4 no. alternatives under each environmental heading. The EIAR then proceeds to provide an assessment of the impact of the proposed development (155 metre tip height) under each environmental heading.
- The revised EIAR is accompanied by a number of Appendices, namely Appendix 6.1 relating to Noise and Vibration which appears to be the same as that submitted with the original application / EIAR and includes reference to a V126 turbine. The revised EIAR submitted also includes

Appendix 8 relating to Ornithological Surveys and Evaluation and which has been updated to include some information from 2021.

- The appeal is also accompanied by the following that are appended to the appeal:
    - Environmental Management Plan, February, 2021 Ecopower Developments, including Sediment Control Plan and Dust Minimisation Plan.
    - Copy of the Notification of Decision issued and report of the Planning Officer,
    - Landscape and Visual Impact Statement prepared by Macro Works.
    - Copy of judgement in case Alen Buckley v An Bord Pleanala (IEHC 541).
    - AA Stage 2 Report dated February, 2021.
- Contended that the landscape and visual impact assessment produced does robustly demonstrate the impact of the proposed larger turbine. The following specific points from the attachment prepared by Macroworks, are specifically noted in this regard:
    - That the contents of the planning Officer report are such that the principle of the development appear to be an issue for the Planning Authority and the application has not been assessed as an amendment to an already permitted development.
    - That the 20km radius for the ZTV / study area is reflective of the scale set out in the Wind Energy Guidelines for turbines in excess of 100 metres.
    - Submitted that it is completely reasonable that the baseline position for the landscape and visual assessment includes the existing permitted development as the baseline / do nothing scenario.

- That there is no dispute that in most instances there will be a discernible difference between the permitted and proposed turbines. The visual impact difference of this increased height is not however significant and visual change does not equal visual impact as seems to be the position of the Planning Officer.
- Regarding the issues raised about Viewpoints CP3 and CP4, these images were prepared on clear days and the viewing distance and low contrast backdrop is the reason why the turbines do not significantly stand out.
- Regarding the comments of the Planning Officer about the heritage views (AV3-AV7) it should be noted that these views represent houses and Villierstown and locations which are heavily enclosed by trees and tree lines and where there are limited positions where views of the development would be available. The positions used are sometimes the only location where views would be available and are considered to represent a worst case scenario.
- Noted that reason for refusal No.1 makes reference to an increased visual catchment, however it should be noted that the increased height of turbine proposed would only result in an additional 4.3 percent of the 20km radius from the site being impacted.

- That the revised 2015 EIS formed the basis for the landscape and visual impact assessment (LVIA) undertaken for the proposal. The LVIA in the 2020 EIAR comprises a shorter report than that in 2015 as it focusses on the amendments to the existing permission. It is submitted that this is a reasonable position to take as in the event of a refusal of permission the developer will build out the permitted c.126 metre turbine development.
- It is considered surprising that the Planners Report does not consider that this approach is appropriate. Submitted that to do anything else would be inadequate were it to not have consideration for the permitted Knocknamona WF.

- That the assessment submitted in the EIAR is clear that in most instances / viewpoints there is a discernible difference in scale between the permitted and proposed development. Visual change does not however mean that there will be a significant visual impact and submitted that this is the assumption made by the Planning Officer.
- Submitted that none of the marginal increases in visual impact considered likely to arise are such that they increase the previous (2015) assessment of significance of impact at any of the selected viewpoints.
- Therefore, submitted that no new significant effects will arise from the proposed larger turbines.
- That the principle of the development on the site was the subject of consideration having regard to the location of the site in an area identified as visually sensitive and visually vulnerable but also within the Strategic Area for Wind Energy. This includes a statement by the inspector that the site is considered to be by far the most viable contiguous site within the 'top tier' designated lands in the county and that development in this location is acceptable in principle. This view is supported in the Board Direction issued which states that the proposed development would be in accordance with development plan policy including that relating to wind energy, protection of the environment and scenic routes, and '*would not be visually dominant and would be acceptable within this landscape'*.
- Submitted that the subsequent legal case (specifically Paragraph 57) demonstrated that the court agreed that the Board had regard to the relevant policies contained in the development plan and that the conclusion of the inspector on the principle of the development at the site was accepted by the court. Therefore, submitted that the issue before the Board should only be whether an increase in the size and design of the turbine is acceptable.
- With regard to Reason for Refusal No.2, it is noted that the Planning Officer makes reference to the fact that other elements of the overall project (notably the grid connection) are currently the subject of appeal

to the Board. Submitted that the planning status of these other elements of the project are not relevant to the evaluation of the case as long as '*these elements are evaluated for whole project effects in the EIAR, so that the planner can carry out a whole project assessment'*. Submitted that separate planning applications can be submitted for different elements of an EIAR project (reference to O'Grianna vs An Bord Pleanala and subsequent case law). The High Court judgement in Alen Buckley vs ABP on the original windfarm permission was also clear that there was not an obligation on the applicant to decide on a specific grid connection or haul route.

- That the applicant indicated to the Planning Authority during pre-application consultations that it would be applying for an amendment to the existing permission and that the submitted EIAR would therefore focus on the impact of changes to the existing system.
- Submitted that the revised EIAR submitted with the first party appeal means that the whole project is evaluated with more clarity and an impact table is included under each topic chapter. A cumulative assessment of the impact with all other projects is also presented.
- That the revised EIAR (Chapter 1 section 1.3.2.2) contains an assessment undertaken by Malachy Walsh and Partners regarding the feasibility of the foundations required for the permitted wind farm being suitable for the proposed larger turbines. This assessment concludes that no increase in the excavation for the foundations or increase in the overall extent of the turbines is required to accommodate the larger turbines.
- That the revised EIS contains further consideration of the interaction of the foregoing.
- In response to the recommendation of the Heritage Officer on the file and the report of the planning officer, a Stage 2 Appropriate Assessment has been submitted. This Stage 2 assessment comprises an assessment of the whole Knocknamona WF project and also includes an evaluation of ex situ effects on Whooper Swan.

- In conclusion, noted that there is only one significant impact identified in the EIAR and this is a positive impact on climate. The proposed amendment will result in more technologically advanced turbines and an increase in electricity production from 75 to 96 million KW/hrs per annum.

6.1.2. The following is a summary of the main issues raised in the third party grounds of appeal prepared by Reid Associates Chartered Town Planning Consultants on behalf of ***Michael and Gianni Alen Buckley***.

- That the reliance on a proposed new grid connection and haul route to woodhouse windfarm is the subject of high court proceedings, is premature and legally unsound. There are also unauthorised development in respect of works undertaken to the proposed haul route.
- That the permission for development upon which the subject application is reliant and seeks to modify is predicated upon the grid route options set out in the EIA conducted by the Board in 2016 and the EIS supporting that grant of permission. It is not feasible to modify that permission while substituting and alternative grid connection, also unpermitted, as this would undermine the integrity of the original EIA.
- Submitted that a new planning application is required for the windfarm and grid connection and for this to be accompanied by an EIAR and NIS. This position was conveyed to the applicant in pre-application consultations held with the planning authority. That there is a clear legal requirement in EU law for a new application which must be self-contained. It is not appropriate where an EIA is required under Class 3 of Part 2 of the Fifth Schedule that an amendment can be submitted to an existing permission which has not been developed.
- That the failure to undertake a de novo application to include the totality of the development renders it impossible for the competent authority to undertake a valid EIA. The application is therefore fundamentally flawed and invalid.

- That it is not possible or valid to rely on the development as permitted by the Board (PL93.244006) and propose modifications to the height, while in parallel propose fundamental changes to the grid connection and haul route upon which the permitted development is predicated.
- That the conclusion of the Planning Authority that it is not possible to conclude that the proposed development would not adversely affect the receiving environment or have potential for significant effects on the Natura 2000 network is supported and stems from the fact that an incorrect application and EIAR that fails to address the totality of the development has been submitted. The same issue arises for the Board.
- That the application is only capable of implementation for the grid connection routes that assessed as part of the original EIA in 2016 and which are bound by the mitigation measures and planning conditions attached to the 2016 permission.
- That the clear intention of the applicant is to use the Woodhouse substation grid connection and haul route, however this has not been included within the subject application or submitted EIAR.
- That reliance on the reference documents relating to the grid connection application Ref. 19/369 / ABP Ref. ABP-306497-20 is not a substitute for adequacy of the EIAR or competent authority EIA.
- That the 2019 EIAR (ABP Ref. 93.244006 Waterford Co. Co. Ref. 19/369) was undertaken on the basis of the transportation of blades with a length of 45 metres and not the c.63 metres now proposed. The EIAR for the permitted grid connection therefore relates to a development other than the current revised proposal.
- It is not appropriate to rely on the application for the un permitted grid connection application (Ref. ABP-306497-20).
- That the 2019 grid connection application and accompanying EIAR was based on the Knocknamona WF development as permitted in 2016 and not the revised proposal now the subject of appeal.

- That the proposed development would breach the conditions (particularly Nos. 1 and 5) attached to permitted development and would undermine the EIA undertaken by the Board in respect of that permission.
- That the application was refused permission by the Planning Authority and the proposed changes '*breach the limits of the visual sensitivity of the site as already determined by the Planning Authority'*.
- That the decision of the Board in the case of Ref. 93.044006 clearly indicates that there is a restricted capacity in terms of visual impact, noise and environmental capacity and these issues led to the reduction in the scale of development permitted by the Board.
- That the public notices are misleading and inaccurate in that they do not fully set out the nature and extent of the proposed changes the subject of the current application. Specifically, there is no reference to the rotor blade dimension (considered to be critical having regard to the Barnafaddock judgement) and there is no reference to the proposal to connect the Knocknamona Windfarm to the Woodhouse Windfarm substation and grid connection and use of the haul route serving Woodhouse Windfarm despite this being a material change from the permission that was granted in 2016 under Ref. PL93.244006.
- That the EIAR (section 3.2.3) refers to the publication of the notice in the wrong paper.
- That the stated site area of 70.5 ha. is significantly in excess of the site area cited in the 2016 application (c.65 ha.) and there is no clear explanation of why this is the case. Submitted that the red line boundary is not the same and therefore it is not clear how the applicant can make an application for modifications to the original permission.
- That the applicant differs from that outlined in the original application.
- That the submitted plans need to be site specific and need to show the depths of foundations and also to comply with the detailed requirements of Articles 22 and 23 including provision of sections and the identification of wayleaves and easements.

- That the applicant incorrectly states that it was a V112 turbine that was permitted in an attempt to minimise the impact between the existing and proposed developments. It was the Nordex N90 turbine that was permitted in 2016.
- That the failure to include an assessment of the haul route is not acceptable as it the assumption that because the haul route served Woodhouse then it will be acceptable for Knocknamona.
- That the impacts of the increased turbine size and potential power output need to be assessed across all environmental headings.
- That the unsustainability of the visual impacts arising from the proposal are indicated by the size of the zone of theoretical visibility of 45 km. the use of a 20km zone is therefore not reflective of the full impact.
- That the EIAR submitted is not a self-contained document and is reliant on separate references to the original application for the windfarm and to the grid connection application.
- Submitted that the 'whole project' now referenced in the EIAR is different to the project as originally permitted as it includes a different haul route and grid connection.
- That the proposed development constitutes project splitting for the purpose of EIA.
- Submitted that the applicant is now bound by the options presented in the EIS submitted to the Board under ref. PL93.244006 as they were central to a lawful EIA.
- That the application and EIAR does not re-evaluate alternatives but rather relies on reference to the previously submitted EIS.
- That the screening determination undertaken by the Board in 2016 relied on the Construction and Environmental Management Plan submitted as an integral element of the project rather than mitigation. Given that there is a pathway via the Goish River to the River Blackwater SAC the decision of the Board to screen out requirement for a Stage 2 AA was

flawed. Both the Planning Officer and the Heritage Officer concluded that a Stage 2 AA was required.

- The transport of the longer turbine blades will have potential impacts across a wide range of areas including bridges and road widening, and potential bird strikes (Whooper Swans and the Blackwater Callows) with associated impacts on European sites.
- That there is no structural assessment or other information provided that supports the statements regarding the foundations of the turbines not being increased. The EIAR makes reference to '*broadly similar foundation engineering specifications'*.
- Inadequate assessment of impact on bird and bat species.
- That the visual impact assessment undertaken is deficient in terms of extent of ZTV, cumulative impacts, extent of increase in visual impact relative to the previously permitted development and choice of viewpoints for visualisations.
- Substandard visualisations in terms of technical information and viewpoints choice and obstructions. Overall, the photomontages do not provide an accurate assessment of scale.
- That the capacity of the landscape to absorb development has already been breached by the existing developed Woodhouse Windfarm.
- The development is proposed to be located in an ad hoc manner along a ridge line resulting in visual clutter and discordant visual impact.
- Visual statement prepared by Alan McDonald attached with the submission which identifies issues related to the 2016 visual assessment and submitted that these issues still remain valid.
- That the proposed scale of development is inappropriate in an area that is designated as visually vulnerable and sensitive, and which is characterised by a number of scenic routes.
- Submitted that the development plan policy to facilitate development in strategic areas does not override landscape policy.

- That neither the wind energy strategy nor the Wind Energy Guidelines were the subject of SEA. Submitted that the application is premature pending the adoption of the new guidelines.
- Appendix 6 of the submission comprises an outline of the cultural, architectural and heritage importance of the Blackwater Valley. Submitted that the proposed development would have a profound adverse impact on this landscape, would adversely affect the character and setting of architectural heritage and archaeological monuments and would undermine its potential designation as a UNESCO site.
- That the nature and scale of the development would materially contravene Article 3 of the landscape convention.
- Regarding noise, submitted that no proper assessment can be made in the absence of a background assessment. A report from MAS Environmental is appended to the appeal. The issues raised in the MAS report include the following:
    - That noise assessment has developed significantly since the preparation of the initial Knocknamona WF EIS in 2014. The assessment of noise undertaken is inadequate and incapable of being assessed using the predictive techniques employed.
    - That the increased turbine size and proximity to the ground raises and turbine layout issues of amplitude modulation, inadequate consideration of low frequency noise and tonal emissions.
    - That the proposed increase in turbines results in a significant adverse impact in terms of noise that is not captured in the EIAR.
- That the EIAR is inadequate in terms of human health and does not provide an adequate assessment of the impact of the proposed development on human health. The effect of the Woodhouse windfarm is not properly provided for.
- The proposed development would significantly impact on the more than 62 no. dwellings that are located within 2km of the site, particularly in terms of visual dominance, noise and shadow flicker impacts.

- That decommissioning is inadequately covered in the EIAR. No final disposal options are presented.
- That climate action does not provide a justifiable case for the increased scale of wind turbine and increased intensity of output.
- There is inadequate consideration of vulnerability to risk of major accidents and / or disasters as required in the EIA Directive.
- Requested that permission be refused for 16 no. reasons that are additional to those cited by the Planning Authority.

6.1.3. The following is a summary of the main issues raised in the third party appeal prepared by Reid Associates Chartered Town Planning Consultants on behalf of ***Wild Ireland Defence Company Limited***. This appeal contains significant overlap with the issues raised in the appeal submitted on behalf of Michael and Gianni Alen Buckley and the following summary focusses on the new issues raised.

- That the scale of the proposed development at 8 no. turbines and more than 5MW output is such that it requires a new self-contained planning application.
- That the plans submitted with the application are inadequate and in breach of Article 23 of the regulations as they do not show all features in the vicinity of the site. Reference also made to the fact that there is only a typical turbine indicated with no details including no foundation details. Level of detail inadequate to enable EIA to be undertaken.
- That an NIS is required given the sensitivity of the site and the pathways to European sites.
- That the application is premature pending the adoption of the new wind energy guidelines.
- That the noise assessment indicates that the noise impact would be profound in this low noise environment rural area.

- That the justification of the development in noise terms on the basis of a comparison with the previous permission is not appropriate and misapplies the test for noise impact.

6.2. Response Submissions

6.2.1. First Party Response

The following is a summary of the main issues raised in the first party response to the third party grounds of appeal:

- That the wind energy guidelines in effect at the time of the assessment were there from 2006 and the 2019 version remains in draft form. The application documentation had regard to both versions.
- The statement that there is a legal requirement that a new application be submitted is not clearly presented in the appeal submissions.
- That the advice to KWFL was that an EIAR was required and that this document fully assesses the impacts, including cumulative and in combination impacts arising from the proposed development. Stated that the advice received is that the previous EIA and EIA reports for the windfarm can be relied upon and that for each environmental factor it has been explained what the effect of the amendments would be.
- Submitted that the EIAR submitted to the Planning Authority addressed all stages of the proposed development and the impact on the overall KWF project and cumulative impacts with other developments. Previous KWF documents were reviewed and were relied upon in the assessment.
- To address concerns expressed in the report of the planning officer and third party submissions a revised EIAR was submitted with the appeal. The revised EIAR '*includes a new whole project effect evaluated with more clarity*'.
- A new impact table and cumulative assessment is also provided.

- That no support to the contention that a new application / EIAR is required is submitted by the third party. Rather it should be noted that amendments to EIA projects are provided for in the regulations and the EIA directive.
- Regarding compliance with the regulations and the validity of the application it is noted that there are no wayleaves relevant to the site, that the original management plan for the windfarm remains relevant, that there are no significant tree stands.
- Submitted that the degree of variation in the proposed hub height and the rotor diameter is insignificant in the context of the overall dimensions of the structure. The maximum height will remain at 155 metres and the assessment of the impact on the individual environmental factors is stated to be based *'on the descriptions in chapter 1 including the description of the variations'*.
- That the Vestas 126 was used for modelling the predicted impacts of the alterations as this is the largest turbine with an overall height of 155 metres and therefore represents the worst case scenario. See revised EIAR section 13.2.2.2.
- Four elevations of separate turbine models that meet the range specified in the application are presented with the appeal. These are the Vestas V126, Enercon E126, Vestas V117 and Enercon E115. States that the first party '*commits to installing turbines of dimensions similar to the above listed turbines, depending on the parameters for turbine dimensions set by planning conditions'.*
- Regarding foundations, stated that there will not be any additional foundations and that the foundations that have previously been authorised can accommodate the proposed amended turbines also. Confirmation from structural engineer provided. Clarified that the original foundations were specified with the capacity to accommodate the larger turbine sizes.

- Statement provided for an engineer stating that the crane hardstanding areas proposed are adequate for the increased turbine sizes proposed and also that the roads '*are adequate for WTG up to 155 metres tip height and in line with the WTG manufacturers requirements for such wind turbine erection'*.
- Submitted that foundation section drawings are not required to be submitted as this is an amendment application and no additional foundation or hard standing areas are required over and above those already assessed and authorised.
- That a NIS is submitted as part of the first party appeal on the basis of the comments of the Heritage Officer and Planning Officer. Submitted that this NIS provides a comprehensive assessment of the effects of the whole Knocknamona WF project including the proposed amendment. The submitted NIS also addresses the ex situ effects on the Whooper Swan.
- That the windfarm grid connection has now been granted permission by An Bord Pleanala and therefore the appellants submissions on this issue and the reason for refusal cited by the Planning Authority are no longer applicable.
- The issue raised that the KWF permission (2016) is legally bound to the grid connection and haul routes identified in that application has been addressed by the applicant and decided upon by the Board as part of the assessment of the revised grid connection application, (ABP-306497-20). Copies of the first party submissions to the Board on this issue made under Ref. 306497 are provided. Quotations from the Inspectors report on this case are also provided.
- Submitted that the Inspectors report on Ref. 306497 also addresses the issues raised by the appellants regarding project splitting, the background and justification for the revised grid connection route, the legal status of Woodhouse windfarm and whether Woodhouse and Knocknamona Windfarms are the same project. Reference is also made to the comments in the Planning Inspector report for ABP-306497-20

regarding the Draft Wind Energy Guidelines, O'Grianna judgement and issues regarding the planning status of the Woodhouse windfarm and also works to local roads.

- That contrary to the statement of the appellant, the wind energy strategy is part of the 2011 County Development Plan (Volume 3 of the plan) and that the plan has been the subject of SEA. Specific reference to Appendix ICSEA Assessment Matrix of Proposed Material Amendments to Draft County Development Plan.
- That the issue of conflicting plan objectives relating to wind energy and visual impact was considered in the judgement of justice Houghton who concluded that this was a matter for the Board to consider.
- That Woodhouse windfarm commenced operation in July 2015 and was therefore operational at the time of the census.
- The issues raised regarding landscape and visual impacts are responded to in a separate attachment prepared by Macro Works / Richard Barker and included with the first party submission.
- That the merits of the physical and cultural landscape of the Blackwater Valley is recognised in the EIAR. The visual impact of the larger turbines was assessed as not significant and the EIAR included an assessment of the impact of the development from historic houses and villages in the vicinity of the site.
- Submitted that the proposed development does not undermine any potential future designation of the Blackwater Valley as a UNESCO World Heritage Site.
- Regarding construction access for the larger components, stated that no changes to either Option A (through Pulla Crossroads) or Option B (via the Woodhouse Windfarm access roads) are proposed. No additional works are proposed to local roads or junctions under either option. Noted that a blade lift trailer could be used if required.

- Regarding the applicant, stated that Ecopower Developments Limited and Knocknamona Windfarm are both subsidiaries of the Ecopower Group and controlled by the same corporate entity.
- The appeal response is accompanied by a report on noise prepared by Malachy Walsh and Partners. The following is a summary of the main issues raised in this report:
    - Regarding the methodology used in the noise impact assessment, the noise emissions from the windfarm can be predicted in accordance with ISO9613 of the IoA GPG.
    - The ground factor of 0.5 and received height of 4.0 metres are both consistent with the IoA GPG.
    - That use of the LA90 noise descriptor / index is consistent with the provisions of the 2006 Wind Energy Guidelines.
    - Submitted that it is not possible pre planning to predict the occurrence of amplitude modulation (AM).
    - There is no reference to Amplitude Modulation in the current Wind Energy Guidelines and the EPA document referenced in the MAS Report states that *'the evaluation of the significance of any such effects is not covered by any recognised process'.*
    - Noted that there is reference to amplitude modulation in the 2019 Draft Wind Energy Guidelines but that the guidance states that the setting of a threshold for AM is not straightforward and that it would *'be unreasonable to penalise operators when periods of amplitude modulation are not cause for complaint'*.
    - In the event that AM does arise the developer commits to the undertaking of an independent assessment and that mitigation measures would be implemented.
    - Low frequency noise is below the threshold of human hearing.
    - Infrasound is not likely to be an issue where the turbine is an active yaw type such as will be used in this development.

- Issues of infrasound and low frequency noise are not predicted to be significant as per the EPA Guidance or the 2019 Draft Wind Energy Guidance.
- That background noise surveys were undertaken in relation to the site in 2014 and 2015. Submitted that there is a close relationship between wind speed and noise level and that at periods of high windspeed turbine noise will be masked by wind and associated noise.
- That as the application is for an amendment, the noise levels will have to comply with the noise limits set out in Condition No.7 of the existing permission. These noise limits are derived from the 2006 Wind Energy Guidelines.
- That the 43dBA limit set is more onerous than the limit specified in the 2006 guidelines. Submitted that there are a number of errors and inconsistencies in the Draft 2019 document as it relates to noise and that this document should not be used for assessment purposes until adopted in its final form.
- Regarding the WHO standard for wind turbines, it should be noted that the recommendations are conditional and recommend an average exposure of 45dBLden above which adverse health effects could arise. There is no limit specified for night time noise. Submitted that the Lden parameter used in the WHO guidance is not always a good characterisation of wind turbine noise.

6.2.2. Third Party Responses

The following is a summary of the main issues raised in the responses received from third parties relating to the first and third party appeals received:

Michael and Gianni Alen Buckley

- That there is no provision for the first party to submit a revised EIAR and Stage 2 Appropriate Assessment. That Waterford County Council was the competent authority for EIA and AA. The revised documents have not been advertised. The approach of the first party substantiates Reason for Refusal No.2.
- That the application is effectively invalid on the back of the Council decision and the Board therefore has no jurisdiction in the process.
- That the totality of the project including the turbines, grid connection and haul route has now changed and that these need to be the subject of full EIA and EIAR to avoid project splitting.
- That the issue of project splitting of the development from the grid connection and the Woodhouse Windfarm remains relevant.
- That the original windfarm permission was on the basis of a connection to the grid at Dungarvan. The decisions included planning conditions relating to the grid connection.
- That there is no reference in the public notices to the changing of the originally permitted grid connection route.
- That the only way that the first party approach could be consistent with the case law (O'Grianna) is if the was if they were to seek permission for a grid connection to Dungarvan.
- That there is no valid permission for the Woodhouse development and that therefore connection via this development results in issues of substitute consent.
- That there is no mechanism for modifying a permission. Modifications can only be sought in respect of changes to a development and in this case there is no development. The EIA Directive requires a description

of the current baseline. The proposed development is designed to supersede the original proposal and there is no environmental rationale to allow the impact of the development to be assessed in stages.

- That the application is in breach of the requirements of the Planning and Development Regulations, specifically with regard to the level of detail regarding the foundations and crane hard standing areas. It is clear from the statement in the appeal from Malachy Walsh and Partners re the ability to accommodate the larger turbines that the foundations have not been designed yet. The detail is contrary to the requirements as per the Balscadden Road case.
- The appeal introduces further lack of clarity regarding the turbine type and dimensions.
- That the landscape and visual assessment undertaken remains inadequate and particularly with regard to the extent of the zone of theoretical visibility and the presentation of the views. The visual impacts are not presented from first principles with the result that they are underestimated. The ZTV should be 45km as per the Scottish Natural Heritage guidelines and an increase to this extent would bring in the cumulative impacts of other windfarms.
- That the assessment undertaken in 2015 by the Board inspector incorrectly assessed the designation of the site for wind energy as having priority over the designation of the site as a sensitive landscape and the visual impact arising.
- That the landscape is not robust as set out in the LVIA submitted. It is visually vulnerable and sensitive, and the development was not assessed in this context. The development would materially contravene development plan policies.
- That the proposal for the alternative 145 metre turbine type does not form part of the application before the Board and reflects their agreement with the refusal of permission. The alternative turbine type is not part of the application before the Board.

- Submitted that the impact on residential and visual amenity, the impact on scenic routes and the visual impact along the haul routes is ignored.
- That the revised Appropriate Assessment and surveys of Whooper Swans remains inadequate. The extent of surveys undertaken remains inadequate and does not track flight movements of the Whooper Swan from the Blackwater Callow, or Cappoquin or Campshire.
- That the flock is of international significance and the proposed development could have impacts on the integrity of the Blackwater Callows SPA, the Campshire and Blackwater Estuary SPA and the Dungarvan Harbour SPA.
- Noted that there is an inaccuracy in the identification of the areas in the survey findings and that this undermine the results.
- That the revised survey does not appear to have been undertaken post consultations with Birdwatch Ireland and the NPWS as recommended in the Heritage Officer Report.
- There is no assessment of the risk associated with the power lines or substation.
- That there is also a potential risk to the black tailed godwit and golden plover.
- That the haul route has now been included in the revised EIAR. There is a lack of assessment of the impacts of the haul route particularly in terms of the landscape impacts and swept path analysis.
- No information on the nature of the stone material to be imported to the site.
- No evidence of replacement planting to account for the loss of existing planting.

Wild Ireland Defence

- That the decision of the Planning Authority is effectively a decision that the application is invalid and the submission of a revised EIAR and AA reinforces this position.
- The sub-standard nature of the application documentation does not comply with the requirements of the Regulations and means that the appeal should dismissed.
- That the submission of the revised EIAR and AA confirms the inadequacies of the original application, and the Board has no jurisdiction to accept these documents or to adjudicate on them.
- That, as highlighted by the Planning Authority, the development as previously permitted is predicated on a different grid connection to that which was previously included for the EIA. Submitted that the totality of the project including the turbines, grid connection and haul route has now changed since the original permission and so in order to avoid project splitting, the totality of the new / revised project has to be the subject of a full EIA.
- That the revised EIAR and NIS do not comply with the requirements of the Water Framework Directive (WFD).
- That the Board does not have any role or competency in the designation of waterbodies or to decide if they are at risk of not complying with the requirements of the WFD. Submitted that it is a requirement for the Board to ensure that each waterbody is identified for the purposes of the WFD, and that each waterbody is compliant.

