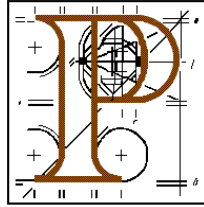


## An Bord Pleanála



## Inspector's Report

### Development:

Ten year permission for the erection of nine no wind turbines each with a hub height of up to 100m, a typical rotor diameter of 103m (overall maximum tip height of up to 150m) and all associated site development works including 1 no temporary site compound area (697 sq.m), turbine foundations, crane hardstandings, access tracks underground cabling, upgrades to existing site entrance off the N62, the construction of a 38kV Switch room and control facility (94 sq.m) with associated equipment and compound area enclosed by a 2.4m high palisade fence. The application is accompanied by an Environmental Impact Statement (EIS) and a Natura Impact Statement (NIS). The Planning application, EIS and NIS may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices of the planning authority during its public opening hours.

### Location:

Townlands of Stonestown, Kilcamin, Crancreagh and Derrinlough, Cloghan, County Offaly.

### Planning Application

Planning Authority	Offaly County Council
Planning Authority Register Ref.	14/188
Applicant	Gaeltech Energy Cloghan Limited.
Type of Application	Permission
Planning Authority Decision	Grant Permission with conditions

## **Planning Appeal**

Appellants	(i) Edward John Bulfin (ii) Christopher Buckley (iii) Pierce Greijmans (iv) Agnes Doolan (v) Bernard Kennedy & others. (vi) Bord na Móna
Type of Appeals	Third Party Appeals v Permission
Observers	(i) Pauline Cahillane (ii) Joseph Caulfield (iii) Damien Buckley
Prescribed Bodies	(i) Dept. of Arts Heritage & the Gaeltacht (ii) An Taisce (iii) Irish Aviation Authority
<b>Date of site inspection</b>	21 <sup>st</sup> January 2015
<b>Inspector:</b>	Bríd Maxwell

## **INTRODUCTION**

This case involves six third party appeals of a decision by Offaly County Council to grant permission for the development of a proposed Windfarm comprising 9 no 3.2mW wind turbines (overall maximum tip height 150m) within the townlands of Stonestown, Kilcamin, Crancreagh and Derrinlough, Cloghan Co Offaly.

### **1.0 SITE LOCATION AND DESCRIPTION**

- 1.1 The appeal site is located in north County Offaly approximately 1.5km to the south east of the village of Cloghan, 30km west of Tullamore and 25km south of Athlone. Other settlements in the vicinity include Ferbane 8km, Banagher 8km, Broughal 10km, Birr 13km and Kilcormac 10km. The unparalleled Monastic site of Clonmacnoise which is strategically located where the Esker Riada crosses the River Shannon is approximately 16km to the northwest of the site.
- 1.2 The general area is characterised by flat agricultural landscapes, peatlands and cutaway bogs. The appeal site is within a fringe area between two major peat bogs which have been subject of industrial scale harvesting. Boora Bog to the east has a widespread rail system serving the ESB Ferbane Power Station and also the briquetting works at Derrinlough which is approximately 0.5km to the south of the appeal site. A substantial conifer plantation also occurs to the south of the site. The topography is generally flat while Cloghan Hill is a prominent feature to the north. Lough Boora Parklands a composite area of Bord na Mona cutaway bogs that have been regenerated as naturalistic wetlands and amenity features over the past 20 years as a pilot project are located approximately 3.5km to the east of the appeal site. Cloghan Village (pop

612<sup>1</sup>), 1.5km to the north west of the site is a well-established village centred around the crossroads of the N62 and R356 and R357. The original core of the village displays a tight grain and vernacular style whilst more recent expansion takes the form of linear development in suburban style along the routes.