6.3. Planning Authority Response

There is no record on the appeal file of a response to the grounds of appeal being received from the Planning Authority.

6.4. Further Responses

6.4.1. The following is a summary of the main issues raised in further responses received by the Board, focussing on new issues:

First Party – Knocknamona Windfarm Limited

- That there is no prohibition under the planning act to the submission of a revised EIAR or AA. The submission of these reports was advertised, and a period allowed for submissions.
- That the issue of whether a de novo application is required has already been addressed by the first party.
- The statement by the appellants that the fact that the development requires EIA means that an amendment application cannot be submitted is not supported by reference to any specific part of the Directive or planning legislation. Paragraph 26 of the directive specifically refers to changes or exemptions.
- That the status of the grid connection application is now clear. Ref. ABP-306497-20 was granted permission by the Board in February, 2021. Knocknamona WF grid connection was part of the whole project evaluation in the revised EIAR 2021 and NIS 2021.
- That the issue of changes to the originally proposed grid connection have also been addressed in previous submissions.
- Stated that the grid connection to Woodhouse substation was not examined in the 2015 EIS as it was not a viable option at the time and was only confirmed as such by Eirgrid in 2017.
- That construction of Knocknamona Windfarm will not create a single entity of that Knocknamona and Woodhouse Windfarms.
- That the effects of the proposed increased turbines on its own, on the authorised windfarm and on the whole project including the WF Grid connection are considered in the revised EIAR and AA. Therefore contended that should the proposed larger turbines be permitted, there would be no gap in the overall assessment. Appellants contend that as

the EIA undertaken by the Board which permitted the grid connection took account of originally proposed smaller turbines that there is a gap in the assessment.

- That all aspects of the proposed development and baseline environment is addressed in the EIAR.
- All cumulative impacts are addressed in the EIAR.
- That the proposed alterations will not require changes to the previously consented substation.
- That the suitability of the proposed foundations and hard standing areas for the increased height of turbines was confirmed in the first party appeal by the submission from Malachy Walsh and partners.
- Geotechnical surveys of the foundation locations were undertaken at the time of the 2015 EIS and the results presented at Chapter 14. This data includes trial pit logs and indicates stable sub surface conditions with no particular risks of failure and an absence of peat coverage.
- That the vulnerability of the project to major hazards, disasters and climate change is assessed at section 1.8 and is not considered to be a significant issue.
- The case made by the appellants that the use of a design range for the turbine is contrary to the Planning and Development Regulations is not accepted. Submitted that the EIAR is based on a design range and that this is necessary to deal with changes in technology.
- That the use of a design range as per the Rochdale Envelope' *is presented in the EC Guidance on Wind Energy Developments and EU Nature Legislation'* (November, 2020). The largest turbine within the range, i.e. the Vestas V126 is the model that has been used in the relevant assessments being a worst case scenario.
- That the issues raised with regard to the Landscape and Visual assessment have been addressed in previous first party responses and

specifically the submission of Richard Barker that was attached as Attachment 4.

- Contrary to the statement of the appellants, the LVIA does refer to the landscape designations contained in the development plan (see section 9.2 baseline environment). Section 9.4.2 assess the potential impact from a total of 18 viewpoints. These include built heritage locations and surrounding settlements.
- Regarding the impact of roadworks along the haul route, submitted that these impacts on visual amenity and landscape would be transitory as the locations would be reinstated along the route.
- Submitted that the alternative turbine with a maximum height of 145.3 metres presented with the appeal is part of the application and falls to be considered. It has a hub height and rotor diameter that is within the advertised ranges. The revised EIAR presents a range of options that are compared across a range of environmental factors in the revised EIAR submitted.
- Regarding the surveys for Whooper Swans, the report submitted by the appellants appears to relate to a different windfarm to the south west of the subject site (Lyrenacarriga). A detailed response to the issues raised is contained in a new report prepared by Inis Environmental attached as Appendix 3 to the submission.
- That the assertions regarding impacts on other bird species such as Black Tailed Godwit and Golden Plover are noted. Golden Plover is brought forward to Stage 2 (section 6.5.3.1 of the revised NIS) and based on survey data that shows very infrequent use of the site by this species, adverse effects on the species are considered to be unlikely.
- That the impact on the Blackwater Estuary SPA is not considered likely to be significant as the potential effects relate to water quality which will not be significant post mitigation.
- That the haul route is described in Chapter 1 of the revised EIAR and addressed in every chapter. It is noted that the construction materials

haul route remains the same as that evaluated in the 2015 EIS for the windfarm and the 2019 EIAR for the grid connection application. Considered that both of the alternative haul routes have been fully evaluated in previous EIS / EIARs. It should be noted that some of the road works that are required on local roads close to the site entrance will be the subject of a further separate application for permission.

- Regarding tree felling, the EIAR of 2015 indicated that the construction of the Knocknamona WF requires the felling of 28.2 ha. of conifer plantation. The revised EIAR submitted confirms that no additional felling is required to accommodate the larger turbines now proposed. It should also be noted that Condition No.13 attached with the original grant of permission requires that all clear felling associated with the development shall be undertaken in accordance with the appropriate forestry service guidelines and that all necessary licences shall be obtained prior to felling.
- That the requirements of the Climate Action Plan and Climate Action and Low Carbon Development Act, 2021 (Bill referred to in the submission as Act was not enacted at the time), commits the country to carbon neutrality by 2050 and a 51 percent reduction in emissions relative to 2018 levels by 2031. The position of the appellants that there is not a climate action related justification for the proposed development is therefore refuted. It is also refuted that the proposed development is developer rather than plan led. The site is located in a location that is a Strategic Location as per the Renewable Energy Strategy 2016 contained as part of the Waterford City and County Development Plan.
- The submission is accompanied by appendices containing copies of the third party submissions, the report of Macroworks submitted with the first party appeal and a new report from Inis Environmental Consultants which specifically addresses the potential impact of the development on Whooper Swans. This states that the assessment of the original application was based on 2005 guidance from Scottish Natural Heritage (SNH) and that these guidelines have now been updated in 2017.

- Notes that the surveys undertaken do not indicate that any swans were recorded flying within the rotor envelope of the proposed development or within 500 metres of the site windfarm. Stated that substantial additional survey information over and above that set out in the 2017 SNH Guidance was undertaken in January and February, 2021 to accurately map the flock of swans based at the Blackwater Callows to the west of the site and that this information is presented with the revised EIAR and NIS. Dawn and dusk surveys as well as vantage point surveys were undertaken. This data indicates that the whooper swan population resident in the River Blackwater area does not overfly the windfarm site.
- The issue raised in the third party submissions regarding the connectivity between the River Blackwater and the Dungarvan Harbour SPA. Whooper swan in the R Blackwater cannot reach numbers that are of international importance and the species is not a qualifying interest of the Dungarvan Harbour SPA. Available information and publications would indicate that the species is not common in Dungarvan Harbour. The potential for overflight of the windfarm site by the species moving between the two locations can therefore be considered to be a very rare occurrence.

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In response to the first party response to the grounds of appeal state that:

- That the submissions continue to ignore the substantive issues raised in the third party grounds of appeal.
- That the substantive further reasons for refusal put forward by the third parties have not been rebutted,
- That the reference by the first party to Class 13 of the Fifth Schedule (changes or extensions to developments that trigger requirement for EIA) is not of any relevance to the consideration as to whether a new application is required.

- That the proposed development would materially breach and dismantle the mitigation measures in the 2015 EIS on foot of which permission would be granted.
- That the first party does not address the breach of Conditions Nos. 1 and 5 attached to the 2016 permission.
- Issues regarding the adequacy of the public notices remain unanswered,
- Issues regarding project splitting remain.
- That the permission granted by the Board for the grid connection is under judicial review and therefore reason for refusal stands.
- That the applicants undertaking to the court regarding the grid connection options in 2015/2016 have not been kept,
- That the issue regarding the transportation of longer turbine blades has not been assessed.
- That there is no assessment of alternatives,
- That the first party does not present any information regarding the potential impact of the proposed development on the status of the water bodies under the water framework directive.
- The windfarm site is withing the River catchment No.18 (Blackwater) and in the Goish sub catchment. This waterbody is identified as '*at risk'* by the EPA.
- The AA is inadequate in its assessment of potential impact on Whooper Swans and European sites which have this species as a qualifying interest.
- That the issues regarding landscape and visual impact remain.
- Regarding noise impact, the issues raised in the third party appeal have not been successfully rebutted and the response refers to the out of date 2006 Wind Energy Guidelines. The issues relating to amplitude modulation and low frequency have not been addressed.

- That the Wind Energy Strategy in the 2011 was not subject to SEA and does not supersede the zoning of the site and identification of the site as a vulnerable landscape.

Wild Ireland Defence Company

- That the submission of a revised EIAR acknowledges the failure to comply with the requirements of the EIA Directive and the Habitats Directive.
- That the requirement to publish revised notices and invite submissions is facilitating the applicant in the submission of an EIAR outside of the remit of the Act to do so.
- Restate the concerns regarding the validity of the appeal with a revised EIAR and AA attached / appended to the grounds of appeal. These documents do not form part of the appeal.
- That the development does not comply with the requirements of the water framework directive.
- Notwithstanding the revised plans submitted the requirements of the Planning and Development Regulations are not met in the development, particularly with regard to the foundations.
- That the plans do not identify rights of way including forestry roads and do not show forested areas.
- That the extent of excavations proposed on sloping ground is a significant factor in this case and impacts on the appropriate assessment.
- That the reliance on the 2006 Wind Energy Guidelines presents significant problems with regard to the assessment of noise and in particular amplitude modulation.

6.5. Further to the submission of the revised EIAR and Stage 2 Appropriate Assessment as part of the first party appeal the Board required that the first party publish revised notices that highlight the information submitted and inviting submissions. The following submission was received in response to these revised notices:

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- That the inadequacies of the application are reflected in the fact that revised EIAR and AA have been submitted and the fact that the application should have been invalidated.
- That the description of the application in the notices is inadequate as it refers to amendments. It is not possible to consider the amendments in isolation when the wind farm has not been constructed. There is no reference to revised grid connection and haul route.
- That the concept of an amendment application is not provided for in the legislation and the application fails to address the baseline conditions under the EIA Directive and results in a fundamental underestimation of the of the significance of the impacts.
- That the amendments are a fundamental breach of the mitigation measures in the extant EIS and permission.
- That the second reason for refusal relating to the gaps in the EIAR and AA remain valid.
- That the Board has no jurisdiction to consider the case. The fact that the development is related to the Woodhouse development which is unauthorised triggers the need for substitute consent.

6.6. **Observations**

An observation on the appeal has been received from Tom and Moya Power. The following is a summary of the main issues raised in this observation:

- That the proposed development will make the existing noise and flicker impacts from the Woodhouse windfarm worse.
- That the WHO have identified health impacts on persons living within 2km of windfarms and infrasound is a significant concern,
- That the increased scale proposed would result in a further negative impact on the landscape and impact negatively on local leisure amenities including Saint Declan's Way.
- That the scale of development should not be permitted to be greater than the 126 metres of the constructed Woodhouse development. The scale proposed would have a disproportionate effect on the rural character and wider environment.
- That the proposal would set a negative precedent for other similar developments.
- That no public notice was placed in the Dungarvan Observer as stated in paragraph 3.2.3 of the EIAR.

7.0 Assessment

7.1. The following are considered to be the main issues in the assessment of this case:

- Principle of Development
- Approach to Application and Legal Issues
- Environmental Impact Assessment
- Appropriate Assessment

7.2. Principle of Development

National and Regional Policy

7.2.1. At a national level, the form of development proposed is in my opinion clearly consistent with the overall objectives of the Climate Action Plan 2021 regarding reduction in greenhouse gas emissions and the target of net zero by 2050. Under the heading of Electricity, the plan identifies an indicative onshore wind capacity of up to 8GW and I consider that the proposed development would clearly be such as to assist in the achievement of that target.

7.2.2. The third party appellants make the case that objectives around climate action does not provide a justifiable case for the increased scale of wind turbine and increased intensity of output. Issues relating to climate and the likely significant effects on the environment under that heading are considered in more detail in the EIA section of this report and the overall assessment will consider the merits of the overall proposal setting climate impacts against other relevant factors.

7.2.3. I consider that there are a number of provisions of the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES) which are supportive of the principle of the form of development proposed. Specifically, National Policy Objective 55 stated that it is an objective to '*Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050*.' I consider that the principle of the form of

development proposed is consistent with this objective. Similarly, at a regional level, I consider that there are a number of policies contained in the RSES for the Southern Region that are supportive of the principle of the development proposed. Specifically, RPO 99 and RPO 100 related to Renewable Wind Energy seek to support renewable energy developments and production subject to relevant environmental considerations.

Local Policy

7.2.4. As set out at Section 5.3 of this report, the application was assessed by the Planning Authority under the provisions of the *Waterford County Development Plan, 2011-2017* and it is this document which is referenced in the first and third party appeal submissions received. In the interim since the determination of the application by the Planning Authority and the receipt of appeal submissions, a new county development plan, the Waterford City and County Council Development Plan, 2022-2028 has been prepared. This plan came into effect on 20th July, 2022.

7.2.5. Paragraph 5.24 of the 2022-2028 plan states that '*In general, the Council will support wind energy proposals, provided such developments would not have an adverse effect on residential and rural amenities, special landscape character, views or prospects, Natura 2000 sites, protected structures, aircraft flight paths, or by reason of noise or visual impact. Applications for such developments will not be encouraged in Areas of High Amenity*.' The new plan can therefore be seen to be supportive of renewable energy projects in principle.

7.2.6. With regard to compliance with the new county development plan, it should be noted that the application submitted is for an amendment to the existing permission for the development of the Knocknamona Windfarm (ABP Ref. PL93.244006). In my opinion therefore the principle of the development of a windfarm in this location has already been established by this extant permission for the KWF and what falls to be determined under this assessment are the merits of the proposed amendments. In stating this however there are a number of aspects of the 2011-2017 and the 2022-2028 plans and specifically the provisions relating to landscape character assessment and wind energy

policy / strategy that I consider need to be highlighted. This is particularly the case in the context of the contention of the third party appellants that the proposed scale of development is inappropriate in an area that is designated as visually vulnerable and sensitive, and which is characterised by a number of scenic routes and that the Board in its 2016 permission for the windfarm erred in giving preference to the facilitation of wind energy developments in strategic areas over landscape policy. This is refuted by the first party who contend that the issue of conflicting plan objectives relating to wind energy and visual impact was considered in the judgement of justice Houghton (in the judicial review of the original windfarm permission) who concluded that this was a matter for the Board to consider.

7.2.7. Under the 2011-2017 plan, the appeal site was identified as being located as being in an area that was strategic for the development of wind energy projects, but which was also identified as visually sensitive and visually vulnerable. These designations were also included in a Renewable Energy Strategy for Waterford City and County 2016-2030 which was published by the council following the merger of the city and county councils.

7.2.8. These designations have however subsequently changed with the adoption of the 2022-2028 plan. Specifically, Appendix 7 of the 2022-2028 Plan contains a ***Renewable Energy Strategy*** for the county for 2016- 2030 which differs from the document referenced above. Specifically, Appendix 2 of the revised version of the renewable energy strategy included as Appendix 7 of the 2022-2028 plan, states that while the previous 2011-2017 County Development Plan designated the county into 4 areas of suitability for wind energy development (strategic, preferred, open for consideration and no go areas) that '*These classifications have now been superseded by the new Landscape and Seascape Character Assessment which is set out in Appendix 8 of the Waterford City and County Draft Development Plan 2022 - 2028 and the relevant policy objectives of Chapter 6 & 10 of the Draft Development Plan.*' The basis for the appeal site being considered to be a strategic or priority location for wind energy development does not therefore exist under the provisions of the 2022-2028 plan and the balance between this previous strategic designation and landscape considerations can therefore be seen to

have changed with a greater emphasis now placed on the landscape designation of the site.

7.2.9. Appendix 8 of the 2022-2028 Plan contains a Landscape Character Assessment, and the appeal site is located within Area 5 which is the foothills LCA and specifically 5E which is the Drumhills. The exact location of the appeal site relative to the Landscape Sensitivity Map indicated in the plan (Figure 10.1) is difficult to establish due to the low resolution of the mapping available in the plan. It would however appear that the bulk if not all of the appeal site is located within an area of High Sensitivity or amenity. This is supported by Table 2 of the LCA which refers to landscape 5E, the Drumhills and Knocknamona as being within the areas identified as High Sensitivity. Table 1 states that such areas *'have a distinctive character with some capacity to absorb a limited range of appropriate new developments while sustaining its existing character.*' Section 4 of the LCA states that '*these areas have a distinctive, homogenous character dominated by natural processes. Development in these areas has the potential to create impacts on the appearance and character of a large part of the landscape. Applications for development in these areas must demonstrate an awareness of the inherent limitations by having a very high standard of site selection, siting, layout, selection of materials and finishes.*'

7.2.10. Section 6.6 of the new plan relates to Renewable Energy and includes an assessment of operational renewable generation, permitted development and the shortfall relative to as assessment of the county's capacity to accommodate renewable energy. This assessment, presented in Table 6.3 identifies a shortfall of c.113 MW of on shore wind capacity. The proposed development would clearly assist in closing this shortfall.

7.2.11. In terms of the principle of the location of the site as being suitable for the proposed development, the recently adopted Waterford City and County Development Plan does not afford the site the strategic status that was in place under the previous development plan. While the absence of any designations relating to wind energy would not appear to be consistent with the requirements of the Planning Authority in the preparation of development plans, the effect is that the assessment of the merits of the site for wind energy development has

to be undertaken on a more site specific basis with the impact on landscape being the primary criteria. In the case of the appeal site, the detailed assessment of the impact of the proposed development in terms of its impact on landscape and visual amenity is set out at section 8.5 below under the heading of EIA – Landscape and Visual Amenity. In terms of general policy, the general presumption in favour of wind energy proposals provided for in Paragraph 5.24 of Volume 2 of the new plan is subject to a number of specific considerations including the effect on special landscape character, residential and rural amenities, views and prospects and Natura 2000 sites and these factors are considered in more detail in sections 8.0 and 9.0 of this report. Paragraph 5.24 does specifically state that '*Applications for such (wind energy) developments will not be encouraged in Areas of High Amenity'* and it is noted that the appeal site is not located within an area identified as high amenity in the new development plan. Rather, as per the landscape and seascape character assessment set out in Appendix 8 of the plan, the site is located within LCA 5E (Drumhills), an area that is identified as an area of high sensitivity, where such areas '*have a distinctive character with some capacity to absorb a limited range of appropriate new developments while sustaining its existing character*.'

7.2.12. In conclusion, while the extant nature of the permission for a windfarm on the site is noted, the proposal for an increase in scale of the turbines has to be seen in the context of the recently adopted 2022-2028 development plan and the fact that the site is no longer located in an area that is identified as 'strategic' for the purposes of wind energy. Rather the proposed increased height has to be assessed against the landscape designation of the site as set out in the landscape and seascape character assessment and the relevant landscape policies in the plan. This LCA does identify some capacity to absorb new development, with the result that I consider that the proposed development is not such as to be unacceptable in principle in this location. More detailed discussion of the merits of the proposal in the context of the landscape character assessment is provided in section 8.5 of this report below under the heading of EIAR – Landscape.

7.3. Approach to Application and Legal Issues

Prematurity Pending Decision on Grid Connection

7.3.1. The fact that the application was determined in advance of a decision on Waterford City and County Council Ref. 19/369; An Bord Pleanala Ref. ABP-306497-20 – (the Knocknamona WF Grid Connection) is noted by the third party as an issue and forms part of the basis of reason for refusal No. 2 attached to the Notification of Decision to Refuse Permission issued by the Planning Authority. The basis for this argument has, in my opinion been removed by the fact that since the issuing of the notification of decision by the Planning Authority on 14th January, 2021, the Board have subsequently issued a grant of permission for the grid connection via the Woodhouse substation, (dated 18th February, 2021). I note the fact that this permission for the grid connection is currently the subject of judicial review, however this does not in my opinion mean that there is no permission in place as contended by the third party appellants. In conclusion therefore, the assessment of the current case no longer involves elements that have not been permitted and, therefore, I consider that the basis for reason for refusal No.2 as issued by the Planning Authority has been addressed.

Requirement for a New Application

7.3.2. The third party appellants contend that a new planning application is required for the windfarm and grid connection and that this application should be accompanied by an EIAR and NIS which cover both elements of the project. It is contended by the third party appellants that this position was conveyed to the applicant in pre-application consultations held with the planning authority and I note from the content of the Planning Officer reports on file indicate that this is also the position of the Planning Authority. The appellants further contend that there is a clear legal requirement in EU law for a new application which must be self-contained, and that it is not appropriate where an EIA is required under Class 3 of Part 2 of the Fifth Schedule that an amendment can be submitted to an existing permission which has not been developed. It is also contended by the third party appellants that the failure to undertake a de novo application to

include the totality of the development renders it impossible for the competent authority to undertake a valid EIA, and that the application is therefore fundamentally flawed and invalid.

7.3.3. A related issue, which I consider to be potentially significant for the completion of the proposed development inclusive of the amendments now sought, follows from the splitting of the overall development into an application for the windfarm and a separate application for the grid connection and the fact that the current application does not seek to combine the two elements into a single application. Specifically, the EIAR submitted, and the EIA undertaken as part of the permitting of the grid connection (ABP Ref. ABP-306497-20), related to the environmental effects of the grid connection to Woodhouse substation in combination with the effects of the permitted windfarm. With the alterations proposed to the windfarm as per the current application it is not clear that an assessment of the full range of cumulative impacts arising from the grid connection part of the project has been undertaken and it could be considered that there is a gap in the assessment. The current assessment does however consider the cumulative impact of the proposed amended KWF development in combination with other permitted plans and projects, specifically the KWF Grid Connection project. Given this it is not considered that any gap in the overall assessment arises.

7.3.4. With regard to the specific case made by the third party appellants regarding the ***need for a de novo application*** for the overall project, the submission of a new single application for the amended KWF and the grid connection would have given more clarity to the EIA and AA assessments, without jeopardising the existing permissions which the first party has for these developments. It is not clear what part of the directive is being referenced by the first party when they state that there is a '*clear legal requirement in EU law'* for a new application which must be self-contained. Reference is made by the third party appellants to the fact that the development is included within the Fifth Schedule of the Planning and Development Regulations, 2001 (as amended) requiring EIA and that, on this basis, it is required that development of the form proposed should be included as a new stand alone application rather than an application for amendments. It is not however clear to me that a new application is

required solely on the basis that the form of development proposed (wind energy) is listed in the Fifth Schedule to the Act and where the scale of the development would exceed the relevant threshold.

7.3.5. I consider that there are a number of points regarding the acceptability of the approach taken where an application for an amendment to a permitted development is proposed, and that these can be summarised as follows:

- Firstly, the acceptability of amendment applications has been clearly established in the South West Regional Shopping Centre Vs An Bord Pleanala case (IEHC 84 of 2016) where the principle of applications for the revision or amendment of existing permissions was established. It is noted that the particular circumstances of the South West Regional Shopping Centre Vs ABP case and the current appeal differ in that no EIS (as was required at the time) was submitted in the SW Regional Shopping Centre case and the requirement for the submission of an EIS was screened out by the Board. It is also worth noting that the circumstances of the South West Regional Shopping Centre case are also different in that the amendments sought were for a reduction in the scale of the development (a reduction in floor area) rather than an increase as is proposed in the current application.

- With regard to EIA, it is noted that Paragraph 55 of the judgement in the South West Regional Shopping Centre case makes reference to the existence of Class 13 of the Fifth Schedule of the Planning and Development Regulations, 2001 (as amended) relating to classes of development where EIA is required and specifically where EIA is required in the case of alterations to EIA projects. The wording of this paragraph specifically notes the existence of such a class as support for the power of a planning authority or the Board to accept and adjudicate upon applications which involve minor variations or changes to existing planning permissions. I note this conclusion and consider that the presence of a specific class (Class 13 of Part 2 of the Fifth Schedule) relating to '*any change or extension of development already authorised, executed or in the process of being executed…'* for the purpose of EIA, indicates that such modifications are effectively a project for the

purposes of EIA. Reference to the existence of Class 13 of Part 2 and to the provision providing for alterations to developments requiring EIA is also highlighted in the first party submissions on file.

- Article 3 of the EIA Directive requires that EIA shall identify, describe and assess the direct and indirect effects of the '*project'* on the environment. I note that Section 172 of the Act relating to the requirement for EIA refers to an application for consent for '*proposed development'* which would appear to clearly encompass alterations or modifications to an extant permission. Notwithstanding this, with specific regard to the wording contained in the directive, Article 1 of the 2011 Directive contains a definition of 'project' as follows, '*the execution of construction works or other installations or schemes and other interventions in the natural surroundings'* and *'landscape including those involving the extraction of mineral resource'*. I consider that alterations to the permitted wind energy development on the appeal site are consistent with this definition and that it is therefore reasonable that the proposed alterations constitute a project for the purpose of the EIA Directive.
- As will be considered further in section 8.0 of this report below relating to EIA, what is required under the 2014 directive is an assessment of the likely significant effects of the project relative to a baseline scenario. No definition of what constitutes the baseline scenario is presented in the Articles of the directive. Paragraph 31 of the preamble to the 2014 Directive does however describe the baseline scenario as '*the likely evolution of the current state of the environment without implementation of the project'*. Thus, the baseline scenario would appear to be dependent on what you consider to be the 'project' for the purposes of EIA. If, as concluded above, the project is considered to be the alterations or amendments to the existing permission, then the baseline would be the state of environment with the originally permitted windfarm but without the proposed alterations. I consider that this interpretation is supported by Paragraph 4.31 of the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018) which states that '*the starting point for EIA is an*

assessment of the current state of the environment and how this is likely to evolve without the proposed project but having regard to existing and approved projects and likely significant environmental effects – in other words the 'do nothing' scenario'.

- With regard to baseline and the baseline scenario, Annex IV(3) of the directive states that the EIA Directive requires:

  'A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the project, as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of the environmental information and scientific knowledge.'

  The implication of this definition is that the baseline has two levels, a current baseline and a future baseline with predicted natural changes and known projects accounted for – a likely future receiving environment.

  The third party appellants make the case that the approach undertaken by the first party whereby the existing baseline is set out in reference documents is unacceptable. It is also contended that the EIARs submitted do not constitute self-contained stand alone documents. These issues are addressed in more detail in section 8.0 of this report below under the heading of EIA and, as set out in that discussion, I consider that the 2021 EIAR document submitted, while not providing a full written description of the baseline environment with the permitted KWF, does provide an evaluation of the impacts on the environment of the permitted development that enables an assessment of the impacts of the proposed amendments to be undertaken. It is therefore my opinion that the 2021 EIAR is consistent with the requirements of the EIA Directive and Article 94 of the Planning and Development Regulations, 2001 (as amended).

- Part of the case presented by the third party appellants with regard to the need for a new application and EIAR that incorporates the entirety of the proposed project relates to the fact that the application for the

Knocknamona WF and associated EIS submitted did not include the grid connection, but rather indicated potential grid connection routes that were taken into account in the EIA undertaken by the Board. Given this and the fact that the grid connection route proposed has now changed, it is contended that a new application for the entire project is required. I do not agree with this interpretation. Firstly, the indicative grid connection options were included in the EIS submitted for the windfarm to enable an assessment of the entire project (inclusive of the grid connection) to be undertaken, notwithstanding the fact that the grid connection did not form part of the permission sought. The fact that the grid connection route has now changed does not in my opinion compromise the validity of the original assessment and permission undertaken for the windfarm. In addition, the revised grid connection via Woodhouse substation has been the subject of a separate application for, and subsequent grant of, permission and the assessment undertaken at that time considered cumulative impacts with the permitted windfarm development.

7.3.6. In conclusion therefore, while I consider that the submission of a new self-contained application that would cover the windfarm inclusive of the proposed amendments and the revised grid connection to Woodhouse would be beneficial from the perspective of clarity, I do not consider that there is a clear legal requirement that this would be the case. Rather, I consider that the provisions of the 2014 EIA Directive and the Fifth Schedule of the Planning and Development Regulations, 2001 (as amended) explicitly provides for a class of development (Class 13 of Part 2) relating to any change or extension to a project requiring EIA. The third party appellants contend that as the proposed development is of a class (wind energy) that exceeds the relevant threshold that a separate application is required. However the wording of Class 13 of Part 2 clearly states that changes or extensions included in Class 13 can relate to development '…. *already authorised, executed or in the process of being executed',* indicating to me that it also applies to developments authorised but not yet constructed such as KWF. I therefore consider that the principle of the approach taken by the first party in this case in submitting an amendment application is acceptable.

Validity of the Revised EIAR and AA Submitted with First Party Appeal

7.3.7. The third party appellants contend that there is no provision in the legislation for the first party to submit a revised EIAR and Stage 2 Appropriate Assessment as part of their first party appeal. The appellants contend that the application is effectively invalid on the back of the Council decision to refuse permission on the basis of deficiencies in the EIAR, that it is not open to the first party to rectify deficiencies identified by the competent authority (Waterford County Council) as part of the appeal process and that the and the Board therefore has no jurisdiction in the process. On these issues, I do not see how the application can be deemed to be invalid on the back of the decision issued by the Planning Authority. The Planning Authority have determined that the submitted EIAR and AA are inadequate and contain information gaps such that permission should be refused (Reason for Refusal No.2). Consideration of these issues now fall to the Board for determination as part of this appeal. As noted above, the revised grid connection proposal which is referenced in reason for Refusal No.2 has now been permitted and I do not see how the consideration of the application cannot be undertaken by the Board on appeal or how the Board can be considered to be precluded from considering the appeal on the basis of the reason for refusal issued.

7.3.8. With regard to the revised EIAR and Stage 2 Appropriate Assessment reports included with the first party appeal, the specific content of these reports is considered in more detail in the relevant sections of this report below under the headings of EIA (8.0) and AA (9.0). These revised reports were circulated for comment to other parties to the appeal and responses to these circulations were received. At the request of the Board, the revised reports were also the subject of new public notices with an opportunity for submissions to be made to the Board by any party. I consider that there is no provision in the Planning legislation that clearly prohibits the approach taken by the first party on this issue and therefore I do not agree with the third party appellants that the Board has no jurisdiction in the process on account of the submission of these revised EIAR and AA documents.

Other Legal Issues

7.3.9. The third party appellants contend that there has been unauthorised development in respect of ***works undertaken to the proposed haul route***. These issues were also raised during the course of the appeal against the grid connection application (Ref. ABP-306497-20) and were addressed during the course of the assessment of that case. As detailed in the assessment relating to the grid connection case, on the basis of the information available, I do not consider that there is any clear indication that unauthorised works along the haul route have been undertaken. It is also noted that no such works are referenced in the internal reports prepared by the planning authority on either the current file or the grid connection case.

7.3.10. The third party appellants also restate the issue raised in the grid connection appeal that the KWF permission (2016) is legally bound to the grid connection and haul routes identified in that application. As set out in my inspectors report on the grid connection appeal case, I do not agree that this is the case. Rather the grid connection options demonstrated in the 2016 EIAR for the KWF indicated the most realistic options available at that time to connect the wind farm to the grid and were presented to enable an assessment of the likely significant environmental impacts of the overall projects to be assessed. This does not in my opinion tie the first party to these grid options and it was open to the first party to make an application for an alternative grid connection that took account of changed circumstances and alternative connection routes that were not evident at the time of the initial application for the KWF. This grid connection was granted permission by the Board under Ref. ABP-306497-20.

7.3.11. The third party appeals received further restate the case made in the appeal against the grid connect application that the approach taken by the first party represents ***project splitting***. For the reasons set out above, I am satisfied that it was open to the first party to submit a separate application for a grid connection and that this connection did not have to be the same as the options presented in the KWF EIS.

7.3.12. Finally, the third party appellants restate the contention made in the appeals against the grid connection application regarding the legal status of Woodhouse windfarm and the contention that the Woodhouse and Knocknamona Windfarms are the same project. Specifically, it is stated that there are aspects of the Woodhouse windfarm that are unauthorised and that the use of the Woodhouse substation to connect KWF to the grid and parts of the Woodhouse access roads for construction access mean that the Woodhouse and Knocknamona developments are essentially the same project. While it is noted that the planning status of Woodhouse windfarm was stated at the time of the grid connection application to be the subject of legal challenge, there is no indication on the current appeal file that this case has been determined. Similarly there is no indication on the appeal file that the Planning Authority consider Woodhouse windfarm to be unauthorised. In any event, I do not consider that the planning status of Woodhouse windfarm is relevant to the assessment of the subject case as it and KWF are two separate projects which are not proposed by the same developer. The fact that KWF proposes to use part of the same access road does not in my opinion mean that the two projects are functionally connected in the way contended by the third party appellants.

7.3.13. The third party appellants raise a number of issues as part of the grounds of appeal relating to the validity of the application as submitted. Firstly, on the issue of the ***public notices***, it is stated that the notices submitted are misleading as they do not relate to the rotor diameter and do not make reference to the proposal to connect the Knocknamona Windfarm to the Woodhouse Windfarm substation and grid connection and use of the haul route serving Woodhouse Windfarm despite this being a material change from the permission that was granted in 2016 under Ref. PL93.244006. On this issue, I note that the public notices did reference the overall height proposed by the amendment and that the description of the development was deemed to be in accordance with the regulations and accepted as valid by the Planning Authority. Regarding the grid connection and haul route, these elements of the overall project are authorised by a separate grant of permission and are not part of the subject amendment application. For these reasons, I do not consider that there is a clear basis on which the Board could determine that the

application and therefore the appeal is invalid on the basis of inadequate public notices.

7.3.14. The third party appellants have also raised issues with regard to the ***validity of the drawings submitted*** with the application, and specifically the lack of details regarding a specific turbine type and, in the specific context of the decision in the case of Balscadden Road Residents Vs An Bord Pleanala, the level of detail submitted regarding the proposed turbine foundations. In the case of the proposed development the first party state that there will not be any additional foundations required and that the foundations that have previously been authorised can accommodate the proposed amended turbines also. Confirmation from a structural engineer that the required foundations can be provided within the area of the foundations indicated has been provided. This information is noted, and I also note the fact that the original permission provided drawings that indicated the basic dimensions of the proposed foundations. These drawings are shown in drawing No. KWF-PLT-05 (Typical Turbine Elevations) submitted with the current application and area also in Drg. No. KWF-PA1-04 (Wind Turbine Base Plan and Elevation) submitted as part of the original application for the KWF and copies at Appendix 1.1 of the revised EIAR submitted with the first party appeal. I also note that as no changes to the foundations are required to accommodate the proposed amendment and that changes to the foundations do not comprise part of the current application that it is not clear that drawings of the foundations are required. Given this, I therefore consider that the drawings submitted with the application are valid and in accordance with the requirements of the regulations and that no further details of the turbine foundations are required to be provided, however this is an issue which the Board may wish to consider further.

7.3.15. With regard to turbine type and dimensions, the published notices make reference to amendments to the previously authorised Knocknamona Windfarm (ABP Ref. PL93.244006) and that these amendments will consist of

'(a) an increase in the uppermost tip height of the eight previously authorised wind turbines from up to 126 metres to up to 155 metres;

(b) Amend the height and design of the previously authorised meteorological mast from a tubular tower mast up to 80 metres in height to a lattice tower mast up to 99 metres in height'.

7.3.16. As noted by the third party appellants, the application details provided in the public notices do not specify a maximum length for the amended turbine blades or detail a range for the overall height or blade length proposed. The submitted documentation does however include a drawing (Drg. No. KWF-PLT-05 – Typical Turbine Elevation) and it is noted that this drawing indicates this typical turbine as having a hub height of 91.65 metres and a range of 86 – 95 metres, a rotor diameter of 126.7 metres with a range of 112 – 126.7 metres and a maximum overall height of 155 metres. Similarly, Drg. No. KWF-PLT-06 – Typical Meteorological Mast Elevation, shows a lattice type mast of maximum height of 99 metres and with a maximum dimension at the base of 4.1 metres.

7.3.17. It is evident from the paragraph 1.5.1 of the original EIAR dated September, 2020 and paragraph 1.3.2.2 of the revised EIAR dated February 2021 that the application is for a range of turbine dimensions with a clear maximum and minimum hub height and rotor diameters specified and it is not therefore a case that the scale of turbine is open ended. It is also evident from chapter 1 of both EIARs submitted that the analysis presented in the assessments is based on the characteristics of the Vestas V126 turbine type and it is this turbine which is illustrated in the submitted drawings of Typical Turbine Elevation (Drg. No. KWF-PLT-05). This turbine is within the range of dimensions set out in the application documentation and constitutes the currently available turbine within the range specified that can be used for assessment purposes. Having regard to the above, I do not consider that the drawings or public notices as submitted with the application are invalid as contended by the appellants. In the event of a grant of permission, it is recommended that a condition would be attached that would require final details of the turbine design, including dimensions within the range as set out in the application documentation to be submitted for the written agreement of the Planning Authority prior to the commencement of development.

7.3.18. The third party appellants highlight the fact that the stated ***site area*** of 70.5 ha. is significantly in excess of the site area cited in the 2016 application (c.65 ha.) and there is no clear explanation of why this is the case. It is submitted that the red line boundary is not the same and therefore it is not clear how the applicant can make an application for modifications to the original permission. The response submission made by the first party does not provide any clear explanation for the apparent changes in site area between the current and the fact that the amendment site area is larger is specifically noted. However, I also note that elements of the originally permitted development which are the subject of the subject application for amendments comprise the permitted turbine locations and all of these turbine locations are within the identified red line boundaries as indicated in both the existing application and the original permission PL93.244006.

7.3.19. The third party appellants have highlighted that the stated ***applicant in the subject application differs from that outlined in the original application.*** Specifically, the stated applicant in the subject case is Knocknamona Windfarm Limited while the applicant in the case of the original application was Ecopower Developments Limited. As detailed by the first party in their response to the grounds of appeal, Ecopower Developments Limited and Knocknamona Windfarm are both subsidiaries of the Ecopower Group and controlled by the same corporate entity. Given this and the nature of the application which is for an amendment to an existing permission rather than a situation where there are two steps in the same permission or consenting process, I do not consider that there is an issue with regard to the validity of the application on account of the name of the applicant.

8.0 Environmental Impact Assessment

8.1. Introduction / Need for EIA

8.1.1. The potential requirement for the submission of an EIAR in this case is not discussed in the EIAR submitted with the application. The submitted EIAR does not definitively identify a power output from the proposed development. It is however stated at section 1.5.1 of the September 2020 EIAR that the purpose of the proposed development is to ensure that the 8 no. turbines permitted on the site would '*substantially fill the 34MW of grid capacity secured'*. Reference is made to turbines being selected from the 3MW to 4.5MW range and specific reference is made to the Vestas V126 model which it is stated is the specification of turbine which has been used in the Landscape, noise, shadow flicker, biodiversity and telecommunications modelling assessment in the EIAR. Specifications listed online indicate a 3.45 MW model however there is reference to a rated output of up to 4.5MW for the V126 with a 155 metre tip height. Such a turbine could therefore give a power output of up to 36 MWs.

8.1.2 Class 3(i) of Part 2 of the Fifth Schedule of the Planning and Development Regulations, 2001. 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. The form of development proposed in KWF would therefore be above the relevant threshold.

8.1.3 Class 13(a) of Part 2 of the Fifth Schedule relates to changes or extensions to developments already authorised and states the following threshold for the requirement for EIA:

> *(a) Any change or extension of development already authorised, executed or in the process of being executed (not being a change or extension referred to in Part 1) which would:-*
>
> *(i) result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule, and*
>
> *(ii) result in an increase in size greater than –*
>
> *- 25 per cent, or*

- an amount equal to 50 per cent of the appropriate threshold, whichever is the greater.

In the case of the proposed development, the output of the permitted KWF was originally proposed to be approximately 34MW, however the original development as proposed was reduced by 33 percent with the omission of 4 no. of the 12 no. turbines proposed. The current proposed amendment would therefore result in an increase in output of c.11MW over the authorised KWF development which is more than 50 percent of the relevant threshold of 5MW.

8.1.4 I have carried out an examination of the information presented by the applicant in both the EIAR originally submitted with the application to the Planning Authority and dated September 2020 and the revised EIAR submitted by the first party to the Board as part of the first party appeal and dated February, 2021 and the submissions made during the course of the appeal. A summary of the planning authority, prescribed bodies, appellants and observers has been set out at section 6 of this report above. The main issues raised specific to EIA can be summarised as follows:

First Party

- That the revised EIAR evaluates the proposed development with more clarity '*particularly in the topic chapters'*.
- That the landscape and visual impact assessment produced does robustly demonstrate the impact of the proposed larger turbine.
- Submitted that separate planning applications can be submitted for different elements of an EIAR project (reference to O'Grianna vs An Bord Pleanala and subsequent case law).

Third Party

- That the permission for development upon which the subject application is reliant and seeks to modify is predicated upon the grid route options set out in the EIA conducted by the Board in 2016 and the EIS supporting that grant of permission. It is not feasible to modify that permission while substituting and alternative grid connection, also unpermitted, as this would undermine the integrity of the original EIA.

- Submitted that a new planning application is required for the windfarm and grid connection and for this to be accompanied by an EIAR and NIS.
- That the application is only capable of implementation for the grid connection routes that assessed as part of the original EIA in 2016 and which are bound by the mitigation measures and planning conditions attached to the 2016 permission.
- That the clear intention of the applicant is to use the Woodhouse substation grid connection and haul route, however this has not been included within the subject application or submitted EIAR.
- That reliance on the reference documents relating to the grid connection application Ref. 19/369 / ABP Ref. ABP-306497-20 is not a substitute for adequacy of the EIAR or competent authority EIA.
- That the 2019 grid connection application and accompanying EIAR was based on the Knocknamona WF development as permitted in 2016 and not the revised proposal now the subject of appeal.
- That the current application / EIAR does not consider the haul route, or the impact of the larger turbine components now proposed. .
- That the impacts of the increased turbine size and potential power output need to be assessed across all environmental headings.
- That the EIAR submitted is not a self-contained document and is reliant on separate references to the original application for the windfarm and to the grid connection application.
- Inadequate assessment of impact on bird and bat species in the EIAR.
- That the visual impact assessment undertaken is deficient in terms of extent of ZTV, cumulative impacts, extent of increase in visual impact relative to the previously permitted development and choice of viewpoints for visualisations.
- Substandard visualisations in terms of technical information and viewpoints choice and obstructions. Overall, the photomontages do not provide an accurate assessment of scale.

- That the development would have a significant negative impact on landscape and visual quality and that the capacity of the landscape in this visually vulnerable area to absorb development has already been breached by the existing developed Woodhouse Windfarm.
- Submitted that the development plan policy to facilitate development in strategic areas does not override landscape policy.
- That neither the wind energy strategy nor the Wind Energy Guidelines were the subject of SEA. Submitted that the application is premature pending the adoption of the new guidelines.
- Regarding noise, submitted that no proper assessment can be made in the absence of a background assessment. A number of specific issues with regard to noise are noted including low frequency noise and modulation due to proximity of blades to the ground.
- That the impacts of the increased turbine size and potential power output need to be assessed across all environmental headings.
- That the application and EIAR does not re-evaluate alternatives but rather relies on reference to the previously submitted EIS.

These issues are addressed below under the relevant headings, and as appropriate in the reasoned conclusion and recommendation. A number of the issues raised by the third parties, specifically those relating to the validity of the approach taken to the application around the need for a new application, relationship to the haul route and grid connection, the description of development and development envelope and project splitting have been addressed in section 7.3 above under the heading of Legal and Other Issues.

8.2 Structure and Content of EIARs

8.2.1 The documents have both been prepared using the grouped format with each factor of the environment assessed in a separate chapter. The documents are accompanied by non-technical summaries, and I am satisfied that the EIAR documents submitted have been prepared by competent experts.

8.2.2 As discussed in section 7.0 of this assessment above, I consider that there is a potential issue with regard to the format of the submitted EIAR documents relating to the issue of the baseline and the clear identification of the impact of the project which is being the subject of EIA which in this case is the modification of the extant permission for the KWF to allow for increased turbine sizes and a consequent increase in output. Paragraph 2C of Schedule 6 of the Planning and Development Regulations, 2001 (as amended) requires that the information to be contained in an EIAR includes:

> *(c) a description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge;*

8.2.3 From this section and the wording of the directive I consider that the minimum that is required is that the EIAR would clearly identify the existing baseline environment and the evolution of that baselines with the permitted developments (specifically in this case the KWF and KWF Grid Connection project). The EIAR should then provide an assessment of the likely impacts on the environment arising from the increased turbine sizes and outputs and the cumulative impacts comprising the impact of the KWF project and other permitted plans and projects in the area.

8.2.4 The EIAR documents submitted, and specifically the 2021 EIAR submitted as part of the first party response to the grounds of appeal, is structured such that each chapter addressing an individual factor of the environment contains a section that is titled '*Baseline Impact on XXXX'*, where xxxx is the relevant environmental factor. This section contains what is a baseline scenario without any KWF development, so no windfarm, no amendments and no grid connection. This section also includes in each chapter an assessment of any changes to this baseline over the period since the environmental assessments undertaken for the KWF (2015 EIS) and KWF Grid Connection (2019 EIAR). The 2021 EIAR document submitted therefore in my opinion contains a clear description of the relevant aspects of the current state of the environment

(baseline scenario) as required by the 2014 EIA Directive and Sixth Schedule of the Regulations.

8.2.5 With regard to the evolution of the baseline scenario over time, what the impact assessment section of each chapter in the 2021 EIAR presents is a table that includes the potential impacts and sources of impact under each environmental factor, the assessed impact of the permitted KWF, the impact of the proposed amendments (larger turbines and met mast) and finally the overall whole project cumulative impact. The chapters do not contain a descriptive assessment of the evolution of the environmental baseline with the permitted KWF, however the environmental impacts of this permitted development are set out. By way of elaboration on this assessment, reference copies of the 2015 KWF EIS and the 2019 KWF Grid Connection Project EIAR are submitted with the application. On balance I consider that this approach is an acceptable method of presenting the evolution of the baseline environment without the development to reflect the permitted KWF. The approach means that where detail on the assessment of the environmental impact of the KWF and KWF Grid Connection are required the reference documents can be consulted. I also note that in the case of Air (noise and shadow flicker) and Landscape and Visual Impacts, which are considered to be the most significant potential environmental impacts arising from the proposed amendments, the approach taken in the 2021 EIAR submitted provides a clear comparator between the results of the assessments for the KWF and that for the amended development (for example see Tables 2 and 3 of Appendix 6.2 of 2021 EIAR Shadow Flicker Assessment 2020 and Table 9.1 and Landscape Visualisation Document also in the 2021 EIAR).

Consideration of Alternatives

8.2.6 The revised EIAR submitted dated February, 2021, sets out a number of alternative turbine types which are the subject of what is described in Paragraph 2.2.1 of the revised EIAR as the 'IMPERIA methodology'. The output of this assessment is presented in Table 2.1 of the revised EIAR (February, 2021) and assesses the following turbine types / sizes:

- Turbines of up to 126 metres tip height (the authorised KWF)
- Turbines at 145.3 metre tip height,

- Turbines of up to 155 metres tip height (what is proposed in the application the subject of this appeal),
- Turbines up to 177 metres tip height.

8.2.7 The third party appellants contend that the approach to alternatives taken is inadequate on the basis that the application and EIAR does not re-evaluate alternatives but rather relies on reference to the previously submitted EIS. What I take from the third party appellants submissions is that they consider that the assessment of alternatives should have included an assessment of alternative locations and numbers of turbines. Given the nature of the application sought and the fact that there is an extent permission in place for the 8 no. turbine KWF, I do not agree with the third party appellants on this issue. In my opinion the extant KWF permission has established the locations for the turbines and what is relevant to the project and up for consideration in the subject application and assessment is the merits or otherwise of an alternative size of turbine. As detailed at Paragraph 2.1 of the revised EIAR dated February 2021, the previous EIS / EIAR documents for the KWF and KWF Grid Connection have considered the higher level alternatives relating to the windfarm location, layout and grid connection.

8.2.8 As set out above, the documents submitted by the first party, specifically the revised EIAR dated February, 2021, clearly identifies a range of alternative turbine types and sets out an overview of the environmental impacts of each. The assessment presented includes the 'do nothing' alternative which in the assessment presented comprises the permitted KWF incorporating 8 no. turbines of up to 126 metres overall height. Having regard to the above, I consider that the assessment of alternatives presented is consistent with the requirements of the 2014 EIA Directive (2014/52/EU) and the Planning and Development Regulations, 2001 (as amended).

8.2.9 I note that the first party appeal proposes the turbines at 145.3 metre tip height as a potential alternative in the event that the Board does not consider the 155 metre option acceptable. I also note that this option is within the hub height and rotor diameter ranges identified in the application and specifically in the 2021 EIAR and therefore should result in a lower environmental impact that the

'worst case' scenario used in the 2021 EIAR, (see paragraph 13.2.2.2). I also note however that a number of the assessments presented, notable the landscape and visual assessment and the noise and shadow flicker assessment, are specifically undertaken on the basis of the larger Vestas V126 turbine model. Given this and the conclusions reached in the assessment below, the option of the 145.3 metre overall height turbine was not examined in detail in the following assessment.

Competent Experts

8.2.10 The introduction to the 2021 EIAR does not contain a specific list of all experts used in the preparation of the EIAR. The author of each chapter is however presented at the start of the relevant chapter of the EIAR, and the description provided sets out a summary of their qualifications, professional affiliations and experience. I consider that the information presented is consistent with the requirements of the 2014 Directive.

Vulnerability of Project to Major Accident Hazards

8.2.11 This issue is addressed at Paragraph 1.8 of the 2021 EIAR. As set out in that section, neither the permitted KWF nor the KWF grid connection are vulnerable to major accidents due to the negligible volumes of hazardous or combustible material that would be present on the site. There is no significant risk of natural forces giving rise to a significant hazard as the site is not located such that there would be a significant flood risk and is not located in an area characterised by peat or other material that would lead to slippage. Climate change factors are not considered to be such that they would lead to any significant vulnerability to major accident hazards given the nature of the KWF development and the location of the site. In addition, the nature of the proposed amendment the subject of this application comprising an increase to the size of the turbines and the increased height and design of met mast is such that any existing risk of major accident hazards would not be increased.

Conclusion

8.2.12 In conclusion, I am satisfied that the 2021 EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR, and supplementary information provided by

the developer, adequately identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment and complies with Article 94 of the Planning and Development Regulations, as amended.

8.2 Population and Human Health

8.2.1 Population and human health impact arising from the project are addressed at Chapter 12 of the original September 2020 EIAR and the revised EIAR dated February 2021.

8.2.2 The proposed project has the potential to impact on the local populations in terms of ***employment and economic contribution to the local economy*** arising from construction related activity and the generation of rates for the local authority. The project would also have the potential to impact on local populations arising from the impact that it would have on amenity and on human health by way of impacts relating to noise, shadow flicker and vibration.

8.2.3 The project would have some slight potential to impact positively on local economic development and the local economy. The baseline projected employment impacts arising from the authorised project are not detailed in the EIARs submitted, however it is stated in 12.4 of the 2020 EIAR that the impact on local employment arising from the proposed amendment and larger turbine sizes would be neutral as no additional construction personnel or locally sourced materials would be required. No additional operational phase employment would be generated.

8.1.2. The cumulative impact on employment with the development of the KWF and associated grid connection would generate a positive economic return for the local economy in the form of additional construction related turnover, supplies and an operation phase return to landowners and the community fund. As per paragraph 1.6.5.1 of the 2021 EIAR, the amended turbines would lead to an increase in the rates generated for the local authority from c.€250,000 to c.€450,000. The EIAR also states that the predicted annual payment into the community fund would rise from c.€150,000 to c.€192,000 and details of how this would be paid to the local community is detailed in paragraph 1.6.5.2. I

note that no condition relating to a community fund was attached to the original permission for KWF (Ref. PL93.244006) and therefore, in the event of a grant of permission, it is recommended that a condition be attached requiring that community gain proposals would be submitted for the agreement of the planning authority.

8.1.3. The project has the potential to impact on ***human health*** as a result of the impact that the development is projected to have on aspects of the environment that have the potential to impact on human health with the most significant of these being noise and shadow flicker issues. As is discussed in detail in Section 8.4 of this assessment below under the heading of Air, the proposed amendment to the KWF to increase the permitted maximum turbine size from 126 metres to 155 metres overall height and hub height and rotor diameters within the ranges specified is not considered to have likely significant effects on the noise levels at noise sensitive locations in the vicinity of the site. Similarly, the increased height of turbine and consequent increase in blade length as modelled using the specifications of the Vestas V126 turbine, is not predicted to result in any significant change in the number of receptors impacted by shadow flicker relative to that with the permitted KWF. Finally, as detailed at Section 8.4 below, the proposed increase in the permitted turbine size would not have any significant impact in terms of vibration that could have impacts on human health. For these reasons, I do not consider that the proposed amendments would have any significant negative impact on human health due to noise or shadow flicker impacts.

8.1.4. The construction and operational phase of the proposed amendment KWF would not have any potential significant impacts in terms of ***surface and groundwater*** that could impact on human health. As detailed below in paragraph 8.4.1 under the heading of Land and Soil, the application documentation as set out in the descriptions of development contained at Chapter 1 of both EIAR documents (1.5 of the 2020 EIAR) clarifies that the extent of turbine excavations proposed to accommodate the increased size of turbine would not be any greater than those provided for in the permitted KWF. The first party response submissions on the appeal file are clear that the original turbine foundations were specified with capacity to accommodate larger

turbines. Similarly, it is stated that there are not proposed to be any changes to the turbine hardstands, access roads, construction compounds or borrow pits. The exact degree to which the excavations to accommodate the larger turbines might be greater than those that would be necessary to accommodate the permitted KWF is not clear, however any indirect impact on population and human health arising from the construction activity would not be any more significant that those assessed under the EIS for the permitted KWF.

8.1.5. With regard to ***traffic***, the proposed larger turbines are stated not to result in any increase in traffic volumes, and construction materials are stated to be capable of being delivered without any additional road or junction improvement works being required. This is discussed in more detail in Paragraph 8.5.1 below under the heading of Material Assets, however there are not likely to be any significant impacts on human health arising from increased traffic volumes along the haul route to the site or changes to the nature of traffic arising from the increase in turbine size.

8.1.6. In conclusion, on the basis of the information submitted with the application including that in the EIAR submitted with the application and the first party appeal, the submissions on file and observations at the time of inspection of the site, I do not consider that the proposed development would have any significant adverse direct or indirect effects on population and human health. The consented KWF was permitted by An Bord Pleanala under Ref. PL93.244006 and EIA of the proposals was undertaken by the competent authority who determined that the predicted environmental impacts were acceptable. Given the nature of the development the subject of this appeal comprising an amendment to an existing permitted windfarm development and to the limited impacts on the environment predicted to arise from this amendment that could impact significantly on this factor of the environment I do not consider that significant cumulative impacts are likely to arise when the proposed development is considered together with other permitted plans and projects in the vicinity.

8.3 Biodiversity

8.1.7. This section relating to biodiversity should be read in conjunction with section 9.0 of this report below under the heading of Appropriate Assessment.