- 1.3 The appeal site, which has a stated area of 12.68 hectares incorporating eight landholdings, includes a combination of marginal farmland and peatland which is being harvested on a domestic scale. The land is boggy and fields are delineated by wire fences and hedgerows. The site is within the townlands of Stonestown, Kilcamin, Crancreagh and Derrinlough and contains tracts of cutover bog, with birch and willow scrub encroaching upon the edges. The northern portion of the site comprises fields of cereal and improved grassland. Field boundaries consist of mature hedgerows of hawthorn hazel and blackthorn. Immediately adjacent to the west of the site runs the N62 national secondary road which links the settlements of Birr and Athlone through the villages of Cloghan and Ferbane. Small man made drainage ditches criss cross the site whilst the Little River, a tributary of the River Brosna, flows through the site adjacent to the existing laneway which accesses the southern portion of the site from the N62 adjacent to Crancreagh Bridge.
- 1.4 The landscape is relatively flat and elevation of the site ranges from approximately 50m to 70m above Ordnance Datum. The settlement pattern in the area is of scattered rural dwellings. Notably there are 27 houses within 1,030m of the proposed site, a significant portion of these are concentrated along the local road L7009 to the north of the site.
- 1.5 Whilst the site is not itself within an area designated for nature conservation there are a number of sites of ecological importance within

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<sup>1</sup> 2011 census figure as provided in the Offaly County Development Plan 2014 – 2020.

15km of the site, including the Middle Shannon Callows (004096) SPA and River Shannon Callows cSAC (000216) located approximately 4.9km to the west of the site. These designated sites cover the same area and contain areas of callow or seasonally flooded semi natural lowland wet grassland along and beside the River Shannon. These areas are of international importance for wintering wildfowl and of national importance for breeding waterfowl. Lough Coura a proposed NHA is located over 2.5km south of the proposed site. Drinagh wetlands, circa 2km to the east of the site is a flooded area of cutaway bog part of the Lough Boora Park which contains areas which have been undergoing natural recolonization for a number of years and is becoming an important habitat for wintering and breeding birds.

## **2.0 THE PROPOSED DEVELOPMENT**

2.1 The application as set out in the public notices describes the proposed development as follows:

*“Ten year permission for the erection of nine no 3.2MW wind turbines each with a hub height of up to 100m, a typical rotor diameter of 103m (overall maximum tip height of up to 150m) and all associated site development works including 1 no temporary site compound area (697sq.m), turbine foundations, crane hardstandings, access tracks, underground cabling, upgrades to existing site entrance off the N62, the construction of a 38kV Switch room and control facility (94 sq.m) with associated equipment and compound area enclosed by a 2.4m high palisade fence.”*

2.2 The direct footprint of the site occupies an area of approximately 1.5km x 2km. The total area of development is calculated as 36,520m<sup>2</sup> the majority of this figure being accounted for by 26,000m<sup>2</sup> of access tracks.

The exact type and manufacturer of the turbine has not been chosen. The GE 3.2-103 turbine is used as the basis of the technical assessments within the application as it is currently the largest generating capacity turbine that fits the required profile. The proposed turbine has a maximum blade tip height of 149.8m. The GE 3.2-103 typically has a rotor speed of 14.8 rotations per minute (r.p.m.) The turbine has a cut-in wind speed of 3 m/s and a cut-out speed of 25m/s. Each turbine tower is bolted down to a steel ring foundation and embedded either in a reinforced concrete raft foundation or on a piled foundation. From the geotechnical investigations carried out to date it is expected that all but one of the proposed turbines will require a piled type foundation. Additional site specific geo-technical investigations are proposed at pre-construction stage. It is proposed that micro siting providing for movement of the proposed turbines by up to 20m from the submitted co-ordinates be provided for.

- 2.3 The turbines will be connected to the proposed single storey switch room in the townland of Stonestown. The switch room will be approximately 94m<sup>2</sup> with an overall height of 5.8m. To the rear of the switch room a compound area is proposed. The switch room and compound area will be enclosed by a 2.4m high palisade fence.
- 2.4 Access to the site comes via an existing laneway which egresses onto the N52 adjacent to Crancreagh Bridge. Minor works are proposed to widen the access point to accommodate irregular loads and to improve sight visibility splays. Within the site a total of approximately 5km of access tracks will be used for construction purposes and for access. An additional 3km of track will be constructed. Width of the tracks will be minimum 5m.
- 2.5 As regards Grid connection, it is proposed that the windfarm will be connected via underground cables to the proposed switch room located in

Stonestown. Cables will be buried in trenches alongside the track. The switch room will be connected to either the nearest existing sub-station at Lumcloon approximately 3km north-east of the site or to an alternative connection point. A temporary wind monitoring mast is currently on site and a permanent anemometer mast is proposed.