8.1.8. Biodiversity is addressed at Chapter 8 of the original EIAR (September, 2020) and the revised EIAR dated February, 2021. The baseline environment is stated in the 2021 EIAR to take account of the permitted KWF and KWF grid connection and states at 8.1.3 and 8.2 that '*the baseline environment of these developments and the impact of the whole Knocknamona Windfarm project on the receiving environment are summarised from the reference documents'* (these being the KWF EIS, 2015 and the KWF Grid Connection EIAR, 2019). There is reference in paragraph 8.2.6.1.1 of the 2021 EIAR to bat surveys and at 8.2.7.1 of the same EIAR to breeding bird surveys, and other reference to surveys including under the heading of terrestrial mammals and aquatic habitats and species and bats. Paragraph 8.2 of the 2021 EIAR comprises an overview of species and habitats as existing. The following is my assessment of the likely significant direct and indirect impacts of the proposed development comprising the amendments to the permitted turbines in the KWF as they relate to biodiversity, the proposed mitigation and residual impacts and cumulative impacts arising.

8.1.9. The EIAR documents submitted summarise in some detail the existing habitats and species on the site (ref. section 8.2 in both documents). The site is characterised by modified habitat comprising conifer plantations, felled conifer, improved agricultural grasslands and agricultural and forestry roads. The upland location of the site is notable for a range of species including breeding and non breeding birds and bats. The conclusion of the KWF and KWF grid connection environmental assessments and assessments undertaken by An Bord Pleanala as competent authority was that the KWF and KWF grid connection projects would not have significant negative impacts on the environment post mitigation.

8.1.10. The nature of the proposed development the subject of this assessment comprises an increase in the turbine size with a consequent increase in rotor diameter. This amendment has a number of potential implications under the

heading of ecology including an increased risk of bird strikes and collision risk for birds and bats. The development does not propose that there would be any increase in the extent of excavations required for turbine foundations, crane pads, borrow pits or other excavations. The hydrological implications of the development are not therefore likely to be materially different from those that were assessed as part of the KWF project and the KWF grid connection project. No material changes to watercourses would result from the proposed alteration given the fact that no additional excavations are required, and no additional water crossings are proposed with the result that there would not be any additional impacts on water quality or water dependant habitats and species.

8.1.11. Similarly, the direct impacts of the development on terrestrial habitats, construction disturbance or transport to and from the site will not be materially different to those previously assessed and considered to be acceptable as there will not be any additional felling or excavation required. No material impacts on terrestrial mammals are therefore considered likely to arise on foot of the proposed amended turbines. In stating this I note the assessment undertaken and presented by the first party with regard to the haul route to the site and specifically the assessment of the haul route via the N25, Clogh Cross roads, Woodhouse crossroads, the Woodhouse Windfarm access road and the new access road permitted under the KWF grid connection project. The assessment presented of this construction access route is such that I do not agree with the third party contention that the proposed larger turbines will have implications for habitats and ecology along this construction access route. There will not be any material change in the nature or volume of construction or operational phase traffic with the result that, subject to mitigation as proposed under the KWF and KWF grid connection applications, there would not in my opinion be any additional risk of the spread of invasive species.

8.1.12. The nature of the construction works proposed is such that no significant additional noise or disturbance impacts are likely to arise over and above those predicted for the permitted KWF and KWF grid connection. Specifically, the level of excavation required to accommodate the turbine foundations has been demonstrated by the first party not to be any greater than that assessed as part of the KWF, and KWF grid connection applications and it is stated that no new

machinery or equipment will be required to accommodate construction. The impact of the proposed development incorporating the increased turbine size is not therefore considered likely to have any significant impacts on mammals or birds due to noise during the construction phase. Operational phase noise is addressed at Paragraph 8.4.2 of this assessment below. As detailed in that section, the operational phase noise impact of the proposed larger turbines is not considered likely to be significant, or such that it would have a material impact on ecology.

8.1.13. With regard to ***birds***, the increased size of the turbines proposed and specifically the increased rotor diameter proposed to be accommodated would have the potential to increase the risk of collision and obstruction of flight paths. This issue is discussed in more detail in section 9.0 of this assessment below under the heading of Appropriate Assessment in the context of species that are qualifying interests of European sites in the vicinity of the application site, most notably whooper swan. As detailed in that discussion, the results of surveys undertaken during the course of the preparation of the 2015 KWF EIS and the 2019 KWF grid connection EIAR as well as additional survey work undertaken for the current application, including 2020-2021 Bird Surveys detailed at Appendix 8.1 of the revised EIAR, indicate that the risk of mortality from collision risk is not significant. No additional turbines are proposed, and the turbine locations are to remain the same as those permitted under Ref. PL93.244006. No additional bird habitat would be lost. With specific regard to collision risk, Section 8.4.4.4 of the revised EIAR (2021) indicates that a number of passerines including meadow pipit, skylark, housemartin, linnet, starling, swallow and swift would not be at significant collision risk as their flight heights are generally lower than the c.28 metre lowest tip height of the blades. This conclusion is noted to be supported by research as detailed in 7.5.1 of Appendix A8.1 and considered to be reasonable.

8.1.14. ***Kestrel*** are noted as being a species that has a low collision avoidance to windfarms (7.3.1 of Appendix A8.1) and the surveys undertaken indicate 50 no. observations over the 2020-2021 survey period. As highlighted in the 2021 EIAR (section 8.4.4.4) additional kestrel activity could be envisaged if forestry is felled however neither the KWF nor the proposed amendment will result in any

significant loss of forestry cover. For this reason and given the relatively large national population of between 12 and 24 thousand birds, the impact resulting from collision risk is not considered to be significant. ***Woodcock*** is a species that has very limited recordings from the surveys undertaken and the additional risk of collision with this species arising from the proposed development is considered to be low. ***Buzzard***, while recorded in surveys undertaken is not considered to be a species that has a high collision risk and overall impact on the species is not considered likely to be high given population numbers.

8.1.15. A number of other species are considered in the 2021 EIAR and are recorded in the 2020-2021 survey appended at A.8.1 and a number of these species, notably hen harrier, golden plover and whooper swan are discussed in the Appropriate Assessment contained at section 9.0 of this report below. In the case of ***hen harrier***, the largely forested habitat on site does not correspond with the open heath / moorland habitat favoured by this species and there is only one recorded sighting of the species in the 2010-2021 period. Similarly, golden plover was not recorded in most surveys with the only recorded sightings in 2018 and 2020 and habitat on site is not optimal for the species. For these reasons, I do not consider that the proposed amended turbine design proposed would have any significant impact on the above listed species.

8.1.16. No observations of ***whooper swans*** were recorded over the 2010 – 2021 period within 500 metres of the site. Additional surveys for this species were undertaken in the early 2021 period incorporating dawn, dusk and vantage point surveys. While mortality of this species is a recognised risk from windfarms, there is no record of swans overflying the site or that the site is on a potential flightpath. For these reasons I do not consider that the proposed amended turbine sizes would have a significant impact on this species. This issue is considered in more detail in 9.0 below under the heading of Appropriate Assessment.

8.1.17. The surveys undertaken demonstrate the presence of both pipistrelle and Leisler bat species on the site. The KWF development therefore has the potential to impact on ***bats*** including through the disturbance or loss of habitat, disruption of commuting routes, disturbance of roosts and collision risk mortality. Given that the proposed development comprising an increase in

turbine size would not result in a loss of additional habitat or disturbance of habitat or loss of forestry or hedgerow over and above the permitted KWF development, the only potentially significant impact arising relates to increased collision risk. This increased collision risk is potentially significant however, subject to mitigation measures as set out at 8.4.3.3 of the 2021 EIAR including set back of the turbines from wooded areas, lighting and post construction monitoring, the risk to bat species arising from the proposed amended turbine size is considered to be slight to moderate and consistent with the impact set out in 8.4.3 of the 2021 EIAR.

8.1.18. With regard to ***cumulative impacts on biodiversity***, in the case of direct habitat loss and potential indirect impacts due to noise or other disturbance, I do not consider that the proposed development would have anything other than a slight adverse impact and would not result in any change in the hydrological regime in the area. The potential for cumulative impacts with other permitted developments in the area including the permitted KWF, the KWF grid connection and Woodhouse windfarm is not therefore considered to give rise to significant cumulative impacts. With regard to the potential cumulative impact of the proposed development on birds and bats, the permitted KWF and KWF grid connection were not considered likely to have significant cumulative impacts on bird and bat species. Given this and the generally sub optimal habitat observed on the site for many species and the limited surveyed observations of more vulnerable species it is concluded that significant cumulative impacts on birds and bats arising from the proposed development are unlikely to arise.

8.1.19. In conclusion, on the basis of the information submitted with the application including that in the EIAR, the submissions on file and observations at the time of inspection of the site, I do not consider that the proposed development would have any significant adverse direct or indirect effects on biodiversity. The extant KWF and KWF grid connection projects were permitted by An Bord Pleanala under Ref. PL93.244006 and ABP-306497-20. In these cases, EIA of the proposal was undertaken by the competent authority who determined that the predicted environmental impacts were acceptable. The proposed amended turbines the subject of the subject application will not result in any additional

turbines, relocation of permitted turbine locations or additional excavations with the result that the impact on hydrology and terrestrial habitats and species are not considered likely to be significant. While some additional impact on birds is considered possible, the results of surveys for this project and previous applications on the site indicate that the more vulnerable species to such impact are not present on the site in significant numbers and that suitable habitat for such species are not widespread. Given the limited impacts predicted under this factor of the environment I do not consider that significant cumulative impacts are likely to arise when the proposed development is considered together with other permitted plans and projects in the vicinity.

8.4 Land, Soil, Water, Air and Climate

8.4.1 Land, Soil and Water

8.4.1.1 ***Land and Soils*** are addressed at Chapter 4 of the EIAR submitted with the application and the revised EIAR dated 2021.

8.4.1.2 The nature of the development the subject of this application comprises an increase in the proposed height of turbine from 126 metre overall height to a maximum of 155 metres and the application documentation and description of development as set out in Chapter 1 of the submitted EIAR documents clarifies that the amendment proposed to increase the turbine sizes will not result in any increase in the extent of excavations or the number and location of turbines. The existing soil and geological environment of the KWF and KWF grid connection site is illustrated in Figures 4.1 to 4.3 of the 2021 EIAR and show the KWF site as primarily composed of sandstone / Devonian till and upper Devonian bedrock.

8.4.1.3 The extant permission for the KWF and KWF Grid connection authorises a range of works that impact directly on land and soils and which include the felling of c.28ha. of forestry and the excavation of 8 no. turbine bases to a diameter of c.20 metres and a depth of c.2.7 metres (as per Drg. KWF-PA1-04 a copy of which is included in Chapter 1 of the 2021 EIAR). The permitted works impacting on land and soils also include the excavation of two borrow pits, temporary and permanent storage of soils in berms, excavation and

construction of 8 no. crane hardstanding areas, the laying of cabling in a trench of c.1.9km in length between the windfarm site and the Woodhouse substation and excavation and construction activity associated with the additional equipment within the substation compound.

8.4.1.4 The proposed amendment to the turbines will have a very minimal impact under the heading of land and soils. The proposed amendment will not require any additional land take, and no additional excavations over and above those which are already permitted are proposed. No additional forestry felling will be required. In terms of direct construction impacts on soil and land, the information submitted with the application and appeal clarifies that there will not be any additional construction materials in terms of foundations required and there is not proposed to be any additional plant or machinery utilised or storage of fuels or other construction materials on the site which could impact on land or soils. Similarly, the proposed amendment will not require any changes to the permitted KWF grid connection and haul route to the site. In view of the above, I would agree with the assessment presented at Chapter 4 of the EIAR documents and specifically at the table in Paragraph 4.4.2 of the 2021 EIAR that the impact on land and soils arising from the proposed amendment would be either neutral or imperceptible.

8.4.1.5 In terms of cumulative impacts, given the fact that the impact on land and soils arising from the proposed amendment is assessed as being imperceptible or neutral, I do not consider that any significant cumulative impacts when assessed in conjunction with other permitted plans and projects including the KWF, the KWF grid connection and Woodhouse windfarm are likely to arise. It is also noted that the Board as competent authority for the purposes of EIA have previously assessed that neither the KWF or the KWF grid connection were such as to have likely significant environmental impacts under the heading of land and soils. Similarly, Waterford City and County Council as competent authority for EIA determined that the Woodhouse windfarm was not such as to have significant environmental impacts under the heading of land and soils.

8.4.1.6 In conclusion, on the basis of the information submitted with the application including that in the submitted EIAR documents, the submissions on file and observations at the time of inspection of the site, I do not consider that the proposed development would have any significant adverse direct or indirect effects on Land, Soils or Geology. The extant permissions for the KWF and KWF grid connection were permitted by An Bord Pleanala under Ref. PL93.244006 and ABP-306497-20 respectively, and in these cases EIA of the proposal was undertaken by the competent authority who determined that the predicted environmental impacts were acceptable. Given the limited impacts predicted under these factors of the environment I do not consider that significant cumulative impacts are likely to arise when the proposed development is considered together with other permitted plans and projects in the vicinity.

8.4.2 Water

8.4.2.1 The impact of the proposed development on water is assessed at Chapter 5 of the original EIAR submitted to the Planning Authority and of the revised 2021 EIAR. Appendix 5.1 details water sampling results undertaken in 2020 and the location of these sample points is illustrated in Figure 5.1. As set out in Paragraph 5.2 of the 2021 EIAR, the KWF and KWF Grid Connection are located within the Goish and Finisk sub catchments of the River Blackwater and in the Brickey sub catchment of the Colligan – Mahon Catchment. The main watercourses in the vicinity of the site are the Monageela stream which rises to the south west of the Woodhouse substation and flows south towards the Goish River which runs east to west connecting to the River Blackwater a short distance to the south of Villiarstown and c.5km from the closest part of the KWF development. The Mountodell stream rises to the north of the site and flows north to connect with the River Brickey. From there it flows south east in the direction of Dungarvan Harbour. In terms of groundwater, the groundwater bodies in the vicinity of the site comprise the Helvic Head GWB and the Glenville GWB. Surface and groundwater bodies in the vicinity of the KWF and KWF Grid Connection sites are indicated in Figures 5.1 and 5.2 included in the 2021 EIAR.

8.4.2.2 The impact of the permitted KWF and KWF grid connection projects on water was assessed in the relevant 2015 EIS for the KWF and 2019 EIAR for the grid connection. These projects have the potential to impact negatively on surface and groundwater through construction related activity including excavations for turbines, and grid connection, the management of materials on site during construction including storage of excavated material, construction materials such as concrete and the use of construction related equipment. Subject to mitigation, a summary of which is provided at Paragraph 5.3.1 of the 2021 EIAR, the assessments concluded that the KWF and KWF grid connection would not have a significant negative impact on the environment under the heading of water either individually or in combination with other plans or projects. The mitigation measures proposed include implementation of plans regarding sedimentation and erosion / storm water, construction and environmental management, CEMP, drainage and attenuation design, use of silt fencing and other drainage management structures, concrete control, waste control, staged construction of the grid connection and construction site management including use of spill kits and training of staff.

8.4.2.3 The proposed amendment to the permitted turbines has limited potential to impact on the baseline environment under the heading of water due to the limited extent to which the proposed amendment would give rise to additional construction activity that could impact on ground or surface waters. No significant additional groundworks are proposed and no significant change to the volumes of excavated material to be stored are proposed. In terms of equipment and materials to be used on site, the information provided in the EIAR (5.4.2 of 2021 EIAR) confirms that there would not be any change to the volumes of construction materials imported onto the site or to the plant and equipment that would be used or to the wastes arising from the construction activity. The potential for the construction phase of the proposed development comprising the amended turbines and met mast to impact on ground or surface water is therefore considered to be negligible. Post construction during the operational phase, there would not be any change to the drainage arrangements for the KWF or the KWF grid connection. The potential for the operational phase of the proposed development comprising the amended

turbines and met mast to impact on ground or surface water is therefore also considered to be imperceptible.

8.4.2.4 I note that one of the issues raised in the third party is that the development does not comply with the requirements of the ***water framework directive***. Paragraph 5.2 of the 2021 EIAR notes that the EPA water quality status (2010-2015) of the River Brickey is Poor, the Finisk River Good and the R Brickey Moderate. Tables 8.4 and 8.4 of this EIAR under the heading of Biodiversity - Aquatic Habitats and Species identify the Q values of the main surface watercourses in the vicinity of the site including the Brickey and Goish as surveyed and assessed by the first party. The results presented by the first party indicate streams in the Brickey and Goish sub catchments as ranging between Q3 and Q4 with the Q values between 2013 and 2020 surveys either showing no change or a slight decrease. As set out above, given the nature of the development the subject of this application, it is not envisaged that it would have any material impact on water quality at either construction or operational phases of the project and therefore the proposed development would not result in a deterioration in the water quality status of waterbodies in the vicinity of the site contrary to the requirements of the Water Framework Directive.

8.4.2.5 With regard to cumulative impacts, given the fact that the impact on water arising from the proposed amendment is assessed as being imperceptible or neutral, I do not consider that any significant cumulative impacts when assessed in conjunction with other permitted plans and projects including the KWF, the KWF grid connection and Woodhouse windfarm are likely to arise. It is also noted that the Board as competent authority for the purposes of EIA have previously assessed that neither the KWF nor the KWF grid connection were such as to have likely significant environmental impacts under the heading of water. Similarly, Waterford City and County Council as competent authority for EIA determined that the Woodhouse windfarm was not such as to have significant environmental impacts under the heading of water.

8.4.1.6 In conclusion, on the basis of the information submitted with the application including that in the submitted EIAR documents, the submissions on file and observations at the time of inspection of the site, I do not consider that the proposed development would have any significant adverse direct or indirect

effects on water. The extant permissions for the KWF and KWF grid connection were permitted by An Bord Pleanala under Ref. PL93.244006 and ABP-306497-20 respectively, and in these cases EIA of the proposal was undertaken by the competent authority who determined that the predicted environmental impacts were acceptable. Given the limited impacts predicted under these factors of the environment I do not consider that significant cumulative impacts under the heading of water are likely to arise when the proposed development is considered together with other permitted plans and projects in the vicinity.

8.4.3 Air

8.4.3.1 Ait is addressed at Chapter 6 of the original EIAR submitted with the application and Chapter 6 of the revised EIAR submitted as part of the first party appeal. This section of the EIAR contains appendices including a Noise and Vibration Assessment prepared by Malachy Walsh and Partners and dated 2020 (Appendix 6.1) and a Shadow Flicker Assessment also prepared by Malachy Walsh and Partners and dated 2020.

Background

8.4.3.2 The 2021 EIAR references the baseline documents comprising the EIS for the KWF and the EIAR for the KWF Grid Connection project. The noise assessment contained in these documents concluded that neither the windfarm nor the grid connection including the additional equipment in the Woodhouse substation would have a significant negative impact on the environment by virtue of noise, vibration, shadow flicker. Conditions Nos. 7 and 8 attached to the original grant of permission for the KWF relate to noise and shadow flicker and these limits are proposed to remain and to control the emissions from the proposed amended development. Specifically, Condition No.7 attached to Ref. PL93.244006 requires that wind turbine noise from the development by itself or in combination with any other permitted wind energy developments in the vicinity would not exceed the greater of 5dB(A) above background levels or 43dB(A)L90 10mins when measured externally at dwellings or other sensitive receptors. Condition No.8 requires that the development be fitted with

equipment and software to control shadow flicker and that any flicker arising shall not exceed 30 hours per year or 30 minutes per day at existing or permitted dwellings or other sensitive receptors.

Potential Impacts

8.4.3.3 The proposed amendment to the permitted KWF has a number of potential impacts under the heading of Air at both construction and particularly operational phase. Issues related to electromagnetic fields and potential interference with telecoms signals is addressed under the heading of material assets at section 8.5 below.

8.4.3.4 There is potential for the construction phase to result in additional noise emissions as a result of additional construction activity or other equipment. Similarly, alternative construction techniques could give rise to additional emissions to air and deterioration in air quality. At the operational phase, the larger turbines give rise to potential for additional operational noise from the rotation of the turbines (air noise) and mechanical noise. The amended dimensions of the turbines also change the separation distance between the turbine tip and the ground. Similarly, the increased turbine rotor diameter has the potential to result in additional areas and properties that are at risk of the effects of shadow flicker.

Noise

8.4.3.5 With regard to ***construction phase*** noise from the proposed amended turbine, the description of development contained at Chapter 1 of the EIAR, and the first party appeal clarify that no additional excavations or turbine foundation size would be required to accommodate the amended turbines. No new construction methods or equipment are proposed to be employed and there is no indication that the construction period would likely be any longer than that envisaged in the KWF application. In view of this, no additional construction phase noise impacts are considered likely to arise on foot of the proposed amendments. Similarly, given the information available with regard to the construction process and methodology, no additional vibration, dust or other emissions to air impacts are considered likely to arise on foot of the proposed amendment. As detailed in Section 2.1.3 of the 2021 EIAR, no additional noise

sensitive receptors have been constructed within 1km of the permitted KWF turbines since the assessment undertaken in 2015 and my inspection of the site did not indicate any such properties.

8.4.3.6 ***Operational Phase***. The EIAR documents are accompanied by a Noise and Vibration Assessment which prepared by Malachy Walsh and Partners which aims to demonstrate that the proposed amended turbine sizes can operate within the noise limit thresholds set out in condition No.7 attached to Ref. PL93.244006 as set out above. The model assumptions are set out in Table 1 of the report and assume that receptors are downwind of the turbines and that the hub height is 92 metres which corresponds with the 91.65 metre hub height of the Vestas V126 turbine as detailed in Table 1-1 of the 2021 EIAR and which has been used as the typical turbine in the range for which the amendment is sought. Modelling of the noise is done using Bruel and Kjaer software and the SPL of the Vestas V126 turbine across a range of octave bands and windspeeds (as per Table 2 of A.8.1) is inputted into the model. It is noted that these SPLs have been increased by 2dB to account for uncertainity in measurement. The modelling method and inputs in terms of turbine are noted and considered appropriate for the purpose proposed. In terms of cumulative impacts, I note that the output of the operational Woodhouse windfarm to the north west of the KWF site is assessed on the basis that five of the eight turbines installed are Nordex N100 models with the balance N90 models.

8.4.3.6 Table 3 of the report details how the SPLs predicted for the Vestas V126 turbine are actually quite similar to those of the Nordex N100 turbine that was used as the typical turbine in the KWF EIS (2016) despite the increased size due to advances in design and technology. Table 3 actually shows that the V126 model has a lower SPL than the N100 model at 8 of the 10 windspeed for which information is provided. At this rough assessment the proposed amended turbine can been seen to have a limited ability to result in a significant increase in noise relative to the permitted KWF.

8.4.3.7 With regard to the baseline noise environment, it should be noted that the baseline assessment undertaken for the purposes of the KWF was undertaken in 2014 at a time before the Woodhouse windfarm was

commissioned. Paragraph 2.3 of the Noise Assessment submitted states that the 2014 baseline noise measurements are still considered to be representative.

8.4.3.8 The results of the Noise modelling undertaken are presented in Tables 7 to 9 of the noise assessment contained at Appendix 8.1 of the EIAR, with Table 7 illustrating the predicted noise at NSLs within 2km of the turbines for the amended KWF alone (Table 7), Woodhouse windfarm alone (Table 8) and both windfarms operational together (Table 9). The results of the assessment indicate that the L90 DB(A) limit of 43 dB specified in Condition No.7 attached to the grant of permission for the KWF (Ref. PL93.244006) would not be exceeded for any windspeed at any location with the exception of H15 and H16 which are properties located in the centre of the windfarm site and which are stated to be connected with the project. It is also noted that in the majority of the modelled NSLs, (50 out of 60 locations) the output of the assessment for the cumulative noise levels incorporating the noise from both the Woodhouse windfarm and the amended KWF would be below 40dB(A) with the majority significantly below this level. In terms of mitigation, it is also noted that the table contained at section 6.4.2 of the 2021 EIAR clarifies that '*the proposed larger turbines can be controlled, via reduced noise operating modes to stay within the noise limits which are authorised and allowable at KWF…*' indicating that the operation of the turbines can be controlled to ensure that the development operates within the prescribed noise limits. In this regard it is noted that Condition No.7 attached to the grant of permission for KWF (PL93.244006) requires that the developer would enter into an agreement with the Planning Authority regarding a noise compliance monitoring programme that would include any noise mitigation measures '*such as the de rating of particular turbines'*.

8.4.3.9 On the basis of the results presented in the noise assessment contained in the EIAR, the predicted noise levels generated by the proposed development at identified NSLs in the vicinity of the KWF site would be within the noise limits specified in the conditions attached to the permission for the KWF. These findings are consistent with the information provided with regard to the SPLs for the proposed amended development incorporating Vestas V126 turbines

relative to the originally proposed and assessed Nordex N100 models. Based on these SPLs, no significant increase in noise level would be anticipated from the proposed amendment. On the basis of the information presented therefore, the operational phase noise impact arising from the proposed amendment is not considered likely to be significant and would be within conditioned limits. With regard to cumulative impacts, the information presented is also consistent with the conclusion that the cumulative impact of the proposed amended KWF with the operational Woodhouse windfarm would not be significant and would be within conditioned limits.

8.4.3.10 I note that the third party appeals submitted raise a number of issues with regard to the noise assessment undertaken and submitted as part of the application for the amended KWF. Specifically the appellants including in a report from MAS environmental limited, highlight the fact that the noise assessment undertaken is not based on new background survey, that the noise environment has changed significantly since the KWF EIS and contend that the predictive technique used is not appropriate and that noise assessment techniques have moved on significantly since the KWF EIS. The first party appellants make a number of points in response to these issues as raised by the first party. Specifically, it is contended that the use of the predictive technique is in accordance with ISO9613 of the IoA GPG. While the significant time period between the original background survey information for KWF and the fact that the Woodhouse windfarm has become operational in the intervening period would suggest that a new background survey should be undertaken for the assessment of a new development, my reading of ISO-9613 does not indicate that predictive techniques such as that utilised by the first party in this case are not acceptable. Similarly, I do not consider that the approach taken by the first party is clearly inconsistent with the requirements of the 2006 Wind Energy Guidelines.

8.4.3.11 In my opinion regard also has to be had to the circumstances of this case where the application relates to an amendment to an existing permission. As highlighted above, the advancement in technology in turbines is such that the proposed larger Vestas V126 turbine does not have an appreciably greater SPL as compared to the permitted development. In addition, as highlighted by

the first party, regard has also to be had to the fact that any permitted amendment will be required to operate within the conditions attached to the KWF, which in the case of noise is a limit of 43dB(A). As set out previously in this assessment, for the majority of receptors identified the predicted noise level is very significantly below this threshold and mechanisms are available to de rate the turbines to ensure compliance with this limit. In my opinion regard should also be had to the fact that a number of assumptions used in the modelling undertaken relate to worst case scenarios which will not be realised in practice, for example that the assessment assumed that receptors are downwind of turbines, and the fact that particularly at higher windspeeds, background noise will largely obscure turbine noise.

8.4.3.12 Notwithstanding the use of a predictive modelling technique without a new noise survey, the third party appellants question a number of the assumptions used as inputs into the modelling process and which are outlined in Table 1 of the Noise and Vibration Assessment contained in Appendix A8.1. Specifically, the applicability of the ground factor of 0.5 and received height of 4.0 metres are questioned. In response, the first party state that the assumptions used for both of these parameters are consistent with the Institute of Acoustics (IoA) GPG. Regarding ground factor, I note that the use of 0.5 is recommended in paragraph 4.3.4 and a receiver height of 4.0 metres as per paragraph 4.3.8 of the same document (A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise).

8.4.3.13 The submissions of the third party appellants also contend that the proposed increase in turbines results in a significant adverse impact in terms of noise that is not captured in the EIAR. Specifically, the potential impact of ***amplitude modulation*** due to the reduced distance between the blade tip and the ground proposed in the amended turbines, low frequency noise and tonal emissions are raised as potential issues that have not been adequately addressed. Firstly, on the issue of amplitude modulation, I note that there is no reference to this issue in the current 2006 Wind Energy Guidelines. There is reference to amplitude modulation in the 2019 Draft Wind Energy Development Guidelines where a methodology is presented for the application of a noise

rating penalty where this noise characteristic is present. There is also published guidance from the IoA on amplitude modulation ('*Method for Rating Amplitude Modulation in Wind Turbine Noise').* As highlighted by the first party, modelling and predicting amplitude modulation is very difficult and these difficulties are recognised in the Draft 2019 Guidelines (Paragraph 4.1.2) where it is noted that a UK Government commissioned report on amplitude modulation states that it would *'be unreasonable to penalise operators when periods of amplitude modulation are not cause for complaint'….and that 'the available research does not identify a clear onset of increased annoyance from amplitude modulation'.* As highlighted by the first party, I also note that the EPA document referenced in the MAS Report (submitted by the third party appellants) EPA Guidelines 2011 (NG3) states that '*the evaluation of the significance of any such effects is not covered by any recognised process'*. The 2011 EPA report does identify a number of features or criteria that are thought to enhance the potential for amplitude modulation, notably a tower height to rotor diameter ration of less than 0.75 which is met in the proposed development, I note that a number of the other criteria set out regarding turbine layout, topography and atmospheric conditions are not clearly present on the appeal site. In conclusion therefore, having regard to the fact that there is no reference to amplitude modulation in the current (2006) Wind Energy Guidelines, and to the fact that as recognised in both the Draft 2019 Guidelines and the 2011 EPA Guidance there are significant issues around the identification and assessment of amplitude modulation, I consider that the only appropriate response is that in the event of instances of amplitude modulation occurring that this would be assessed independently and mitigation in the form of de rating or other limitation on the turbines implemented.

8.4.3.14 The third party appellants also raise issues around ***low frequency noise and infrasound***. Neither of these are referenced in the current Wind Energy Guidelines but are referenced in the 2019 Draft Guidelines. The 2019 Guidelines note that infrasound occurs at frequencies outside the range of human hearing and also that the design of turbines with the blades upwind of the tower means that infrasound has been '*effectively eliminated'* (paragraph 5.7.6.3). Notwithstanding the fact that the 2019 Guidelines remain in draft form,

I would therefore agree with the contention of the first party that issues of low frequency noise and infrasound are unlikely to arise in a development of the form proposed. I also note and agree with the comments of the first party that there remain a number of issue with regard to the noise measurement and assessment sections of the 2019 Draft Guidelines and that the use of the WHO standard for wind farms incorporating a Lden measurement is not a clearly more appropriate means of measurement than the L90dB(A) measurement used in the Irish wind energy guidelines and referenced in Condition No.7 attached to the extant permission for KWF.

8.4.3.15 In conclusion, I consider that the method of assessment of noise presented by the first party is acceptable and that the results obtained indicate that the proposed amendment would not be likely to have a significant increase in noise to surrounding noise sensitive locations. The analysis also indicates that the proposed development in conjunction with the operational Woodhouse windfarm would not have an adverse cumulative impact on the environment under the heading of Air - Noise.

Shadow Flicker

8.4.3.16 The issue of shadow flicker is addressed at Chapter 8 of the submitted EIAR documents and at Appendix A8.2 attached with these documents, (*'Shadow Flicker Assessment 2020'* prepared by Malachy Walsh and Partners).

8.4.3.17 The methodology used in the assessment is presented in Section 2 of the above Shadow Flicker Assessment and it is noted that the assessment undertaken makes a number of worst case assumptions including that the sun will always be shining, that the wind is blowing / continuous rotation of the turbines, that the rotors would always be perpendicular to the sun – receptor line of sight and that there would be no screening from vegetation. The theoretical maximum values for shadow flicker as generated by the model were then the subject of a factor of 0.28 to account for actual sunshine hours. These assumptions and the model used to predict shadow flicker outcomes (Windfarm) are noted and considered to be appropriate. The output of the modelling exercise is presented in Table 2 and a comparison of the permitted KWF and the proposed amended KWF turbines is presented in Table 3. In

each case the predicted values for average minutes per day and annual hours are presented for all receptors located within ten rotor diameters of a turbine.

8.4.3.18 The results of the modelling undertaken (Table 2) indicate that a modelling of the amended KWF would lead to mean minutes and total hours (adjusted to account for actual sunshine hours) that are well within the limits specified in Condition No.8 attached to the KWF grant of permission (Ref. PL93.244006). A comparison of the shadow flicker projections for the extant KWF and the proposed amended version is presented in Table 3 and indicates some relatively large increases in both mean minutes per day and total hours. On both measures the proposed development is however within the parameters specified in Condition No.8.

8.4.3.19 Table 2 also provides a cumulative assessment of shadow flicker with the proposed amendments to the KWF together with the operational Woodhouse windfarm. These results indicate that the cumulative impact on all receptors with the exception of dwellings 15 and 16 would be within the daily and yearly limits for shadow flicker.

8.4.3.20 Section 3 of the Shadow Flicker Assessment 2020 note that shadow flicker control modules are proposed to be fitted to the turbines to ensure that the turbines are turned off when any shadow flicker incidences are predicted to arise. As set out at section 4 of the Shadow Flicker Assessment and section 6.4.2 of the 2021 EIAR no additional shadow flicker impacts are considered likely to arise at receptors with 10 rotor diameters of a turbine and, with the implementation of mitigation in the form of the installation of the shadow flicker control modules, the shadow flicker impact arising is likely to be less than with the permitted KWF.

Vibration and Other Emissions to Air

8.4.3.21 As detailed in Chapter 1 of the submitted EIAR documents, the proposed amendment to the permitted KWF will not result in any additional excavations over and above those assessed in the KWF EIS. No new or different equipment or construction process is proposed to be employed at the site. The potential for additional construction phase vibration impacts to arise is therefore very limited. At operational phase, no additional vibration impacts would arise.

8.4.3.22 Similarly with regard to other emissions to air during the construction phase of the development. As no additional excavations or construction processes are proposed the potential for other construction related emissions to air, including dust, to arise is negligible.

Air - Conclusion

8.4.3.23 In conclusion, on the basis of the information submitted with the application including that in the EIAR, the submissions on file and observations at the time of inspection of the site, I do not consider that the proposed development would have any significant adverse direct or indirect effects on air. Given the limited impacts predicted under this factor of the environment I do not consider that significant cumulative impacts are likely to arise when the proposed development is considered together with other permitted plans and projects in the vicinity. In view of these conclusions, I would not agree with the contention of the third party appellants that the EIAR is inadequate in terms of human health and does not provide an adequate assessment of the impact of the proposed development on human health. Similarly, I would not agree with the third party appellants that the effect of the Woodhouse windfarm is not properly provided for under the heading of Air and note that both the Noise and Vibration Assessment and the Shadow Flicker Assessment submitted specifically address the cumulative impact of the proposed development with the Woodhouse windfarm.

8.4.4 Climate

8.4.4.1 Climate is addressed at Chapter 7 of the submitted EIARs. The baseline situation with regard to climate implications of the existing permitted KWF development is set out in the reference documents submitted, namely the KWF EIS and KWF Grid connection EIAR (2019).

8.4.4.2 The potential impacts from the proposed amended KWF development under the heading of climate relate to potential construction impacts from the use of construction equipment, transport to and from the site and the manufacture of equipment and materials to be used in the construction process. At operational phase, the development has the potential to result in the

generation of additional renewable energy with consequent positive impacts for reduction in CO2 emissions and benefits for the climate.

8.4.4.3 As previously detailed and as outlined in Chapter 1 of the submitted EIARs, the construction activity related to the proposed amended turbines does not require the use of new construction techniques and the extent of excavations is not proposed to be greater than that assessed in the KWF EIS. No additional construction activity or construction personnel are stated to be required. The construction activity will not therefore lead to any additional climate change impacts relative to the permitted KWF. In terms of materials, there may be some slight additional climate related impacts arising from the manufacture of the larger turbines and mast structure. Any such impacts are not assessed in the EIARs submitted, however in the overall context of the project the impact under the heading of climate is considered likely to be negligible.

8.4.4.4 At operational phase, the proposed amendment to the KWF incorporating the larger 155 metre turbines rather than the permitted 126 metre turbines has the potential to generate significant percentage increase in renewable energy output from the project. Paragraph 7.4.2 of the 2021 EIAR quantifies the increase in capacity factory that would arise as increasing from 29.8 percent to 38.2 percent with the amended turbines. The increased output is indicated in 7.4.2 of the 2021 EIAR as being from 75,000,000kw/hr to 96,000,000kw/hrs with the amended KWF turbines, equating to an increase of 28 percent. In view of these figures, I would agree with the assessment contained at Paragraph / Table 7.4.2 of the 2021 EIAR that the proposed development would have a significant positive impact under the heading of climate.

8.4.4.5 In conclusion, on the basis of the information submitted with the application including that in the EIAR, the submissions on file and observations at the time of inspection of the site, I do not consider that the proposed development would have any significant adverse direct or indirect effects on climate. Given the significant positive impacts predicted under this factor of the environment I consider that significant positive cumulative impacts are likely to arise when the proposed development is considered together with other

permitted plans and projects in the vicinity including the permitted KWF, KWF Grid Connection project and the operational Woodhouse windfarm.

8.5 Material Assets, Cultural Heritage and the Landscape

8.5.1 Material Assets

8.5.1.1 The baseline environment with the KWF and KWF grid connection is set out in Chapter 11 of the EIAR documents submitted and in the reference documents comprising the KWF EIS and the KWF Grid connection EIAR submitted as part of the current application.

8.5.1.2 The existing environment is characterised by local ***roads*** that are lightly trafficked and narrow leading to the regional road network to the west on the R671 and the N72 Dungarvan to Cappoquin road to the north. The impact of the KWF and KWF grid connection works would have short term negative impacts on local roads in particular , however the use of the construction access from the west via Clogh Cross Roads on the R671 and the Woodhouse windfarm access road and new section of road permitted under the Ref.ABP-306497-20 significantly reduces the extent of local road required to be traversed for site access and enables the existing road widening and junction improvement works undertaken to facilitate the Woodhouse Windfarm to be reused. The traffic assessment undertaken for the KWF and the KWF grid connection indicated that the level of construction traffic could be accommodated on local roads accessing the site and demonstrated how the construction access for larger components would operate via Clogh cross roads as well as access from the south east of the windfarm site via local roads. I note that the original grant of permission for KWF includes a condition that requires, inter alia, the submission of a transport management plan to and from the site, control measures for exceptional loads and pre and post construction condition surveys along the haul routes to and from the site. I also note that the first party submissions on file state that a subsequent application for minor works to junctions along the haul route will be submitted and this application is currently with the Board (Ref. ABP-314219-22). The works envisaged in this application are relatively minor and are located on the local road to the south

east of the site. The Board may wish to consider this application concurrently with the above road improvement works.

8.5.1.3 With regard to services in the form of electricity, gas and drainage services, the permitted KWF and KWF grid connection provide for connections within the windfarm site and for a new connection to the existing Woodhouse substation. The permitted development would not have any negative impacts on electrical infrastructure outside of the KWF and KWF Grid connection sites. An analysis of the impact of the KWF on telecommunications signals undertaken for the KWF application indicated that the permitted KWF would not have any significant adverse impacts. Paragraph 11.2.4 of the 2021 EIAR notes the fact that the existing permitted KWF and KWF grid connection would not have significant impacts on overhead telecommunications lines along either the haul route or close to the KWF site itself. Similarly, no significant impacts on water or other underground services are predicted to arise on foot of the permitted KWF and KWF grid connection.

8.5.1.4 The proposed amendment to the permitted KWF to incorporate the increased turbine size and taller met mast could have impacts under the heading of material assets. At construction phase, the larger scale of development proposed could have traffic implications or impacts on existing services. At operational phase, the main potential impact relates to the potential for additional interference with telecommunications signals due to the additional height of the turbines.

8.5.1.5 The description of the proposed development and construction activity contained at Chapter 1 of the EIAR indicates that the development would not involve the additional excavations over and above those considered in the KWF EIS and the KWF grid connection EIAR. There are not therefore likely to be any impacts on underground services in the vicinity of the site. The EIAR also clarifies that no additional construction workers are proposed to be employed at the site and that no additional or different construction equipment or materials are proposed to be employed. In terms of construction traffic, the revised EIAR clarifies that the larger turbine components can be accommodated on the proposed haul routes, subject to some measures that were proposed as part of the KWF and KWF Grid Connection Projects including junction and bend

widening, street furniture removal, culvert replacement and road widening on sections of the L2024 to the south east of the windfarm site (see Figure 9.1 of 2021 EIAR). It is noted that the works to the south east of the site on the L2024 are now the subject of a separate appeal to the Board (Ref. ABP-314219-22). Mitigation in the form of notification of An Garda Siochana and consultation with the councils area engineer is proposed as well as pre and post construction road condition surveys undertaken. On this issue, I note that the third party appellants question the capacity of the proposed haul routes to accommodate the larger turbines and contend that just because the haul route via Clogh Cross roads and the Woodhouse windfarm access road was adequate to cater for that development does not mean that it is capable of accommodating the proposed development. As set out above, on the basis of the information presented with the application and appeal I am satisfied that the proposed larger turbines can be transported to the KWF site via the Clogh Cross roads / / Woodhouse Windfarm route without a significant negative impact on the road network arising. Use of the access to the site from the south east to transport turbine blades may also be an option subject to the decision regarding the junction and road upgrade works proposed on the L2024. No additional issues of disruption of access to local properties or severance would arise on foot of the proposed amendment.

8.5.1.6 At operational phase the proposed amendment to the turbines would give rise to potential additional impacts on telecommunications signals in the vicinity. Details of these potential impacts are addressed in Appendix 11.1 of the 2021 EIAR in the form of a Telecommunications, Television and Aviation Impact Assessment for the proposed Larger Turbines at KWF. As detailed at paragraph 11.2.5 of the 2021 EIAR and in Appendix 11.1, the assessment undertaken includes for an update of new equipment and technologies installed in the vicinity of the site in the intervening period since the KWF EIS and indicates that no significant impacts are likely to arise. As highlighted at Paragraph 11.4.3 of the 2021 EIAR, there is however a degree of uncertainity with regard to the potential impact on the 2RN FM radio signal that links between the RTE masts at Dungarvan and Mullaghanish and the DTT UHF feeder between the same sites as well as signals from the Kilnafarna mast.

Similarly, the assessment undertaken indicates that there would likely be some slight increase in the number of residences that would potentially have their TV signal impacted by the development with the number of such properties affected estimated to rise from 669 no. with the existing KWF permission to a total of 719 no.

8.5.1.7 Mitigation measures to address these potential interferences are presented in 11.4.3 of the EIAR and the works proposed are considered to be feasible to be undertaken. I note that Condition No.9 attached to the grant of permission for the KWF (Ref. PL93.244006) requires that prior to the commencement of development a protocol for the assessment of the impact on telecommunications would be agreed and in the event of any such issues arising a methodology would be agreed with the planning authority. Having regard to the outcome of the assessment presented in the EIAR, I do not consider that the additional risk of interference to telecommunications signals that are likely to arise from the proposed amendments to the KWF are such as to have a significant negative impact and, in the event of a grant of permission I consider that this condition would be sufficient to ensure that any issues arising are adequately addressed. Subject to the proposed mitigation measures I do not consider that significant cumulative impacts between the proposed amendment, and other permitted and constructed developments, notably the Woodhouse windfarm are likely to arise.

8.5.1.8 At operational phase there is also the potential for wind take from the operational Woodhouse windfarm given the proximity between the two developments. This issue is addressed at paragraph 1.4.5 of Chapter 1 of the 2021 EIAR. This details the relative location of the KWF and Woodhouse windfarms and using wind atlas data, concludes that the potential for wind take on the basis that there are no KWF turbines located to the south west of Woodhouse and any turbines located cross wind from the Woodhouse development would be more than 3 rotor diameters. On the basis of the information presented I am satisfied that wind take would not be an issue in the proposed development.

8.5.1.8 In conclusion, on the basis of the information submitted with the application including that in the EIAR, the submissions on file and observations

at the time of inspection of the site, I do not consider that the proposed development would have any significant adverse direct or indirect effects on material assets. Given the limited impacts predicted under this factor of the environment I do not consider that significant cumulative impacts are likely to arise when the proposed development is considered together with other permitted plans and projects in the vicinity.

8.5.2 Cultural Heritage

8.5.2.1 Cultural heritage is addressed at chapter 10 of the submitted EIAR documents. As detailed in Paragraph 10.2 of the 2021 EIAR, the baseline for the purposes of cultural heritage relate to the potential for impacts on sites of archaeological, historical and architectural interest in the vicinity of the site. As set out in the detailed submission prepared by Dr John Olley which accompanied the third party appeal on behalf of Michael and Giancarla Alen Buckley, the Blackwater Valley is a significant area in terms of history, landscape and the setting of architectural heritage and archaeological monuments. Reference is also made by the third parties to the fact that the proposed development would potentially undermine the designation of the Blackwater Valley as a UNESCO site.

8.5.2.2 The appeal site is located such that there are no recorded sites located within the site of the proposed development. There are two recorded monuments (ringforts) located within 500 metres of the site and an additional 26 no. sites located within 2km, the majority of which comprise ringforts and enclosures. In the wider area there are a number of notable sites, most particularly there are a number of demesnes and houses that occur along the Blackwater valley, notably Cappagh House, Cappoquin House, Tourin House and Headborough House. The villages of Aglish and Villierstown are also located to the west of the site at a separation of c. 3 and 5km respectively from the nearest turbine.

8.5.2.3 The assessments undertaken of the impact of the proposed KWF and KWF grid connection projects on cultural heritage and presented in the KWF EIS and KWF Grid Connection project EIAR concluded that these

developments would not give rise to significant adverse impacts in terms of cultural heritage and these conclusions were accepted in the decisions of the Board.

8.5.2.4 The proposed amendment to the permitted KWF comprise an increase in the height of the turbines from the permitted 126 metres to a maximum of 155 metres and an increase in the meteorological mast from 80 metres to a maximum of 99 metres. During construction, the proposed amendment would not have any additional direct impacts on cultural heritage sites given the separation of the proposed development from known architectural, archaeological and heritage sites and the fact that no additional groundworks or other significant changes to the method of construction are proposed. The assessment of the construction access to the site does not indicate that there would be any significant additional impacts from the development on cultural heritage or any protected structures located along the identified haul routes.

8.5.2. At operational phase, the main potential impacts arising under the heading of cultural heritage are closely interconnected with the landscape and visual impact of the development (discussed in more detail in section 8.6 of this report below) and the potential for the development to change the landscape setting of cultural heritage sites and locations in the vicinity. The proposed amendments have the potential to impact on views from cultural heritage sites in the general environs of the appeal site including those listed above and to impact on their character and setting. Section 8.6 of this assessment below under the heading of Landscape and Visual Impact considers the impact of the proposed amendment to the KWF in detail and specifically assesses the potential landscape and visual impact of the proposed amendment to the KWF when viewed from a number of heritage properties in the vicinity of the site including Cappagh House, Cappoquin House and Tourin House, as well as from the historic settlements of Villierstown and Aglish. As set out in that assessment, the proposed amended KWF would have an appreciable change in views from a number of cultural heritage sites, however the degree to which these changes could be considered to be significant relative to the permitted development is assessed as limited. Similarly, the overall impact of the proposed amendment on landscape character is also assessed as slight. In view of this, the impact of

the proposed amended KWF development on cultural heritage by virtue of increased visual impact is considered to be slight.

8.5.2.5 With regard to cumulative impacts, the assessment of the impacts on cultural heritage arising from the permitted KWF and the KWF grid connection is that in the operational phase there would be some negative impacts arising due to the visual impact of the permitted development and the impact on the established landscape character of the Blackwater Valley and the effect that this would have on the character and setting of a number of heritage sites in the vicinity of the KWF. As set out above, the proposed amendment to the KWF would have a limited additional impact on views from heritage sites in the vicinity and a similarly limited impact on the overall landscape quality. Cumulatively therefore, the proposed amendment will have the potential to have a moderate negative impact on cultural heritage when considered in combination with the permitted KWF and other permitted and proposed developments, notably the operational Woodhouse windfarm.

8.5.2.6 In conclusion, on the basis of the information submitted with the application including that in the EIAR, the submissions on file and observations at the time of inspection of the site, I do not consider that the proposed development would have any significant adverse direct or indirect effects on cultural heritage. Given the limited impacts predicted under this factor of the environment and the fact that the impact of the permitted KWF and KWF grid connection projects were not assessed as having a significant negative impact on cultural heritage, I do not consider that significant cumulative impacts are likely to arise when the proposed development is considered together with other permitted plans and projects in the vicinity.

8.5.3 Landscape and Visual Impact

8.5.3.1 Landscape and visual impacts arising from the proposed development are addressed at Chapter 9 of the submitted EIAR documents and issues raised regarding landscape and visual impact in the third party appeal submissions were specifically addressed in a report prepared by Richard Barker of Macro

Works appended to the first party response to the grounds of appeal. The information contained in the EIAR is supported by a separate volume of the EIAR titled '*Proposed Larger Turbines at Authorised Knocknamona Windfarm – EIAR landscape Illustrations Pack (Comparative ZTVs and Photomontages*)'.

8.5.3.2 The existing baseline for landscape and visual amenity is set out in Paragraph 9.2 of the 2021 EIAR. This notes the location of the KWF site within an extensive area of forestry and the location of the north western side of the Drum Hills. The operational Woodhouse windfarm is located to the north west of the KWF site and the Blackwater River valley to the west of the site is the main feature in the wider area. The landscape of the area is described as varied in paragraph 9.2.1.2 of the 2021 EIAR with some sensitive landscape areas and features mixed with the more typical landscape area of the site comprising forestry, agricultural lands In the adjoining lowland areas and the existing Woodhouse windfarm. In terms of visual amenity, the EIAR identifies the there are a number of identified scenic routes in the vicinity of the site. These are illustrated at Figure 9.1 of the 2021 EIAR.

8.5.3.3 It is noted that the scenic routes listed at Figure 9.1 are related to the 2011 Waterford County Development Plan and that a new plan (the Waterford City and County Development Plan, 2022-2028) is now in effect. Scenic routes and protected views are set out at section 5 of Appendix 8 of this plan which is the Landscape and Seascape Character Assessment and at Map 5 of Volume 4 of the new plan. A number of the scenic routes identified in the 2022-2028 Plan are also listed in Figure 9.1 of the EIAR, notably the N26 from Youghal east to Dungarvan that runs to the south of the site. Section 5 of the LCA relates to Scenic Routes and Protected Views. The closest scenic route is located to the south running on a local road that runs east – west at a distance of c.1.5km from the proposed development at the closest point. The closest protected view that is in the direction of the site is c.6km to the west of the proposed development at the bend in the River Blackwater in the general vicinity of Dromore. Map 5 does not indicate this view as being in the direction of the KWF site. Section 5.2 of Appendix 8 identifies protected views and those listed include '*16. Blackwater Valley from layby west of Aglish'*. Although not specifically referenced in the landscape character assessment included as part

of the 2022-2028 Waterford County Development Plan, Map 9.1 of the EIAR includes reference to the Sean Kelly cycling route that passes to the north of the KWF site through Villiarstown Village, north on the R671 and then east on the N72 towards Dungarvan. St Declan's Way that runs to the west of the site is also referenced. Both of these are considered to be important tourist routes and routes where views of the development could have a potentially significant impact. Reference is also made in the EIAR under the heading of existing baseline to the presence of a number of significant historic houses and demesnes that are primarily located to the west of the KWF site along the Blackwater Valley. These locations comprise Cappagh House, Cappoquin House, Tourin House and Headborough House and are illustrated in photomontage viewpoints AV5 – AV8 contained in the EIAR landscape Illustrations Pack.

8.5.3.4 The reference documents comprising the KWF EIS and the KWF Grid Connection EIAR set out what are considered to be the likely impacts on the landscape and visual amenity and the conclusion of these assessments was that the visual impacts at the assessed view points were generally slight to imperceptible with moderate and substantial-moderate at a small number of locations, notably at Toor North in close proximity to the site. The assessment of the landscape and visual impacts arising from the proposed amendment sets out in Table 9.1 of the 2021 EIAR a comparison of the existing permitted and proposed developments (the increase turbine size and met mast height) and therefore the existing landscape and visual baseline with the permitted KWF development is presented in this section of the 2021 EIAR. These comparisons are presented visually in the separate volume '*EIAR Landscape Illustrations Pack*'.

8.5.3.5 The proposed development comprising the amendments to the permitted KWF incorporating an increase in the height of the permitted turbines from 126 metres to 155 metres overall height and an increase in height of the proposed meteorological mast from the permitted 80 metre tubular structure to a 99 metre lattice structure has a number of potential impacts under the heading of landscape and visual impact. At construction phase, there is potential for the construction requirements related to the proposed larger turbines and met mast

to result in visual clutter or a more significant short term visual impact than would be the case with the permitted KWF development, potentially by virtue of larger equipment or a longer construction period. At operational phase the potential impact of the proposed amendments to the permitted KWF relate to the overall impact on the landscape that would arise from the additional height and scale of turbines to be installed and also the potential for additional visual impacts from certain viewpoints including local historical and cultural heritage sites, tourist and amenity routes and population centres and residences.

8.5.3.6 Firstly, at ***construction stage***, the proposed amendments are stated in Chapter 1 of the 2021 EIAR not to have any implications for construction in terms of methods or equipment. There is no indication that the construction period would be longer than that previously envisaged for the permitted KWF and the overall construction period for the KWF and KWF grid connection is estimated at between 9 and 12 months. In view of the fact that the construction period is not anticipated to be materially different to the permitted development and no new construction methods or equipment are proposed to be employed, I do not consider that the construction phase of the proposed development comprising the amendment to the permitted KWF is likely to give rise to any adverse impacts under the heading of landscape or visual impact.

8.5.3.7 At ***operational phase***, the proposed development comprising the amendments to the KWF has the potential to impact on both the landscape and overall landscape character of the environs of the site and on specific views. Before undertaking an assessment of these potential impacts, the following sections address a number of the issues raised in the appeal submissions with regard to the methodology and general approach used in the landscape and visual assessment undertaken by the first party and included in Chapter 9 of the EIAR.

8.5.3.8 Firstly, I note that the assessment contained at Chapter 9 of the submitted EIAR documents focusses on the impact of the proposed amendment relative to a baseline position comprising the permitted KWF. In my opinion this is appropriate and reasonable for the assessment of the form of development proposed. To do what appears to be the preference of the Planning Authority is to assess the visual impact of the amended turbine from first principles which is

not in my opinion appropriate given the extant permission for a 8 no. 126 metre high turbine development that exists on the site.

8.5.3.9 With regard to the ***appropriateness of the viewpoints used*** in the assessment and as presented in the EIAR Landscape Illustrations Pack, I consider that these locations are acceptable and representative of the most significant views available in the surrounding area. Specifically, the view points used are representative of the heritage locations in the vicinity including Cappagh House, Cappoquin House, Tourin House and Headborough House. In addition, the viewpoints used include the main population centres including Youghal and Dungarvan, surrounding villages / heritage centres Villierstown and Aglish, positions on national roads (N72) and positions on local roads in the vicinity of the site including local roads in close proximity including Toor North and Kereen. In addition, the main purpose of the current assessment is to undertake a comparison of the visual impact of the proposed amended turbine designs with the permitted KWF. It is therefore considered appropriate that the same viewpoints that were used in the original landscape and visual assessment are reused in the current assessment. The contention of Planning Authority as expressed in the report of the Planning Officer that the viewpoint locations used are not representative is not therefore accepted and I specifically note the comments of the first party with regard to the choice of viewpoint locations in Villierstown and some of the heritage sites. As detailed by the first party, the viewpoints used in these settlements represent the only viable locations where clear views could be obtained as the rest of these locations have restricted views due to vegetation and trees and my observations on site support this conclusion. Similarly, I note that the views of the KWF site from the local road to the south that is identified in the landscape character assessment are very limited by virtue of the roadside vegetation and vegetative screening.