- 2.6 The application represents a reduced proposal from the previous scheme proposed for the site which was refused by An Bord Pleanála in December 2013. The revised proposal proposes a reduced number of turbines from 10 to 9 turbines with a reduced tip height from 170m to 150m. The two most northerly turbines (closest to Cloghan Village) have been omitted and an additional turbine is proposed to the south within the townland of Derrinlough.

### **3.0 PLANNING POLICY**

#### **3.1 National Policy and Guidelines**

##### **3.1.1 *Delivering a Sustainable Energy Future for Ireland – The Energy Policy Framework 2007-2020***

This is a Government White Paper. The overriding objective is to ensure that energy is consistently available at competitive prices, with minimal risk of supply disruption. It is an objective to achieve 15% of electricity consumption, on a national basis, from renewable energy sources by 2010, and 33% by 2020 (target increased to 40% in Government budget speech of 2009).

##### **3.1.2 *National Renewable Energy Action Plan 2010***

This Plan implements EU Directive 2009/28/EC on the promotion of the use of energy from renewable sources, which sets out agreed new climate and energy targets- 20-20-20 by 2020 – 20% reduction in greenhouse gas

emissions; 20% energy efficiency, and 20% of the EU's energy consumption to be from renewable sources. In relation to the electricity sector, the plan has set a target of 40% electricity consumption from renewable sources by 2020.

### **3.1.3 Strategy for Renewable Energy, 2012–2020**

The Strategy for Renewable Energy, 2012–2020 is the most recent policy statement on renewable energy. It reiterates the Government's view that the development of sources of renewable energy is critical to reducing dependency on fossil fuel imports, securing sustainable and competitive energy supplies and underpinning the move towards a low-carbon economy. The Strategy sets out specific actions the Government will take to accelerate the development of wind, ocean and bio-energy, R&D, sustainable transport energy, and supporting energy infrastructure. Strategic Goal 1 aims to achieve progressively more renewable electricity from onshore and offshore wind power for the domestic and export markets.

### **3.1.4 Ireland's Second National Energy Efficiency Action Plan to 2020 (March 2013)**

This Plan sets out strategy to reduce Ireland's dependence on imported fossil fuels, improve energy efficiency across a number of sectors and ensure a sustainable energy future.

### **3.1.5 Guidelines for Planning Authorities on Wind Farm Development and Wind Energy Development 2006**

The Guidelines offer advice on planning for wind energy through the Development Plan process, and in determining applications for planning permission, and are intended to ensure consistency of approach in the identification of suitable locations for wind energy developments, and acknowledge that locational considerations are important. These



considerations include ease of vehicular access and connection to the electricity grid. It is acknowledged that visual impact is amongst the more important issues when deciding a particular application. Whilst there is no set-back distance specified, it is indicated at section 5.6 that noise is likely to a problem at less than 500m. In relation to shadow flicker, section 5.12 states that impact at neighbouring offices and dwellings within 500m should not exceed 30 hours per year or 30 minutes per day. It goes on to state that at distances greater than 10 rotor diameters, the potential for shadow flicker is very low. Section 5.13, dealing with 'windtake', states that distances between turbines will generally be 3 rotor diameters in the crosswind direction and 7 rotor diameters in the prevailing downwind direction. This section goes on to state- 'Bearing in mind the requirements for optimal performance, a distance of not less than two rotor blades from adjoining property boundaries will generally be acceptable, unless by written agreement of adjoining landowners to a lesser distance. However, where permission for wind energy development has been granted on an adjacent site, the principle of the minimum separation distances between turbines in crosswind and downwind directions indicated above should be respected'.

### **3.1.6 Proposed Revisions to Wind Energy Development Guidelines 2006**

These Draft Guidelines were introduced by the Department of Environment, Community and Local Government, in December 2013, to deal with limited aspects of wind farm developments. A consultation period was allowed – up to 21st February 2014. The revisions proposed are-

- A more stringent absolute outdoor noise limit (day and night) of 40 dB for future wind energy developments.
- A mandatory setback of 500m between a wind turbine and the curtilage of the nearest dwelling, for amenity considerations.
- A condition to be attached to all future planning permissions for wind farms to ensure that there will be no shadow flicker at any

dwelling within 10 rotor diameters of a wind turbine. If shadow flicker does occur, the wind energy developer/operator should be required to take necessary measures, such as turbine shutdown for the period necessary to eliminate the shadow flicker. There is no indication to date as to proposed changes, if any, to the 2006 Guidelines.