8.5.3.10 Similarly, the specific issues raised regarding the representativeness of the 'with development' images contained in Viewpoints CP3 and CP4 (Dungarvan and Youghal) are noted. As detailed by the first party this is due to the low contrast background and significant distances to the development site mean that the turbines would not be readily visible, and this explanation appears reasonable.

8.5.3.11 With regard to the visual catchment and the appropriateness of the Zone of Theoretical Visibility (ZTV) used in the assessment, the reason for refusal No.1 cited by the Planning Authority makes reference to an increased visual catchment. As highlighted by the first party however, the calculations presented indicate that the proposed amended development with the increased turbine height would only result in an additional 4.3 percent of the 20km radius of the site being within the ZTV. This is not in my opinion a significant change in visual impact and also has to be seen as very much a worst case scenario as the ZTV is calculated with no regard to screening in the form of buildings, roadside hedgerows, trees or other vegetation. The third party appellants have also questioned the appropriateness of the 20km ZTV used in the assessment and submit that it is not in accordance with Scottish Natural Heritage Guidance for windfarms (Visual representation of Windfarms). These guidelines indicate that for a turbine height of 155 metres plus a ZTV radius of 45km should be used which is significantly greater than the 20km used in the assessment presented by the first party. I consider that there are a number of relevant points on this issue. Firstly, from the inspectors report on Ref. PL04.244006 (KWF permission), this issue was considered at the time of the assessment of that case and a radius of 20km for the ZTV was used and considered appropriate. Secondly, there is no prescribed ZTV distance presented in the Irish Wind Energy Guidelines. The Scottish Guidelines note that the ZTV should '*extend far enough to include all those areas within which significant visual impacts of a wind farm are likely to occur'*. In this regard I note the comparative ZTV analysis presented by the first party in the EIAR Landscape Illustrations Pack which indicates that within the 20km radius ZTV analysed, the proposed amended turbines would only be visible at an additional 4.3 percent of the 20km radius area (59.3 percent relative to 55 percent for the permitted KWF). The extent of additional areas where the amended development would be theoretically visible is not therefore in my opinion significant, and I further note the fact that there are no additional visibility areas illustrated are contiguous to the 20km boundary illustrating to me that the potential additional visibility outside the 20km boundary is likely to be limited. Fundamentally, the use of the ZTV tool has to be reflective of the form of development proposed

and in this case, having regard to the factors outlined above, I consider that the use of a 20km radius is appropriate for this assessment and does not lead to a significant under or mis representation of the overall visual impact of the proposed amendment to the KWF development.

8.5.3.12 I note the contents of the Visual Statement prepared by Alan MacDonald attached with the third party submission which identifies issues related to the 2016 visual assessment and submitted that these issues still remain valid. The issues raised in this assessment relate to the original visual assessment undertaken and not the proposed amendments the subject of this application. As set out above, I do not agree with the third party appellants that the assessment undertaken and presented in the current application is clearly deficient in terms of the extent of ZTV, choice of viewpoints or the accuracy of the photomontages produced.

8.5.3.12 With regard to ***operational phase landscape and visual impacts***, Table 9.1 of the 2021 EIAR presents a comparison of the visual impact as assessed with the permitted KWF and the proposed amendment with a description provided of the comparison between the two for each of the 18 no. viewpoints examined. The overall conclusion of the assessment is that the magnitude of visual impact with the proposed amendment would be unchanged relative to the permitted KWF. As stated in the first party response to the grounds of appeal, there is no dispute that in most instances there will be a discernible difference between the permitted and proposed turbines. The visual impact difference of this increased height is not however significant and visual change does not equal visual impact. It is submitted by the first party that none of the marginal increases in visual impact considered likely to arise are such that they increase the previous (2015) assessment of significance of impact at any of the selected viewpoints. It is therefore, submitted that no new significant effects will arise from the proposed larger turbines.

8.5.3.13 From my observations on site and review of the landscape and visual assessment submitted and associated Landscape Illustrations Pack and the reference documents in the form of the KWF EIS, I consider that there are a number of locations where the magnitude of visual impact could potentially be

increased with the proposed development. The following locations are particularly noted.

8.5.3.14 In ***VP Nos. CP1 and CP3*** relating to views from Cappoquin, and Dungarvan I consider that the turbines are appreciably larger and changed relationship with the existing Woodhouse windfarm and the ridge / skyline. Overall, I consider that the increased visual prominence is marginal as to whether the magnitude of visual impact at these locations should be increased from slight to slight - moderate, however on balance, I do not consider that the changes are such as to justify an increased magnitude of visual impact.

8.5.3.15 At a number of the VP locations in relatively close proximity to the site I consider that the assessment of unchanged visual impact can be questioned. Specifically ***VP DR8 (Toor North),*** the amended turbines do appear larger, however they do not break the sky or ridgeline to a materially more significant degree and therefore I consider that the original significance of Moderate – Substantial remains appropriate. Similarly, in the view from Laragh Crossroads (VP LC2), while the turbines on the left of the image would become significantly more visible, the change relative to the permitted development is not in my opinion such that the significance of visual impact would change. VP LC5 (Knocknaglogh) also would experience an increase in scale at the range of 0.9km illustrated however I do not consider that the changes are such as to justify an increased magnitude of visual impact.

8.5.3.16 ***VP MR1*** which illustrates the view from the N72 to the north of the site at ***Kilcloher*** approximately 5.6km from the site, shows a discernible increase in turbine size. No additional turbines would however break the ridge line when viewed from this location and, from my inspection of the site, the number of locations along the N72 where clear views such as that illustrated in VP MR1 is limited. The assessment presented in the EIAR of an unchanged magnitude of visual impact relative to the permitted KWF is therefore considered appropriate.

8.5.3.16 With regard to the heritage views, the view from ***Villierstown (VP AV3)*** and Aglish (VP AV4) are assessed by the first party as unchanged. My observations of the situation on the ground in Villierstown supports the assessment of the first party that there are limited locations within this village

where clear views of the proposed development would occur. Where views do arise, as illustrated in VP MR1, the increase in height and scale of turbines within the view would not be easily discernible. The assessment presented in the EIAR of an unchanged magnitude of visual impact relative to the permitted KWF is therefore considered appropriate. Similarly, from Aglish, the number of locations where clear views of the proposed development would be available are limited. The view represented in ***VP AV4 (Aglish)*** would represent a material change with the proposed larger turbines, however I do not consider that there is a clear basis to determine that the magnitude of visual impact relative to the permitted KWF would change.

8.5.3.17 The visual impact of the proposed amendment on stately homes and demesnes is presented in VP AV5 – VP AV8. I consider that in ***VP AV5 (Cappagh House), VP AV6 (Cappoquin House) and VP AV7 (Tourin House),*** the degree of existing screening, separation distances to the KWF site and the topography mean that the magnitude of the change in visual impact from these receptors arising from the proposed amendment is limited and not in my opinion such as to result in a material change in the magnitude of visual impact. In the case of ***VP AV8 (Headborough House),*** clearer more open views of the KWF site are available. In my opinion the degree of impact, while discernible in the images presented, is negligible in terms of the overall magnitude of visual impact.

Landscape Impacts

8.5.3.18 As per Appendix 8 of the *Waterford City and County Development Plan, 2022-2028, (Landscape and Seascape Character Assessment, Scenic routes and Protected Views)* the appeal site is located in Landscape Character Area 5 which is the foothills LCA and specifically 5E which is the Drumhills. The exact location of the appeal site relative to the Landscape Sensitivity Map indicated in the plan is difficult to establish exactly due to the low sensitivity mapping available in the plan. It would however appear that the bulk if not all of the appeal site is located within an area of High or Increased sensitivity. This is supported by Table 2 of the LCA which refers to landscape 5E, the Drumhills and Knocknamona as being within the areas identified as High Sensitivity. Table 1 states that such areas *'have a distinctive character with some capacity*

to absorb a limited range of appropriate new developments while sustaining its existing character.' Section 4 of the LCA states that '*these areas have a distinctive, homogenous character dominated by natural processes. Development in these areas has the potential to create impacts on the appearance and character of a large part of the landscape. Applications for development in these areas must demonstrate an awareness of the inherent limitations by having a very high standard of site selection, siting, layout, selection of materials and finishes.*'

8.5.3.19 As with visual impacts, an assessment of the landscape impacts arising from the proposed amendment has to be undertaken in the context of the existing permission for the KWF comprising 8 no. 126 metre tip height turbines. The relevant landscape impact for assessment is therefore the additional impact arising from the proposed amendment and the proposed use of 155 metre tip height turbines. While the description of the LCA makes reference to the fact that development can have impacts on the appearance and character of a large part of the landscape, the fact that there is an existing permitted development means that the main landscape impacts in terms of the introduction of a new form of development into this location has already occurred. The proposed amendment will not alter the number or location of the permitted turbines and no additional forestry clearance will be undertaken. As set out above in terms of visual impact, the overall assessment of the proposed amendments is that the proposed changes are not such as to justify an increased magnitude of visual impact relative to the permitted KWF. Given the existing permitted KWF and the limited potential impact on viewpoints predicted, including from population centres and heritage locations, I do not consider it likely that the proposed development would have a significant additional negative impact on landscape character in this area, notwithstanding its designation as being of High Sensitivity.

8.5.3.20 ***Appendix 7 of the 2022-2028 Waterford County Development Plan*** contains a ***Renewable Energy Strategy*** for the county up to 2030. Appendix 2 of this document states that while the previous 2011-2017 County Development Plan designated the county into 4 areas of suitability for wind energy development (strategic, preferred, open for consideration and no go areas) that '*These*

classifications have now been superseded by the new Landscape and Seascape Character Assessment which is set out in Appendix 8 of the Waterford City and County Draft Development Plan 2022 - 2028 and the relevant policy objectives of Chapter 6 & 10 of the draft Development Plan.' As noted by both the first and third party appellants in their submissions on file, the trade-off between the previous (2011 plan) strategic designation of the site for wind energy and the fact that it was visually vulnerable was significant in the assessment of the previous application for the KWF. The third party appellants contend that the development plan policy to facilitate development in strategic areas does not override landscape policy, while the first party note that this issue was addressed by the inspector in the previous KWF case, and that the judgement of the High Court was clear that the assessment of the relative merits of the strategic designation versus landscape designations was a matter for the Board in its assessment. As set out above, the context of this discussion has now changed with the adoption of the 2022-2028 plan and the omission of any specific designations regarding wind energy. While the site is identified as being of high sensitivity in visual terms, the 2022-2028 plan is clear that the acceptability of development proposals has to be assessed in the context of the Landscape and Seascape Character Assessment contained at Appendix 8 of the plan. As detailed in the assessment above, I do not consider that the proposed amendment to the permitted KWF would lead to a change in the magnitude of visual impact at the viewing points assessed. Similarly, I do not consider that the proposed amendments would have a significant negative impact on landscape and landscape character. For these reasons and having specific regard to the nature of the proposal as an amendment to a permitted wind energy development, I do not therefore consider that the proposed development would be contrary to the landscape and visual amenity provisions of the 2022-2028 Waterford City and County Development Plan.

8.5.3.21 With regard to the assessment of ***cumulative landscape and visual impacts***, I note that the third party appellants contend that this has not been adequately assessed and that the capacity of the landscape to absorb development has already been breached by the existing developed Woodhouse Windfarm. On this issue I would note the fact that what is under assessment is the visual

impact of the proposed amendments to the KWF incorporating larger turbines and increased height and design of met mast. The constructed Woodhouse windfarm and the permitted KWF have to be taken as givens in this assessment. The assessment of visual impacts presented by the first party in the EIAR documents and in the Landscape Illustrations Pack include the constructed Woodhouse windfarm and the assessment presented at Table 9.1 of the 2021 EIAR specifically addresses the cumulative visual impact with the constructed Woodhouse windfarm. I do not therefore agree with the third party appellants that cumulative impacts have not been properly assessed in the submitted EIARs. In stating that the capacity of the landscape to absorb development has already been breached by the existing Woodhouse windfarm and stating that the development is proposed to be located in an ad hoc manner along a ridge line resulting in visual clutter and discordant visual impact, the third parties are questioning the principle of the KWF from a visual and landscape perspective. As stated above, the assessment of the subject application and this appeal relates to an assessment of the visual and landscape impacts arising from the proposed amendments to the permitted KWF and not an assessment of the merits of the development from first principles.

8.5.3.22 Also related to cumulative landscape and visual impacts, I note that an application under strategic infrastructure development provisions of the planning and development acts has been submitted to An Bord Pleanala for the construction of a 17 no. turbine windfarm on lands located c.12km to the south west of the KWF site. As at the date of writing this report this application (ABP Ref. ABP-309121-21 – Lyrenacarriga Windfarm) had not been determined by the Board. This application was submitted to the Board after the application the subject of this assessment was submitted to Waterford City and County Council and was not therefore specifically modelled in the visual illustrations prepared and submitted with this application and appeal. Given the significant separation distance between the KWF site and the Lyrenacarriga Windfarm, I would agree with the assessment presented at 9.4.2.4 of the 2021 EIAR that significant cumulative visual impacts are unlikely to arise between the two developments. Specifically, given the nature of the current application for amendments to the

permitted KWF, I do not consider that significant cumulative impacts with Lyrenacarriga Windfarm are likely to arise or that the predicted magnitude of visual and landscape impacts predicted would be impacted by this development.

8.5.3.24 In conclusion, on the basis of the information submitted with the application including that in the EIARs, the submissions on file and observations at the time of inspection of the site, I do not consider that the proposed development would have any significant adverse direct or indirect visual impacts or effects on landscape. This assessment has been undertaken having regard to the presence of the existing Woodhouse windfarm and given the limited impacts predicted under this factor of the environment I do not consider that significant cumulative impacts are likely to arise when the proposed development is considered together with other permitted plans and projects in the vicinity.

8.6 Interactions

8.6.1 Interactions between the environmental factors are assessed at Chapter 13 of the submitted EIAR documents. As set out above,, this EIA relates to the identification and assessment of the likely significant impacts on the environment arising from the proposed amendment to the permitted KWF development comprising an increase in the size of the turbines and the on site met mast. No increase in the number of turbines, turbine locations, amount of excavations or construction equipment or methodology relative to the permitted KWF development is proposed to be employed. As a result and as set out in the assessment above under the heading of the individual environmental factors, the nature of the proposed development is such that the impact of the proposed development on the environment under the majority of headings examined is limited. The main potential interactions are considered to relate to landscape and visual impacts and potential emissions to air (noise and shadow flicker) and to be as follows.

8.6.2 There is potential for interaction between air in the form of noise and shadow flicker and human health. As set out in 8.4 of this assessment above, the modelled impact of the proposed amended development in terms of noise impact is not significantly different to the permitted KWF and is such that noise impacts at the identified noise sensitive locations in the vicinity of the site would not exceed the limits set down in the existing permission for the KWF development. Similarly, the assessment of shadow flicker impacts arising from the proposed amendment is such that no significant additional shadow flicker impacts are likely to arise and, subject to mitigation, the shadow flicker impacts would not exceed the limits set down in the existing permission for the KWF development. No significant interactions between air and human health are therefore considered likely to arise.

8.6.3 Given the nature of the proposed development and the predicted environmental impacts the other potential for interactions arises between landscape and visual impacts and cultural heritage and between landscape and visual impacts and population and human health. Specifically, changes in the visual impact of the KWF arising from the proposed amendments could interact with local populations and impact on residential amenity and could also have a potentially negative impact on tourism in the area. As set out in section 8.5 of this assessment above under the heading of Landscape and Visual Impacts, the nature of the proposed amendments are such that it is not considered that they would have any significant adverse direct or indirect visual impacts or effects on landscape. The development will result in visual change however it is not considered that the degree of change is such that the magnitude of visual impact at any of the receptors examined would change. It is not therefore considered that there would be significant interactions between landscape and visual impacts of the development and population and human health or material assets.

8.7 Reasoned Conclusion

8.7.1 Having regard to the examination of environmental information contained above, and in particular the EIAR documents and supplementary information provided by the developer and the submissions from the Planning Authority, prescribed bodies, appellants and observers in the course of the application, it is considered that the main significant direct and indirect effects of the proposed development on the environment are, and will be mitigated as follows:

- The proposed development would have a significant positive impact on climate as it would result in the generation of additional renewable energy with consequent positive impacts for reduction in CO2 emissions and climate benefits.
- Regarding biodiversity and ecology, the proposed amended turbines the subject of the subject application will not result in any additional turbines, relocation of permitted turbine locations or additional excavations with the result that the impact on hydrology and terrestrial habitats and species are not considered likely to be significant. While some additional impact on birds is considered possible, specifically arising from collision risk from the larger turbines, the results of surveys for this project and previous applications on the site indicate that the more vulnerable species to such impact are not present on the site in significant numbers and that suitable habitat for such species are not widespread in the vicinity of the windfarm site.
- The proposed development would have the potential to impact negatively on human health arising from the emission of noise, and potential impact in terms of shadow flicker from the larger turbines proposed. Emissions to air are not considered to be significantly negative post mitigation and would be within the limits prescribed in the existing permission for the windfarm on the site. The proposed development is not therefore considered likely to have significant impacts on human health.

- The proposed development would have potential negative impacts on the landscape and views in the vicinity of the site. These potential impacts would be successfully mitigated by the extant nature of the permission for a windfarm in this location, by the same number and layout of turbines being proposed and by the limited additional height proposed in the context of the existing landscape and views assessed.

Having regard to the above, I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect, or cumulative impacts on the environment.

9.0 Appropriate Assessment

9.1. Appropriate Assessment - Screening

9.1.1. Compliance with Article 6(3) of the Habitats Directive

The requirements of Article 6(3) as related to the screening the need for appropriate assessment of a project under Part XAB, Section 177U of the Planning and Development Act, 2000 (as amended) are considered in this section.

9.1.2. Background to the Application.

The applicant submitted a screening report for appropriate assessment as part of the planning application prepared by Inis Environmental Consultants Limited and dated September, 2020. This report provides a description of the proposed development and identifies European sites within a possible zone of influence of the development. The conclusion of the assessment is that the proposed development '..*either individually or in combination with other projects and plans is not likely to give rise to significant effects on European sites'*.

As part of the first party appeal submitted against the decision of Waterford City and County Council, the first party submitted a revised '*Appropriate Assessment Report 2021 (Stage 2)'*, also prepared by Inis Environmental Services Limited, which includes a revised screening assessment. The conclusion of this assessment is that the proposed development *'…individually or in combination with other plans or projects and in view of best scientific knowledge is likely to have significant effects on any European sites'.*

There is therefore a very significant difference between the initial screening assessment submitted with the application which screened out the likelihood of significant effects on the conservation objectives of any European site, and the revised assessment which identifies 7 no. European sites which it is considered could be subject to likely significant effects arising from the proposed development and which screens in 5 no. sites for further assessment as part of a Stage 2 appropriate assessment. .

Having reviewed the documents, and submissions I am satisfied that the information allows for a complete examination and identification of any potential significant effects of the development alone, or in combination with other plans and projects on European sites.

9.1.3. Screening for Appropriate Assessment – Test of Likely Significant Effects

The project is not directly connected with or necessary for the management of a European site and therefore it needs to be determined if the development is likely to have significant effects on a European site(s).

The proposed development is examined in relation to any possible interaction with European sites designated Special Conservation Areas (SAC) and Special Protection Areas (SPA) to assess whether it may give rise to significant effects on any European sites.

9.1.4. Brief Description of the Development

The applicant provides a description of the proposed development at section 2.2.3 and 2.2.4 of the screening report dated September 2020 originally submitted to the planning authority and section 2.0 of the revised AA Screening submitted to the Board as part of the first party appeal (dated February, 2021). In summary, the development comprises:

- An amendment of the existing authorised Knocknamona windfarm with an increase in the height of the 8 no. permitted turbines from 126 metres to 155 metres maximum height with an amendment of the hub height and the rotor diameter. The application provides for an increase in the turbine hub height from 81.6 metres to within the range 86-95 metres and the rotor diameter to within the range 112-126.7 metres.
- Section 2.1.1.4 of the Screening Assessment (February, 2021) notes that an example of a turbine that meets the amended turbine type proposed and above dimensions in the subject application is the Vestas V126 which it is stated has been used in the EIAR modelling for Landscape and Visual impact, Noise, Shadow flicker, biodiversity and

telecommunications. Stated that this turbine has an overall height of 155 metres (tip height), a hub height of 91.65 metres and a rotor length of 63 metres.

- The amended turbines and turbine bases are proposed to be located in the same positions as those permitted under the original Knocknamona Windfarm permission.
- Stated that the hardstanding areas, windfarm access roads, substation, construction compound, borrow pits and ancillary works will remain unchanged from the original KWF permission.
- An increase in the height of the previously permitted met mast from the permitted 80 metres to 99 metres and an amendment of the design / form of the met mast from a tubular tower to a lattice tower. The location of the tower is proposed to remain as permitted in the original Knocknamona windfarm permission.
- Permission is sought for a period of 10 years.

A construction and environmental management plan is submitted with the appeal documentation. This document is prepared by Ecopower Developments, is dated February, 2021 and includes a Sediment Control Plan and Dust Minimisation Plan.

The development site is described in Section 4 of the February 2021 Screening Report and this section details the results of habitat surveys (presented at Figure 6). The results indicate that the site is composed primarily of modified habitat comprising conifer plantations, felled areas and forest roads. Two freshwater streams run through the site and there is a small area of upland wet heath recorded.

It is noted that the Appropriate Assessment Screening documents submitted by the first party undertake an assessment of the potential for the whole development incorporating the windfarm, grid connection and haul route, to have significant effects on European sites. The assessment undertaken in this

section relates to the potential for the amendments proposed to the previously permitted turbines, in combination with other permitted plans and projects (including the previously permitted KWF turbines and haul route and the previously permitted grid connection and haul route, to have significant effects on European sites.

Taking account of the characteristics of the proposed development in terms of its location and scale of works, the following issues are considered for examination

Construction Phase

- Potential for construction activity to result in discharges to surface or groundwaters including arising from the use of concrete, storage of materials on site and use of construction equipment.
- Disturbance impacts of construction activity.

Operational Phase

- Severance of habitats or impact on flightpaths following the construction of the windfarm,
- Operational phase impacts on water quality and effects of earthworks.

9.1.5. Submissions and Observations

The following is a summary of the main issues raised in the submissions made to An Bord Pleanala by parties to the appeal and prescribed bodies as they relate to the proposed development.

First Party

- In response to the recommendation of the Heritage Officer on the file and the report of the planning officer, a Stage 2 Appropriate Assessment has been submitted which details the effects of the whole Knocknamona WF project including the proposed amendment. The submitted NIS also addresses the ex situ effects on the Whooper Swan.

- Regarding the surveys for Whooper Swans, stated that the report submitted by the third party appellants appears to relate to a different windfarm to the south west of the subject site (Lyrenacarriga).
- That the assertions regarding impacts on other bird species such as Black Tailed Godwit and Golden Plover are noted. Golden Plover is brought forward to Stage 2 (section 6.5.3.1 of the revised NIS) and based on survey data that shows very infrequent use of the site by this species, adverse effects on the species are considered to be unlikely.
- That the impact on the Blackwater Estuary SPA is not considered likely to be significant as the potential effects relate to water quality which will not be significant post mitigation.

Third Parties

- That the conclusion of the Planning Authority that it is not possible to conclude that the proposed development would not adversely affect the receiving environment or have potential for significant effects on the Natura 2000 network is supported.
- Given that there is a pathway via the Goish River to the River Blackwater SAC the decision of the Board in the original KWF permission to screen out requirement for a Stage 2 AA was flawed.
- Noted that both the Planning Officer and Heritage Office considered that a Stage 2 Appropriate Assessment was required.
- The use of the longer turbine blades will increase the potential for bird strikes (Whooper Swans and the Blackwater Callows) with associated impacts on European sites.
- Inadequate assessment of impact on bird and bat species. That there is also a potential risk to the black tailed godwit and golden plover.
- That the revised Appropriate Assessment and surveys of Whooper Swans remains inadequate. The extent of surveys undertaken remains

inadequate and does not track flight movements of the Whooper Swan from the Blackwater Callow, or Cappoquin or Campshire.

- Submitted that this flock is of international significance and the proposed development could have impacts on the integrity of the Blackwater Callows SPA, the Campshire and Blackwater Estuary SPA and the Dungarvan Harbour SPA.
- That the revised survey does not appear to have been undertaken post consultations with Birdwatch Ireland and the NPWS as recommended in the Heritage Officer Report.
- There is no assessment of the risk associated with the power lines or substation.

9.1.6. European Sites

The development is not located within or immediately adjacent to a European Site. The closest European site is the Blackwater River (Cork / Waterford) SAC which is located c. 3.8 km from the proposed development at the closest point.

A summary of European sites that occur within a possible zone of influence of the proposed development is set out in Table 1 below. The distances from the appeal site cited in the table reference the distance of the relevant European site from the nearest proposed turbine. Table 5.1 of the Screening Assessment (February, 2021) submitted by the applicant incudes details of the separation distance of the sites from the nearest element of the overall KWF project including haul route and grid connection elements.

Table 1 – Screening Assessment Initial Summary.

European Site	Distance from Appeal Site	Potential Connections (source-pathway-receptor)	Further Consideration in Screening
Blackwater River (Cork / Waterford) SAC	3.8km from nearest turbine. 550 metres from overall project.	Potential hydrological connection to permitted windfarm site via watercourses (including Goish R.) that would potentially impact on habitats and species that are QIs of this site. Potential introduction of invasive species.	Yes
Blackwater Callows SPA	13.5km from nearest turbine and c.13km from closest part of overall project.	Potential for flight paths of species that are QIs of this site through the appeal site. Potential loss of foraging habitat.	Yes.
Blackwater Estuary SPA	c.7.5km from nearest turbine and c.7.5km from closest part of overall project.	Potential for flight paths of species that are QIs of this site through the appeal site. Potential loss of foraging habitat. Also a potential hydrological pathway between the appeal site and this European site.	Yes.
Dungarvan Harbour SPA	c. 6.0km from the nearest turbine.	Potential for flight paths of species that are QIs of this site through the appeal site. Potential loss of foraging habitat. Also a potential hydrological pathway between the appeal site and this European site.	Yes.
Helvick Head SAC	12.5km from the nearest turbine and c.5.7km from the closest part of the overall project.	No hydrological or other pathway between project and European site.	No.

Helvick Head to Ballyquin SPA	c.10.5km from the nearest turbine.	Potential for flight paths of species that are QIs of this site through the appeal site.	Yes.
Ardmore Head SAC	c.13.5km from the closest turbine location. C.11km from closest part of the overall project	No hydrological or other pathway between project and European site.	No.
Glendine Wood SAC	12.5km from the nearest proposed turbine. C.3km from the closest part of the haul route.	No hydrological or other pathway between the project site and the European site.	No.
Comeragh Mountains SAC	c.15km from the nearest proposed turbine. C.9km from closest part of overall project.	No hydrological or other pathway between the project site and the European site.	No.
Mid Waterford Coast SPA	17km. c.17km from closest part of overall project.	Potential for flight paths of species that are QIs of this site through the appeal site.	Yes.
Ballymacoda Bay SPA	17.5km. c.17.5km from closest part of overall project.	Potential for flight paths of species that are QIs of this site through the appeal site. Loss of foraging habitat.	Yes.
Nier Valley Woodlands SAC	c. 22km from the nearest proposed turbine to this European site. C.20km from closest part of overall project.	No hydrological or other pathway between the project site and the European site.	No.
Lower River Suir SAC	c. 22km from the nearest proposed turbine to this European site. C.20km to the closest part of the overall project.	No hydrological or other pathway between the project site and the European site.	No.

Based on the above initial screening exercise, the proposed development could have a significant effect on the following European sites.

- Blackwater River (Cork / Waterford) SAC
- Blackwater Callows SPA
- Blackwater Estuary SPA
- Dungarvan Harbour SPA
- Ballymacoda Bay SPA
- Helvic Head to Ballyquin SPA
- Mid Waterford Coast SPA

The potential for the proposed development to give rise to likely significant effects on these sites is considered in more detail in the sections below:

Blackwater River (Cork / Waterford) SAC (site code 002170)

The Qualifying interests of this site are as follows:

- Estuaries
- Mudflats and sandflats not covered by seawater at low tide
- Perennial vegetation of stony banks
- Salicornia and other annuals colonising mud and sand
- Atlantic salt meadows
- Mediterranean salt meadows
- Water courses of plain to montane levels with the ranunculion fluitantis and callitricho-batrachion vegetation
- Old sessile oak woods with Ilex and Blechnum in the British Isles
- Alluvial forests with Alnus glutinosa and Fraxinus excelsior
- Margaritifera margaritifera (Freshwater Pearl Mussel)
- Austropotamobius pallipes (White-clawed Crayfish)

- Petromyzon marinus (Sea Lamprey)
- Lampetra planeri (Brook Lamprey)
- Lampetra fluviatilis (River Lamprey)
- Alosa fallax fallax (Twaite Shad)
- Salmo salar (Salmon)
- Lutra lutra (Otter)
- Trichomanes speciosum (Killarney Fern)
- *Taxus baccata* woods of the British Isles

The stated conservation objectives are to restore the favorable conservation condition of the above listed species and habitats having regard to specified attributes and targets.

There is potential for indirect pathways between the permitted KWF and this European site via tributaries of the River Blackwater that flow in the vicinity of the windfarm site, most notably the Goish River and its associated tributaries. While the details of the turbine foundations are not provided with the application, the first party has stated that the additional height can be accommodated within the turbine foundation area as indicated in the original application. While the proposed development comprising an amendment to the permitted KWF will not therefore have a likely significant effect on this European site, the wider KWF project does have potentially significant effects.

This hydrological connection has the potential to have an indirect effect on a number of qualifying interests of the site due to a potential reduction in water quality from construction activity, including the generation of silt, use of concrete, the release of hydrocarbons and potential introduction or spread of invasive species. Specifically, such a reduction in water quality could have an impact on old sessile woods, alluvial forests and watercourses of plain to montaine levels. In addition, the proposed development may be considered to have some potential for impact on Freshwater Pearl Mussel. It is however noted that any potential impact on water quality arising from the construction of the turbines or increase in turbine size would only impact on watercourses that

connect with the SAC downstream of the known freshwater pearl mussel locations. The construction activity could also potentially give risk to the spread of invasive species into the SAC. Any impact would be due to the proximity of the haul route to the windfarm site to the River Licky which is a tributary of the Blackwater River within which the mussel has been recorded as being present. Similarly, salmon and lamprey species which are QIs of this site may be impacted by the development.

In view of the above, it is therefore considered that, taken in conjunction with permitted developments notably the Knocknamona Windfarm, the proposed development could have significant effects on this European site in light of the conservation objectives. This site is therefore screened in and will be considered further in the Appropriate Assessment – Stage 2 below.

Blackwater Callows SPA (site code 004094)

The Qualifying interests of this site are as follows:

- Whooper Swan (Cygnus cygnus)
- Wigeon (Anas penelope)
- Teal (Anas crecca)
- Black-tailed Godwit (Limosa limosa)
- Wetland and Waterbirds

The stated conservation objectives are to restore the favorable conservation condition of the above listed species and habitats having regard to specified attributes and targets.

The qualifying interest for this site that is potentially most impacted by the proposed development is whooper swan. Given the nature of the habitat on site and separation distance between the proposed development and the characteristics of the other species identified as qualifying interests there is no potential for significant effects to arise on other species identified as QIs. It is not considered that the habitat on the appeal site is such that the proposed development would have a significant effect on the qualifying interests of this

site due to loss of suitable foraging or breeding habitat. Given the location of the Blackwater Callows site up catchment of the watercourses that run in the vicinity of the KWF site there are no likely significant effects arising from a hydrological connection.

With regard to whooper swan, the habitat of the site and close environs of the proposed development is such that there is no significant potential for breeding or wintering habitat. Whooper swan populations have however been recorded on lands to the west of the site and, given the nature of the development incorporating larger rotor diameters, there is some potential for collision risk and impact on established flight paths. Given the separation between the appeal site and the SPA site and between the appeal site and the recorded locations of swans in the vicinity of the site there is not considered to be any likely significant effects on this QI as a result of disturbance.

In view of the above, it is therefore considered that the proposed development could have significant effects on this European site in light of the conservation objectives. This site is therefore screened in and will be considered further in the Appropriate Assessment – Stage 2 below.

Blackwater Estuary SPA (site code 004028)

The Qualifying interests of this site are as follows:

- Wigeon (Anas penelope)
- Golden Plover (Pluvialis apricaria)
- Lapwing (Vanellus vanellus)
- Dunlin (Calidris alpina)
- Black-tailed Godwit (Limosa limosa)
- Bar-tailed Godwit (Limosa lapponica)
- Curlew (Numenius arquata)
- Redshank (Tringa totanus)
- Wetland and Waterbirds

The stated conservation objectives are to restore the favorable conservation condition of the above listed species and habitats having regard to specified attributes and targets.

The majority of the species which are QIs for this site are such that they are generally not associated with upland areas or habitat types as found on the appeal site. The loss of potential foraging habitat arising from the construction of the KWF project is not therefore considered likely to have significant effects on this site. There is however some potential for risk of collision with turbines in the case of golden plover given previous observations of this species in the vicinity of the site. Given the very significant separation distance between the proposed development and the SPA site (c.6km direct and c.16km via the hydrological connection) effects on the conservation objectives of the site arising from a reduction in water quality are not considered likely to arise.

In view of the above, it is therefore considered that the proposed development could have significant effects on this European site in light of the conservation objectives. This site is therefore screened in and will be considered further in the Appropriate Assessment – Stage 2 below.

Dungarvan Harbour SPA (site code 004032)

The Qualifying interests of this site are as follows:

- Great Crested Grebe (Podiceps cristatus)
- Light-bellied Brent Goose (Branta bernicla hrota)
- Shelduck (Tadorna tadorna)
- Red-breasted Merganser (Mergus serrator)
- Oystercatcher (Haematopus ostralegus)
- Golden Plover (Pluvialis apricaria)
- Grey Plover (Pluvialis squatarola)
- Lapwing (Vanellus vanellus)
- Knot (Calidris canutus)
- Dunlin (Calidris alpina)

- Black-tailed Godwit (Limosa limosa)
- Bar-tailed Godwit (Limosa lapponica)
- Curlew (Numenius arquata)
- Redshank (Tringa totanus)
- Turnstone (Arenaria interpres)
- Wetland and Waterbirds

The stated conservation objectives are to restore the favorable conservation condition of the above listed species and habitats having regard to specified attributes and targets.

The majority of the species which are QIs for this site are such that they are generally not associated with upland areas or habitat types as found on the appeal site. The loss of potential foraging habitat arising from the construction of the KWF project is not therefore considered likely to have significant effects on this site. There is however some potential for risk of collision with turbines in the case of golden plover given previous observations of this species in the vicinity of the site. Given the very significant separation distance between the proposed development and the SPA site (c.6.5km direct and c.11km via the hydrological connection via the Roaring Water and the R. Brickey) effects on the conservation objectives of the site arising from a reduction in water quality are not considered likely to arise.

In view of the above, it is therefore considered that the proposed development could have significant effects on this European site in light of the conservation objectives. This site is therefore screened in and will be considered further in the Appropriate Assessment – Stage 2 below.

Ballymacoda Bay SPA (site code 004023)

The Qualifying interests of this site are as follows:

- Wigeon (Anas penelope)
- Teal (Anas crecca)

- Ringed Plover (Charadrius hiaticula)
- Golden Plover (Pluvialis apricaria)
- Grey Plover (Pluvialis squatarola)
- Lapwing (Vanellus vanellus)
- Sanderling (Calidris alba)
- Dunlin (Calidris alpina)
- Black-tailed Godwit (Limosa limosa)
- Bar-tailed Godwit (Limosa lapponica)
- Curlew (Numenius arquata)
- Redshank (Tringa totanus)
- Turnstone (Arenaria interpres)
- Black-headed Gull (Chroicocephalus ridibundus)
- Common Gull (Larus canus)
- Lesser Black-backed Gull (Larus fuscus)
- Wetland and Waterbirds

The stated conservation objectives are to restore the favourable conservation condition of the above listed species and habitats having regard to specified attributes and targets.

The majority of the species listed are connected with coastal sites rather than an upland site such as the appeal site that is characterised by significant forestry. In addition there is a very significant separation between the proposed development and this site of c.17.5km at the closest point that would reduce the likelihood of significant effects on this site. The loss of potential foraging habitat arising from the construction of the KWF project is not therefore considered likely to have significant effects on this site. There is however a record of golden plover which is a qualifying interest of the Ballymacoda Bay SPA site being observed in the vicinity of the development site and on that basis it is considered that the proposed development could have significant effects on this European site in light of the conservation objectives. This site is therefore screened in and will be considered further in the Appropriate Assessment – Stage 2 below.

Helvic Head to Ballyquin SPA (site code 004192)

The Qualifying interests of this site are as follows:

- Cormorant (Phalacrocorax carbo)
- Peregrine (Falco peregrinus)
- Herring Gull (Larus argentatus)
- Kittiwake (Rissa tridactyla)
- Chough (Pyrrhocorax pyrrhocorax)

The stated conservation objectives are to restore the favourable conservation condition of the above listed species and habitats having regard to specified attributes and targets.

The majority of the species listed as qualifying interests of this site are wholly or primarily coastal or maritime, including the herring gull, kittiwake, chough and cormorant. The only qualifying interests / species which has potential to be present in the vicinity of the development site are the peregrine and herring gul, however the habitat of the site is not suitable for breeding of these species and there are no recorded observations of these species on or in close proximity to the site. For these reasons and given the c.10.5km separation distance between the proposed development and the European site, it is considered that the potential for effects on these qualifying interest having regard to the conservation objectives can be screened out. This site is therefore screened out and will be considered further in the Appropriate Assessment – Stage 2 below.

Mid Waterford Coast SPA (site code 004193)

The Qualifying interests of this site are as follows:

- Cormorant (Phalacrocorax carbo)
- Peregrine (Falco peregrinus)
- Herring Gull (Larus argentatus)
- Chough (Pyrrhocorax pyrrhocorax)

The stated conservation objectives are to restore the favourable conservation condition of the above listed species and habitats having regard to specified attributes and targets.

A number of the species listed as qualifying interests of this site are wholly or primarily coastal or maritime, including the herring gull, chough and cormorant. The only qualifying interests / species which has potential to be present in the vicinity of the development site are the peregrine and herring gul, however the habitat of the site is not suitable for breeding of these species and there are no recorded observations of these species on or in close proximity to the site. For this reason and given the c.17km separation distance between the proposed development and the European site, it is considered that the potential for effects on these qualifying interest having regard to the conservation objectives can be screened out. This site is therefore screened out and will be considered further in the Appropriate Assessment – Stage 2 below.

9.1.7. Mitigation Measures

No measures designed or intended to avoid or reduce any harmful effects of the project have been relied upon in this screening exercise.

9.1.8. Screening Determination

The proposed development was considered in light of the requirements of Section 177U of the Planning and Development Act, 2000 as amended. Having carried out screening for appropriate assessment of the project, it has been concluded that the project individually or in combination with other plans or projects could have a significant effect on the following European sites having regard to the conservation objectives of the sites, and appropriate assessment is therefore required.

- Blackwater River (Cork / Waterford) SAC
- Blackwater Callows SPA

- Blackwater Estuary SPA
- Dungarvan Harbour SPA
- Ballymacoda Bay SPA

9.2. Appropriate Assessment – Stage 2

9.2.1. Appropriate Assessment

The requirements of Article 6(3) as related to appropriate assessment of a project under Part XAB, Sections 177U and 177V of the Planning and Development Act, 2000 (as amended) are considered fully in this section. The areas addressed in this section are as follows:

- Compliance with Article 6(3) of the EU Habitats Directive.
- Screening the need for appropriate assessment,
- The Natura Impact Statement and associated documents,
- Appropriate assessment of implications of the proposed development on the integrity of each European site.

9.2.2. Compliance with Article 6(3) of the EU Habitats Directive

The Habitats Directive deals with the conservation of natural habitats and of wild fauna and flora throughout the European Union. Article 6(3) of the directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the sites conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site before consent can be given.

The proposed development is not directly connected to or necessary for the management of any European site and therefore is subject to the provisions of Article 6(3).

9.2.3. Screening Determination

Following the screening process, it has been determined that appropriate assessment is required as it cannot be excluded on the basis of objective information that the proposed development either individually or in combination with other plans or projects will have a significant effect on the following European sites:

- Blackwater River (Cork / Waterford) SAC
- Blackwater Callows SPA
- Blackwater Estuary SPA
- Dungarvan Harbour SPA
- Ballymacoda Bay SPA

The possibility of significant effects on other European sites has been excluded on the basis of objective information. The following European sites have been screened out for the need for appropriate assessment:

- Helvick Head SAC
- Helvick Head to Ballyquin SPA
- Ardmore Head SAC
- Glendine Wood SAC
- Comeragh Mountains SAC
- Mid Waterford Coast SPA
- Ballymacoda Bay SPA
- Nier Valley Woodlands SAC
- Lower River Suir SAC

Measures intended to reduce or avoid significant effects have not been considered in the screening process.

9.2.4. The Natura Impact Statement

No Natura Impact Statement was submitted with the original application submitted to the Planning Authority. A Natura Impact Statement dated

February, 2021, was however submitted to An Bord Pleanala as part of the first party response to further information. This NIS was prepared by Inis Environmental Consultants Limited and considers the potential effects of the development on the integrity of the following European sites:

- Blackwater River (Cork / Waterford) SAC
- Blackwater Callows SPA
- Blackwater Estuary SPA
- Dungarvan Harbour SPA
- Ballymacoda Bay SPA

This assessment is based on surveys undertaken in connection with the KWF development over the period 2010 to 2021. The most recent such surveys were for Whooper Swan and undertaken over the January and February 2021 period and these surveys post-dated the original Appropriate Assessment report submitted with the application and dated September, 2020. .

The applicants NIS was prepared in line with best practice and provides an assessment of the impact of the proposed development on the above listed European sites. The applicants NIS concludes that '*the evaluation has found that following the examination and analysis presented, it can be concluded on a reasoned basis that the proposed development will not result in adverse effects on the integrity of…..*'any of the above listed European sites *'in circumstances where no reasonable scientific doubt remains'*.

Having reviewed the documents, submissions and consultations undertaken, I am satisfied that the information allows for a complete assessment of any adverse effects of the development , on the conservation objectives of the following European sites alone, or in combination with other plans or projects.

- Blackwater River (Cork / Waterford) SAC
- Blackwater Callows SPA
- Blackwater Estuary SPA
- Dungarvan Harbour SPA
- Ballymacoda Bay SPA

9.2.5. Appropriate Assessment of Implications of the Proposed Development

The following is a summary of the objective scientific assessment of the implications of the project on the qualifying features of the European sites using the best scientific knowledge in the field. All aspects of the project which could result in significant effects are assessed and mitigation measures designed to avoid or reduce any adverse effects are considered and assessed.

- DoEHLG (2009), Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, National Parks and Wildlife Service, Dublin.
- EC (2002) Assessment of Plans and Projects Significantly Affecting Natura 2000 sites. Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/42/EC.

9.2.6. European Sites

The following sites are subject to Appropriate Assessment:

- Blackwater River (Cork / Waterford) SAC
- Blackwater Callows SPA
- Blackwater Estuary SPA
- Dungarvan Harbour SPA
- Ballymacoda Bay SPA

A description of the sites and their conservation and qualifying interests are set out in the submitted Natura Impact Statement and are set out in the screening assessment above.

Aspects of the Proposed Development. While the proposed development the subject of this assessment relates to an increase in the height of the previously permitted turbines, the potential effects of the development in combination with other plans and projects are considered in this assessment. In particular, the potential effects in combination with the permitted KWF and KWF grid connection are considered in this assessment.

The main aspects of the proposed development that could adversely affect the conservation objectives of European sites include:

- Impacts arising from the excavation of turbine bases and other construction activity resulting in mobilisation of silt and other contaminants to surface waters.
- Impacts arising from the use of construction materials and equipment on site and potential discharge to surface and ground waters.
- Potential loss or fragmentation of foraging habitat of importance to European sites,
- Potential disturbance impacts from construction,
- Potential spread of invasive species,
- Potential impacts arising from collision risk.

The following sections address the potential for adverse effects on the conservation objectives of the above listed European sites that have been brought forward to Stage 2 assessment on foot of the screening for Appropriate Assessment undertaken.

9.2.6.1 Blackwater River (Cork / Waterford) SAC

The Blackwater River SAC follows the channel of the River Blackwater that runs to thew west of the windfarm site. The site also takes ion the River Goish channel that runs east to west approximately 2.5 km to the north of the site at the closest point and also the Licky River to the south. The following Table 2 summarises the appropriate assessment of the adverse effects on the integrity of this site.

Table 2 – Appropriate Assessment Blackwater River (Cork / Waterford) SAC.

Blackwater River (Cork / Waterford) SAC – Site Code 002170: **Summary of Key issues that could give rise to adverse effects** • **Water Quality and water dependant habitats** • **Spread of invasive species** •					
		Summary of Appropriate Assessment			
Conservation Objective	**Main relevant targets and attributes**	**Potential adverse effects**	**Mitigation measures**	**In-combination effects**	**Can adverse effects on integrity be excluded?**
Conservation objective To maintain or restore the favourable conservation condition of the following.		C. 7km connection via the Goish River to the south of site c.500 metres from closest turbine. Connection via Finik R. to north via tributary that passes c.1.2km from closest turbine.			
Estuaries	Area stable or increasing and maintain the extent and quantity of Mytilus dominant communities. .	Habitat takes in main river channel almost as far as Lismore. Potential deterioration in water quality from WF. No direct impacts. Proposed increased turbine size have no adverse effects. Potential in combination effects with other parts of KWF project.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species control measures as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on these habitats in view of the conservation objectives.

Mudflats and sandflats	Area stable or increasing and maintain the extent and quantity of Mytilus communities.	Identified locations to the south of the windfarm site in vicinity of mouth of R. Blackwater and close to the confluence of R. Licky and R. Blackwater. Potential deterioration in water quality. No direct impacts. Proposed increased turbine size have no adverse effects. Potential in combination effects with other parts of KWF project.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species control measures as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on these habitats in view of the conservation objectives.
Perennial vegetation of stony banks.	Area stable or increasing.	Extent unknown. Potential deterioration in water quality. No direct impacts. Proposed increased turbine size have no adverse effects. Potential in combination effects with other parts of KWF project.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species control as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on these habitats in view of the conservation objectives.
Salicornia and other annuals colonising mud and sand.	Area stable or increasing.	Extent unknown. Potential deterioration in water quality. No direct impacts. Proposed increased turbine size have no adverse effects. Potential in combination effects with other parts of KWF project.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species control as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on these habitats in view of the conservation objectives.
Atlantic salt meadows.	Area stable or increasing.	Recorded location confined to inlet close to mouth of R. Blackwater. Proposed increased turbine size have no adverse effects. Potential in combination effects with other parts of KWF project.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species control measures as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on these habitats in view of the conservation objectives.

Mediterranean salt meadows.	Area stable or increasing.	Recorded location confined to inlet close to mouth of R. Blackwater. Risk of deterioration in water quality or change in hydrological regime. No direct impact. Proposed increased turbine size have no adverse effects. Potential in combination effects with other parts of KWF project.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species control measures as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on this habitat in view of the conservation objectives.
Water courses of plain to montane levels.	Area stable or increasing and maintenance of hydrological regime. .	Risk of deterioration in water quality or change in hydrological regime from WF. No direct impact. Proposed increased turbine size have no adverse effects. Potential in combination effects with other parts of KWF project.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species management measures as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on this habitat in view of the conservation objectives.
Old sessile oak woods.	Area stable or increasing.	As above.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species management measures as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on this habitat in view of the conservation objectives.
Alluvial forests with Alnus glutinosa and Fraxinus excelsior.	Area stable or increasing.	As above.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species management measures as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on this habitat in view of the conservation objectives.

Freshwater Pearl Mussel.	Restore substratum quality and hydrological regime. Maintain juvenile salmonids.	As above.	The recorded locations of pearl mussel within the SAC are upstream or in tributaries such that there is no clear hydrological connection. Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species management measures as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded given the absence of a hydrological pathway to known mussel sites and mitigation measures proposed. There is no doubt as to absence of effects on this species in view of the conservation objectives.
White-clawed Crayfish	No reduction in area. No alien species or disease.	As above.	Recorded in the Awbeg River which is located up catchment from the windfarm site. Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species management measures as per 6.8 of the revised NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded given the absence of a hydrological pathway to known crayfish locations and mitigation measures proposed. There is no doubt as to absence of effects on this species in view of the conservation objectives.
Sea Lamprey	75% of stream accessible and maintain age / size range.	As above.	The recorded main locations of Sea Lamprey within the SAC are between Mallow and Cappoquin upstream on the Blackwater from the windfarm site or in the Licky R. to the south. Mitigation in	None predicted.	Yes Adverse effects on site integrity can be excluded given the absence of a hydrological pathway to known lamprey sites and mitigation measures

			form of separation of turbines from watercourses and sediment and water control and invasive species management measures. .		proposed. There is no doubt as to absence of effects on this species in view of the conservation objectives.
Brook Lamprey.	100% of stream accessible and maintain age / size range.	Potential adverse effect on water quality, siltation and artificial barriers. Proposed increased turbine size have no adverse effects.	No recorded locations of this species downstream of the proposed windfarm site. Mitigation in form of separation of turbines from watercourses and sediment and water control and invasive species management measures.	None predicted.	Yes Adverse effects on site integrity can be excluded given the absence of a hydrological pathway to known lamprey sites and mitigation measures proposed. There is no doubt as to absence of effects on these habitats in view of the conservation objectives.
River Lamprey.	100% of stream accessible and maintain age / size range.	As above.	No recorded locations of this species downstream of the proposed windfarm site. Mitigation in form of separation of turbines from watercourses and sediment and water control and invasive species management measures.	None predicted.	Yes Adverse effects on site integrity can be excluded given the absence of a hydrological pathway to known lamprey sites and mitigation measures proposed. There is no doubt as to absence of effects on this species in view of the conservation objectives.

Twaite Shad	75% of stream accessible and maintain age range.	As above.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species management measures as per 6.8 of the NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on this species in view of the conservation objectives.
Salmon	100% of river channel accessible and meet targets for spawning fish and fry.	As above.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species management measures as per 6.8 of the NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on this species in view of the conservation objectives.
Otter	No significant decline in distribution, area or couching sites or holts.	As above.	Mitigation in form of separation of turbines from watercourses and sediment and water control measures and invasive species management measures as per 6.8 of the NIS.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on this species in view of the conservation objectives.
Killarney Fern	No decline in areas (2 identified within SAC).	Two locations within the SAC, one upstream of the windfarm site and the second on tributary. No clear pathway.	None required.	None predicted.	Yes Adverse effects on site integrity can be excluded as there is no doubt as to absence of effects on these habitats in view of the conservation objectives.
Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.					

The application details have clarified that the proposed development would not require any additional excavations over and above those indicated on the drawings submitted with the original permission for KWF. For the purposes of appropriate assessment however the extent of maximum excavation for turbine foundations has been set in the extant KWF permission and no enlargement of this area has been sought by the first party.

When considered in combination with the permitted KWF development and grid connection development, the proposed development has potential to lead to a deterioration in water quality via a number of potential pathways between the permitted turbine locations and grid connection and this European site, notably via the Goish River and tributaries to the south and the Finish River and tributaries to the north.

Extensive mitigation to control the release of sediment and contaminants and control of water quality is proposed and detailed at section 6.8 of the NIS. These measures include for the protection of watercourses, the operation of machinery management of excavated material and runoff and sediment control. Measures for the monitoring of silt fencing are set out (6.8.1.3.8) and details are provided as to how the development would be managed through a construction and environmental management plan, a sediment and storm water control plan and a fuel management plan. Invasive species management measures are also proposed. Subject to the implementation of the mitigation measures as detailed in the NIS I am satisfied that the proposed development comprising the increase to the permitted turbine size would not, in combination with other plans and projects, have an adverse effect on the integrity of this European site.

9.2.6.2 Blackwater Callows SPA

The Blackwater Callows SPA comprises the stretch of the River Blackwater that runs in a west to east direction between Fermoy and Lismore in Counties Cork and Waterford, approximately 13km from the windfarm site at the closest point. According to the site synopsis, the site includes the river channel and strips of seasonally-flooded grassland within the flood plain. The site is located upstream of

the KWF catchment and there is therefore no potential impacts on this site from the overall KWF project arising from a reduction in water quality or spread of invasive species. The following table (Table 3) gives an overview of the impact of the proposed development in conjunction with other plans and projects on this SPA site.

In the case of widgeon, teal and black tailed godwit, the habitat on the windfarm site is not suitable for breeding or foraging of these species. Collision risk is therefore very unlikely to arise.

In the case of whopper swan, there is a known flock of swans located at Clogh bog which is approximately 2.5km to the north west of the windfarm site. The significance of this flock has been raised by the third party appellants to this case who contend that it is an internationally important flock of birds and that inadequate information to demonstrate that the KWF site is not on a flight path to and from Clogh bog has been provided.

The windfarm site is not located on a direct flightpath between this known flock and the SPA site further to the north west. Dawn and dusk surveys for whooper swan were undertaken at 5 no. locations in the vicinity of the windfarm site and at two vantage points. Survey area 5 approximates to the Clogh bog location and the results of the observations in this location show swan activity over the site in an east – west direction with swans observed moving west from the site and away from the windfarm site.

Third party appellants contend that the extent of surveys undertaken remains inadequate and does not track flight movements of the Whooper Swan from the Blackwater Callow, or Cappoquin or Campshire. It should be noted that the additional surveys contained in the February 2021 Appropriate Assessment Report postdate these points raised by the third party appellants. It should also be noted that the Whooper Swan survey contained at Appendix 2 of the February 2021 NIS include an analysis of recorded swan flightpaths in the Campshire area (Area 3 in the survey). These recorded flightpaths can be seen to predominately north and west away from the KWF site. Table 8.15 of the original EIAR (dated September 2020) further notes that there were no recorded observations of Whooper Swans within 500 metres of the KWF site in surveys undertaken between 2010 and 2020.

Table 3 – Appropriate Assessment - Blackwater Callows SPA

Blackwater Callows SPA – Site Code 004094: **Summary of Key issues that could give rise to adverse effects** • **Ex situ collision risk.**					
		Summary of Appropriate Assessment			
Conservation Objective	**Targets and attributes**	**Potential adverse effects**	**Mitigation measures**	**In-combination effects**	**Can adverse effects on integrity be excluded?**
Conservation objective To maintain or restore the favourable conservation condition of the following	None specified. Generic conservation objectives document.				
Whooper Swan		Potential impact on flight path. Collision risk.	n/a	None.	Yes. Survey results, including from Jan/Feb 2021 do not indicate the presence of whooper swan within or close to the KWF site.
Wigeon		Wintering species not associated with upland habitats.	n/a	None.	Yes on basis of unsuitable habitat.
Teal		Wintering species not associated with upland habitats.	n/a	None.	Yes, on basis of unsuitable habitat.
Black-tailed Godwit		Primarily coastal species. No suitable breeding or wintering habitat within or close to KWF site.	n/a	None.	Yes, on basis of unsuitable habitat.
Wetland and Waterbirds		No likely impacts. KWF removed from wetland sites and KWF site not suitable habitat for waterbirds.	n/a	None.	Yes, on basis of unsuitable habitat.
Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.					

The results of the 2021 surveys do not indicate any swan flightlines within the windfarm site and, on the basis of these surveys, it is considered that the additional height and rotor diameter proposed would not have an adverse effect on the integrity of this European site in light of its conservation objectives. The potential for in combination effects with the extant permitted KWF arising from collision risk of whooper swans is recognised, however the extant KWF has previously been the subject of screening for appropriate assessment by An Bord Pleanala as part of its assessment of Ref. PL93.244006 and a finding of no likely significant effects. Notwithstanding this, the survey results presented as part of the revised Appropriate Assessment dated February 2021 do not indicate that collision risk is likely to be associated with the extant KWF project and therefore that in combination effects that would impact on the overall integrity of the site are likely to arise.

9.2.6.3 Blackwater Estuary SPA

The Blackwater estuary site is located approximately 8km to the south west of the appeal site at the closest point. The site incorporates the south facing estuary of the R. Blackwater from a point just north of the confluence of the Blackwater and Licky Rivers as far south as Ferry Point, Youghal. The site contains significant extents of intertidal mud flats and is an important site for wintering waterbirds. The site synopsis identifies the site as being an internationally important location by virtue of its population of black tailed godwit as well as national importance for other species including bar tailed godwit and golden plover. The following table (Table 4) summarises the appropriate assessment of the potential for adverse effects on the integrity of this site.

Table 4 – Appropriate Assessment – Blackwater Estuary SPA.

Blackwater Estuary SPA – Site Code 004028:
Summary of Key issues that could give rise to adverse effects

- **Ex situ collision risk**
- **Loss of habitat.**

		Summary of Appropriate Assessment			
Conservation Objective	**Targets and attributes**	**Potential adverse effects**	**Mitigation measures**	**In-combination effects**	**Can adverse effects on integrity be excluded?**
Conservation objective To maintain or restore the favourable conservation condition of the following					
Wigeon	Population stable or increasing and stable use of areas.	Wintering species not associated with upland habitats.		None.	Yes, on basis of unsuitable habitat.
Golden Plover	Population stable or increasing and stable use of areas.	Potential loss of habitat, ex situ collision risk. Deterioration in water quality not potential effect due to length of hydrological connection (c.16km).	Mitigation as set out at 6.8 of NIS to protect water quality.	None.	Yes, on basis of unsuitable habitat, only two observations of species on KWF site in surveys undertaken.

Lapwing	Population stable or increasing and stable use of areas.	As above.	Mitigation as set out at 6.8 of NIS to protect water quality.	None.	Yes, on basis of no recorded incidences of this species on KWF site in surveys.
Dunlin	Population stable or increasing and stable use of areas.	Species associated with coastal locations and not upland sites.		None.	Yes, on basis of unsuitable habitat.
Black-tailed Godwit	Population stable or increasing and stable use of areas.	Primarily a coastal species. Some potential for habitat loss. .		None.	Yes, on basis of no recorded incidences of this species on KWF site in surveys.
Bar-tailed Godwit	Population stable or increasing and stable use of areas.	Primarily a coastal species.		None.	Yes. No flightlines recorded in surveys as part of the NIS.
Curlew	Population stable or increasing and stable use of areas.	Potential disturbance and collision impacts from KWF.		None.	Yes. With exception of two individuals observed in 2011, no breeding or wintering curlew observed in surveys of the KWF site.
Redshank	Population stable or increasing and stable use of areas.	Potential disturbance and collision impacts from KWF.		None.	Yes. No flightlines recorded in surveys as part of the NIS.
Wetland and Waterbirds	Area of wetland stable.	Potential impact on water quality of downstream wetland within SPA unlikely due to length of pathway. .	Mitigation as set out at 6.8 of NIS to protect water quality.	None.	Yes. On basis of mitigation to protect water quality and length of pathway (c.16km). .
Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.					

There are no site specific conservation objectives available for this site. In the case of widgeon, dunlin and bar tailed godwit in particular, the species are not associated with upland habitat of the type found in the vicinity of the KWF site.

With regard to golden plover, the habitat within the KWF site is not suitable breeding habitat and, as recorded at 6.6.3.1 of the NIS, this species was not recorded during the breeding surveys undertaken in 2020, 2018, 2014 or 2013 or during the winter surveys in 2010, 2012 and 2013/2014. Details of these surveys are not presented in the NIS, however Appendix 8.1 of the originally submitted EIAR, dated September, 2020 does indicate at Figure 5.4 the only recorded instances of golden plover in close proximity to the KWF site. On the basis of the surveys undertaken and stated results I do not consider that there is likely to be an adverse effect on the integrity of the Blackwater Estuary SPA site having regard to the conservation objectives for the site.

In the case of curlew, surveys undertaken for the KWF development show infrequent use of the KWF site by this species with the only recorded instances in the 2011 survey. Together with the fact that the habitat within the KWF site is not optimal for this species it is considered that significant effects on this species are unlikely. Similarly, in the case of the internationally significant clack tailed godwit, there is no evidence from the surveys undertaken either in connection with this application or the original KWF development of use of the site by this species, which together with the fact that this is a primarily coastal species which would not use upland habitat of the type on the KWF site supports the conclusion that the proposed development in conjunction with other plans and projects, including the extent KWF development, would not have an adverse effect on the integrity of this SPA site in light of its conservation objectives.

9.2.6.4 Dungarvan Harbour SPA

The Dungarvan Harbour SPA site is located c.6.5km to the east of the closest permitted turbine location of the KWF and incorporates the harbour as far out as Cannigar spit and the lower reaches of the River Brickey. The table below (Table 4) summarises the appropriate assessment of the potential for adverse effects on the integrity of this site.

Table 5 – Summary of Appropriate Assessment - Dungarvan Harbour SPA.

Dungarvan Harbour SPA – Site Code 004032:
Summary of Key issues that could give rise to adverse effects

- **Ex situ collision impacts.**
- **Loss of habitat.**

Conservation Objectives: [Insert reference (see www.npws.ie)]

		Summary of Appropriate Assessment			
Conservation Objective	**Targets and attributes**	**Potential adverse effects**	**Mitigation measures**	**In-combination effects**	**Can adverse effects on integrity be excluded?**
Conservation objective To maintain or restore the favourable conservation condition of the following					
Great Crested Grebe	Population stable or increasing and stable use of areas.	Potential loss of habitat. Potential indirect effects arising from deterioration in water quality unlikely due to length of hydrological pathway, (c.11km).	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes. No suitable habitat within or close to the KWF site. Water quality will be protected by mitigation measures.
Light-bellied Brent Goose	Population stable or increasing and stable use of areas.	As above.	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes. No suitable habitat within or close to the KWF site. Water quality will be protected by mitigation measures.

Shelduck	Population stable or increasing and stable use of areas.	As above.	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes. No suitable habitat within or close to the KWF site. Water quality will be protected by mitigation measures.
Red-breasted Merganser	Population stable or increasing and stable use of areas.	As above.	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes. No suitable habitat within or close to the KWF site. Water quality will be protected by mitigation measures.
Oystercatcher	Population stable or increasing and stable use of areas.	Potential indirect effects arising from deterioration in water quality unlikely due to length of hydrological pathway, (c.11km).	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes. Water quality will be protected by mitigation measures and unlikely due to length of pathway. .
Golden Plover	Population stable or increasing and stable use of areas.	Loss of habitat, potential ex situ mortality from collision. Effects due to impact on water quality unlikely due to length of hydrological pathway.	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes, on basis of unsuitable habitat, only two observations of species on KWF site in surveys undertaken and mitigation measures to protect water quality.
Grey Plover	Population stable or increasing and stable use of areas.	No suitable habitat on KWF site. Effects due to deterioration in water quality unlikely due to length of hydrological pathway.	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes, on basis of mitigation measures to protect water quality.

Lapwing	Population stable or increasing and stable use of areas.	No suitable habitat on KWF site. Effects due to deterioration in water quality unlikely due to length of hydrological connection. .	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes, on basis of mitigation measures to protect water quality.
Knot	Population stable or increasing and stable use of areas.	No suitable habitat on KWF site. Coastal species. Potential effect due to water quality impacts.	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes, on basis of mitigation measures to protect water quality.
Dunlin	Population stable or increasing and stable use of areas.	As above. .	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes. on basis of mitigation measures to protect water quality.
Black-tailed Godwit	Population stable or increasing and stable use of areas.	As above.	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes. on basis of mitigation measures to protect water quality.
Bar-tailed Godwit	Population stable or increasing and stable use of areas.	As above.	As above.	None.	Yes. on basis of mitigation measures to protect water quality.
Curlew	Population stable or increasing and stable use of areas.	Potential for disturbance, ex situ mortality from collision. Deterioration in water quality unlikely due to length of hydrological pathway. .	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes. Surveys indicate only two examples of birds flying through KWF site (2011 survey) and implementation of mitigation measures to protect water quality.

Redshank	Population stable or increasing and stable use of areas.	No suitable habitat within KWF site. Coastal based species with no known flightlines on KWF site. Potential effects due to water quality unlikely due to length of hydrological pathway. .	Mitigation to protect water quality as detailed at section 6.8 of NIS.	None.	Yes. Based on implementation of mitigation measures to protect water quality.
Turnstone	Population stable or increasing and stable use of areas.	As above.	As above.	None.	Yes. Based on implementation of mitigation measures to protect water quality.
Wetland and Waterbirds	Area of wetland stable.	Potential effects due to water quality.	As above.	None.	Yes. Based on implementation of mitigation measures to protect water quality.
Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.					

The site is of particular significance for its population of wintering waterbirds and the site synopsis notes the internationally important numbers of light bellied brent goose and black tailed godwit which are present as well as nationally important populations of 13 no. other species including golden plover and bar tailed godwit.

In the case of the majority of the species of bird that are qualifying interests of this site, the habitat on the KWF site is unsuitable , with the majority being species associated with coastal and lowland locations.

In the specific case of golden plover, the habitat within the KWF site is not well suitable breeding habitat and, as recorded at 6.6.3.1 of the NIS, this species was not recorded during the breeding surveys undertaken in 2020, 2018, 2014 or 2013 or during the winter surveys in 2010, 2012 and 2013/2014. Details of these surveys are not presented in the NIS, however Appendix 8.1 of the originally submitted EIAR, dated September, 2020 does indicate at Figure 5.4 the only recorded instances of golden plover in close proximity to the KWF site. On the basis of the surveys undertaken and stated results I do not consider that there is likely to be an adverse effect on the integrity of the Blackwater Estuary SPA site having regard to the conservation objectives for the site. In the case of the light bellied brent goose and black tailed godwit, habitats on the KWF site are unsuitable for these species and this conclusion is supported by the absence of any observations of these species in the surveys undertaken in connection with this project or the previous KWF applications. Any impacts on these species and on the wider conservation objectives of the site due to impacts on water quality would be mitigated by the measures set out in 6.8 of the NIS.

9.2.6.5 Ballymacoda Bay SPA

The Ballymacoda Bay SPA site is located c.18km to the south of the KWF site at the closest point. The SPA site is not hydrologically connected to the KWF site by surface or groundwater connections and any hydrological connection can only be via open water with the site located c.3.2km from the mouth of Youghal harbour. Given this separation and absence of a viable hydrological connection or pathway, there is not considered to be potential for significant effects on this European sites by way of water related impacts. While the majority of the species which are qualifying

interests of the site are associated with coastal and low lying areas, there are some which could be associated with habitat as found on the KWF site and where there have been some observations in the surveys undertaken. For these reasons the site was screened in for potential adverse effects arising from

The following table (Table 6) summarises the appropriate assessment of the potential for adverse effects on the integrity of this site.

Table 6 – Summary of Appropriate Assessment – Ballymacoda Bay SPA

Ballymacoda Bay SPA – Site Code 004023:
Summary of Key issues that could give rise to adverse effects

- **Ex situ collision impacts.**
- **Disturbance of QI species.**

Conservation Objectives: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004023.pdf

		Summary of Appropriate Assessment			
Conservation Objective and Qualifying Interest	**Targets and attributes**	**Potential adverse effects**	**Mitigation measures**	**In-combination effects**	**Can adverse effects on integrity be excluded?**
Conservation objective To maintain or restore the favourable conservation condition of the following					
Wigeon	Population stable or increasing and stable use of areas.	Wintering species associated with coastal and lowland wetlands. . No recorded observations from surveys in vicinity of KWF site.	n/a	None.	Yes. On basis of unsuitable habitat and lack of observations of species on KWF site.
Teal	Population stable or increasing and stable use of areas.	Wintering species associated with coastal and lowland wetlands. . No recorded observations from surveys in vicinity of KWF site.	n/a	None.	Yes. On basis of unsuitable habitat and lack of observations of species on KWF site.

Ringed Plover	Population stable or increasing and stable use of areas.	Species associated with coastal locations and no suitable habitat on KWF site.	n/a	None.	Yes. On basis of unsuitable habitats.
Golden Plover	Population stable or increasing and stable use of areas.	Species not associated with habitats found on KWF site. Some observations of species on KWF site in 2018 and 2020 so potential disturbance and collision impacts.	n/a	None.	Yes. On basis of the only observations being from a 3 no. occasions in 2018 and 2020 with no observations recorded in other surveys undertaken from 2010 to 2020 and the sub optimal nature of the KWF habitat.
Grey Plover	Population stable or increasing and stable use of areas.	Wintering species associated with coastal locations and no suitable habitat on KWF site.	n/a	None.	Yes. On basis of unsuitable habitats.
Lapwing	Population stable or increasing and stable use of areas.	As above.	n/a	None.	As above.
Sanderling	Population stable or increasing and stable use of areas.	As above.	n/a	None.	As above.

Dunlin	Population stable or increasing and stable use of areas.	As above.	n/a	None.	As above.
Black-tailed Godwit	Population stable or increasing and stable use of areas.	As above.	n/a	None.	As above.
Bar-tailed Godwit	Population stable or increasing and stable use of areas.	As above.	n/a	None.	As above.
Curlew	Population stable or increasing and stable use of areas.	Species not associated with habitats found on KWF site. Single observations of species on KWF site in 2011 so potential disturbance and collision impacts.	n/a	None.	Yes. On basis of the only observations being from a 2011 with no observations recorded in other surveys undertaken from 2010 to 2020 and the sub optimal nature of the KWF habitat.
Redshank	Population stable or increasing and stable use of areas.	No redshank recorded in surveys undertaken in connection with KWF project or this development. No suitable habitat within the KWF site.	n/a	None.	Yes. On basis of unsuitable habitats and absence of sightings in vicinity of KWF.

Turnstone	Population stable or increasing and stable use of areas.	Primarily coastal species with no suitable habitat in vicinity of KWF site and no observations in surveys.	n/a	None.	As above.
Black-headed Gull	Population stable or increasing and stable use of areas.	As above.	n/a	None.	As above.
Common Gull	Population stable or increasing and stable use of areas.	As above.	n/a	None.	As above.
Lesser Black-backed Gull	Population stable or increasing and stable use of areas.	As above.	n/a	None.	As above.
Wetland and Waterbirds	Area of wetland stable.	No potential pathway between KWF site and wetland areas and therefore no potential effects.	n/a	None	Yes.
Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.					

With the exception of curlew and golden plover, the other qualifying interests for this site comprise predominantly wintering species that are associated with coastal and lowland wetland areas and where there is not suitable breeding or foraging habitat on or in close proximity to the KWF site. This conclusion is supported by the absence of observations of these species in the surveys undertaken between 2010 and 2020 connected with the KWF project and the current proposed development.

In the case of both curlew and golden plover, they are not associated with the habitats characteristic of the KWF site. This fact together with the limited instances of observations of these species on the KWF site are such that it can reasonably be concluded that the proposed development would not have an adverse effect on the integrity of this European site in light of its conservation objections which, in the case of the above listed species, are that the populations are stable or increasing and the stable use of areas.

9.2.7. Appropriate Assessment Conclusion

The proposed amendment to the permitted Knocknamona windfarm to provide for an increase in the size of the permitted turbines has been considered in light of the assessment requirements of Sections 177U and 177V of the Planning and Development Act, 2000 as amended.

Having carried out screening for appropriate assessment of the project, it was concluded that it may have a significant effect on the following European sites:

- Blackwater River (Cork / Waterford) SAC
- Blackwater Callows SPA
- Blackwater Estuary SPA
- Dungarvan Harbour SPA
- Ballymacoda Bay SPA

Consequently, an appropriate assessment was required of the implications of the project on the qualifying features of these sites in light of their conservation objectives.

Following an appropriate assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects, would not adversely affect the integrity of any of the above European sites in view of their conservation objectives.

This conclusion is based on a complete assessment of all aspects of the proposed project, including an assessment of in combination effects with other plans and projects, and there is no reasonable scientific doubt as to the absence of adverse effects.

10.0 **Conclusion**

10.1. A significant part of the third party objections received relate to the approach to the application as an amendment to the existing grant of permission for KWF, the relationship with other extant and proposed developments (Woodhouse windfarm and KWF Grid Connection) and the adequacy of the environmental and habitat assessments undertaken. A common theme in the submissions is that there is a need to revert to consider the proposal from fist principles and that a new application is required that would encompass the amended windfarm and the KWF grid connection project. However, as set out in the assessment above, while I consider that the submission of a new application would potentially be clearer in terms of the presentation and assessment of cumulative impacts and in combination effects, I do not consider that there is any obligation on the first party to follow this approach.

10.2. Fundamentally, the application the subject of appeal is for the amendment of a permitted development and the assessment relates to the environmental implications arising from these proposed amendments. The issue of the structure of the EIAR submitted and the degree to which these documents clearly describe the existing environment, act as stand alone assessments and comply with the requirements of the EIA Directive and Planning and Development Regulations is highlighted. As detailed in my assessment, on balance, I consider that the description of the background environment provided in the 2021 EIAR under each environmental heading, combined with the provision of the 2015 KWF EIS and KWF Grid Connection Project EIAR as reference documents provides an adequate baseline for

the full accurate assessment of likely significant direct and indirect effects arising from the proposed amendments. In the sections of the EIAR most relevant to the assessment of this case, namely Landscape and Visual Impacts and Air (noise and vibration) the information presented in the EIAR gives more descriptive information with regard to the background environment or baseline scenario with the permitted KWF in place.

10.3. The nature of the proposed amendments to the permitted KWF, specifically the fact that turbine numbers and locations are remaining the same and that no additional excavations over and above those indicated and assessed under the original application are proposed, are such that the potential environmental impacts arising from the proposed development under most headings are assessed as negligible. The main areas where significant negative impacts could potentially arise are considered to be under the headings of Landscape and Visual Impact and Air (Noise and Shadow Flicker).

10.4. As detailed in the assessment above, I do not consider that the proposed amendment to the permitted KWF would lead to a change in the magnitude of visual impact at the viewing points assessed. Similarly, I do not consider that the proposed amendments would have a significant negative impact on landscape and landscape character. For these reasons and having specific regard to the nature of the proposal as an amendment to a permitted wind energy development, I do not therefore consider that the proposed development would be contrary to the landscape and visual amenity provisions of the 2022-2028 Waterford City and County Development Plan.

10.5. Notwithstanding this assessment, the proposed amendment to the permitted KWF has significant policy support in the form of European and national policy regarding renewable energy, emissions reductions and climate change. This, together with the limited environmental impacts assessed as arising from the proposed development mean that notwithstanding the location of the appeal site in an area identified in the landscape character assessment as being of high sensitivity and no longer benefiting from a designation of strategic for wind energy development, the proposed development is considered overall to be acceptable and in accordance with the proper planning and sustainable development of the area.

11.0 Recommendation

11.1. Having regard to the above, it is recommended that permission is granted based on the following reasons and considerations and subject to the attached conditions.

12.0 Reasons and Considerations

I recommend that planning permission should be granted for the proposed development for the reasons and considerations set down below, subject to compliance with the attached conditions and in accordance with the following Draft Order.

Reasons and considerations

Having regard to:

(a) European and national policies to increase the proportion of energy that is generated from alternative, indigenous and renewable energy sources including wind and the minimisation of emissions of greenhouse gases as set out in the National Climate Action Plan, 2021,

(b) the provisions of the “Wind Energy Development Guidelines - Guidelines for Planning Authorities”, issued by the Department of the Environment, Heritage and Local Government in June 2006, and Draft Amendments to these guidelines, 2019

(c) the policies set out in the Regional Spatial & Economic Strategy for the Southern Region 2020,

(d) the policies of the planning authority as set out in the Waterford County Development Plan 2022-2028,

(e) the provisions of the Renewable Energy Strategy for Waterford City and County 2016 -2030 as contained at Appendix 7 of the Waterford City and County Development Plan, 2022-2028,

(f) the nature and scale of the proposed development comprising an amendment to an existing permitted development of 8 no. turbines with no change to the number or location of turbines permitted,

(g) the distances of the proposed development to dwellings or other sensitive receptors,

(h) the contents of the Environmental Impact Assessment Report, Appropriate Assessment Screening and revised Environmental Impact Assessment Report and Natura Impact Assessment reports submitted by the applicant,

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

(j) the topography and character of the landscape of the area in the vicinity of the site,

(k) the planning history of the site and the pattern of existing and permitted development in the area,

(l) the submissions made in connection with the application, and

(m) the report and recommendation of the inspector.

Proper planning and sustainable development:

It is considered that subject to compliance with the conditions set out below the proposed development would accord with European, national, regional and local planning, renewable energy, other and related policy, it would not have an unacceptable impact on the landscape or ecology, it would not seriously injure the visual or residential amenities of the area or of property in the vicinity, and it would

be acceptable in terms of traffic safety and convenience. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Appropriate Assessment:

- The Board agreed with the screening assessment and conclusion carried out in the Inspector's report that the Blackwater River (Cork / Waterford) SAC Site Code 002170, the Blackwater Callows SPA Site Code 004094, the Blackwater Estuary SPA Site Code 004028, the Dungarvan Harbour SPA Site Code 004032 and the Ballymacoda Bay SPA Site Code 004023 are the only European sites for which there is a possibility of significant effects and must therefore be subject to Appropriate Assessment.
- The Board considered the Natura Impact Statement and all other relevant submissions and carried out an appropriate assessment of the implications of the proposed development for European Sites in view of the site's Conservation Objectives for the Blackwater River (Cork / Waterford) SAC Site Code 002170, the Blackwater Callows SPA Site Code 004094, the Blackwater Estuary SPA Site Code 004028, the Dungarvan Harbour SPA Site Code 004032 and the Ballymacoda Bay SPA Site Code 004023. The Board considered that the information before it was sufficient to undertake a complete assessment of all aspects of the proposed development in relation to the site's conservation objectives using the best available scientific knowledge in the field.

In completing the assessment, the Board considered, in particular, the following:

(i) Site Specific Conservation Objectives for four of these five European Sites,

(ii) Current conservation status, threats and pressures of the qualifying interest features,

(iii) likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,

(iv) mitigation measures which are included as part of the current proposal,

In completing the AA, the Board accepted and adopted the Appropriate Assessment carried out in the Inspector's report in respect of the implications of the proposed development on the integrity of the aforementioned European Sites, having regard to the site's Conservation Objectives.

In overall conclusion, the Board was satisfied that the proposed development would not adversely affect the integrity of European sites in view of the site's Conservation Objectives and there is no reasonable scientific doubt as to the absence of such effects.

Environmental Impact Assessment:

The Board completed an environmental impact assessment of the proposed development taking account of:

(a) the nature, scale, location and extent of the proposed development on a site,

(b) the Environmental Impact Assessment Reports (EIARs) and associated documentation submitted in support of the application,

(c) the submissions received from the prescribed bodies and observers, and

(d) the Inspector's report.

The Board considered that the environmental impact assessment report dated February 2021, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment. The Board agreed with the examination, set out in the Inspector's report, of the information contained in this environmental impact assessment report and associated documentation submitted by the applicant

and submissions made in the course of the application. The Board considered that the main significant direct and indirect effects of the proposed development on the environment are, and would be mitigated, as follows:

- The proposed development would have a significant positive impact on climate as it would result in the generation of additional renewable energy with consequent positive impacts for reduction in CO2 emissions and climate benefits.
- Regarding ecology, the proposed amended turbines the subject of the subject application will not result in any additional turbines, relocation of permitted turbine locations or additional excavations with the result that the impact on hydrology and terrestrial habitats and species are not considered likely to be significant. While some additional impact on birds is considered possible, specifically arising from collision risk from the larger turbines, the results of surveys for this project and previous applications on the site indicate that the more vulnerable species to such impact are not present on the site in significant numbers and that suitable habitat for such species are not widespread in the vicinity of the windfarm site.
- The proposed development would have the potential to impact negatively on human health arising from the emission of noise, and potential impact in terms of shadow flicker from the larger turbines proposed. Emissions to air are not considered to be significantly negative post mitigation and would be within the limits prescribed in the existing permission for the windfarm on the site. The proposed development is not therefore considered likely to have significant impacts on human health.
- The proposed development would have potential negative impacts on the landscape and views in the vicinity of the site. These potential impacts would be successfully mitigated by the extant nature of the permission for a windfarm in this location, by the same number and layout of turbines being proposed and by the limited additional height proposed in the context of the existing landscape and views assessed.

The Board completed an environmental impact assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures proposed as set out in the EIAR, and the implementation of the measures proposed in the Environmental Management Plan and subject to compliance with the conditions set out below, the effects of the proposed development on the environment, by itself and in combination with other plans and projects in the vicinity, would be acceptable. In doing so, the Board adopted the report and conclusions of the Inspector.

13.0 **Conditions**

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application and by the further plans and particulars received by An Bord Pleanála on the 10th day of February, 2021 except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

   Reason: In the interest of clarity.

2. All conditions attached to An Bord Pleanala Ref. PL93.244006 shall be complied with in the development except as may otherwise be required in order to comply with the following conditions.

   Reason: In the interests of clarity.

3. The period during which the development hereby permitted is constructed shall be 10 years from the date of this order.
   Reason: In the interests of clarity.

4. The developer shall ensure that all construction methods and environmental mitigation measures set out in the Environmental Impact Assessment Report dated February 2021, Natura Impact Statement dated February 2021 and associated documentation are implemented in full, save as may be required by conditions set out below.
   Reason: In the interest of protection of the environment.

5. The following design requirements shall be complied with:
   (a) The wind turbines will have a maximum tip height of 155 metres.
   (b) Final details of the turbine design, hub height, tip height and blade length complying the maximum limit and within the range set out in the application documentation along with details of colouring, shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.
   (c) Cables within the site shall be laid underground.
   (d) The wind turbines shall be geared to ensure that the blades rotate in the same direction.
   (e) No advertising material shall be placed on or otherwise be affixed to any structure on the site without a prior grant of planning permission.
   Reason: In the interest of visual amenity.

6. Prior to commencement of development, a transport management plan for the construction stage shall be submitted to, and agreed in writing with, the planning authority. The traffic management plan shall incorporate details of the road network to be used by construction traffic, including over-sized loads, and detailed arrangements for the protection of roads, bridges, culverts or other structures to be traversed, as may be required. The plan should also contain details of how the developer intends to engage with and notify the local community in advance of the delivery of oversized loads. Any works, including reinstatement works, to existing junctions on the national road network shall comply with Transport Infrastructure Ireland (TII) standards as outlined in TII Publications and shall be subject to Road Safety Audit as appropriate.
   Reason: In the interest of traffic safety and the proper planning and sustainable development of the area.

7. Prior to the commencement of development, the community gain proposals shall be submitted to planning authority for their written agreement.

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

8. On full or partial decommissioning of the wind farm, or if the wind farm ceases operation for a period of more than one year, the wind monitoring mast, the turbines concerned and all decommissioned structures shall be removed, and foundations covered with soil to facilitate re-vegetation, all to be complete to the written satisfaction of the planning authority within three months of decommissioning or cessation of operation.
   Reason: To ensure satisfactory reinstatement of the site upon full or partial cessation of the project.

Stephen Kay
Planning Inspector

12th September, 2022