### **3.2 Offaly County Development Plan 2014-2020**

3.2.1 The Offaly County Development Plan 2014-2020 which was adopted on 15<sup>th</sup> September 2014 and is effective from 13<sup>th</sup> October 2014 is the statutory plan for the county. (Relevant Extracts from the County Development Plan are attached in appendices to this report.) I note that the submitted application particulars including EIS and the Offaly County Council Planner's report refer to the provisions of the previous development plan 2009-2015 which was effective at the time of the decision of Offaly County Council on 7/10/2014.

3.2.2 **Chapter 3 of the Offaly County Development Plan 2014-2020 sets out the Energy Strategy.** The wind energy strategy map (Map 3.2) demonstrates areas in which applications for wind energy development will be open for consideration subject to site specific considerations and layout. In areas suitable for wind energy development, the development of wind farms and smaller wind energy projects shall be open for consideration where projects can demonstrate that they will not have likely significant effects on the conservation objectives of European Sites.

3.2.3 In relation to cutaway bog, the development plan states that: *"The characteristics of cutaway bog appear to be particularly suitable for wind development. The individual sites on cutaway bogs are large and*

*generally uninterrupted by hedgerows, streams or other natural features. Many are already connected to each other via corridors i.e. bog railway routes, which will allow for transmission infrastructure and roadways to be built between sites, avoiding impacts on the public road in terms of traffic or visual impact.*

*The areas where peatlands occur have a low density road network and are traditionally sparsely populated and while they have not completely avoided sporadic urban generated one-off housing, they are the least densely populated areas of the county.*

*Appropriate buffers should be provided, which shall be a minimum of 2km from Town and Village cores, European designated sites, including Special Areas of Conservation (SAC) and Special Protection Areas (SPA) and national designations, Natural Heritage Areas (NHA). The EIA associated with any development should also assess the flight paths of any Annex 1 bird species present in order to minimise the potential for bird strikes.”*

3.2.4 Policy EP03 *“It is the council policy to encourage the development of wind energy in suitable locations, on cutaway bogs within the wind energy development areas open for consideration identified in Map 3.2, in an environmentally sustainable manner and in accordance with Government policy, having particular regard to the Wind Energy Strategy for the County and Section 3.5.1, which states that appropriate buffers should be provided, which shall be a minimum of 2km from Town and Village Cores, European designated sites, including Special Areas of Conservation (SAC) and Special Protection Areas (SPA), and national designations, National Heritage Areas (NHA), Wind Energy developments on cutaway bogs should generally be developed from the centre out.”*

3.2.5 EO – 01 *“It is an objective of the Council to achieve a reasonable balance between responding to government policy on renewable energy and in*

*enabling the wind energy resources of the county to be harnessed in an environmentally sustainable manner. This will be implemented having regard to the Council's Wind Energy Strategy as follows:*

*In areas open for consideration for Wind Energy Development, as identified in map 3.2 the development of wind farms and smaller wind energy projects shall be open for consideration."*

3.2.6 Heritage and Landscape Policies are addressed in Chapter 7.

**LAO-01** *It is an objective of the Council to preserve and enhance the character of the county's landscape where, and to the extent that in the opinion of Offaly County Council, the proper planning and sustainable of the area requires it.*

**LAO-02** *It is an objective of the Council to preserve scenic views and prospects throughout the county which will be assessed on a case-by-case basis, as part of the development management process. (Views are listed in Table 7.11.5 and shown on Map 7.18).*

3.2.7 Areas of High Amenity Policies: AHAP-01 *"It is Council policy to protect and preserve the county's primary areas of high amenity namely the Slieve Bloom Mountains, Clonmacnoise Heritage Zone, Durrow High Cross, Abbey and surrounding area, the River Shannon, Lough Boora Parklands, Grand Canal, Croghan Hill, Raheenmore Bog, Pallas Lake, Clara Bog and Eskers, Eiscir Riada and other Eskers. These areas are indicated on Map 7.17."*

## **4.0 PLANNING HISTORY**

4.1 **PL19.242354 12/293** Previous application on the site, for 10 no. wind turbines each with a hub height of up to 110m and a rotor diameter of up to 120m with an overall maximum tip height of up to 170m and all

associated site development works. The decision of Offaly County Council to grant permission was overturned following two third party appeals to the Board.<sup>2</sup> The Board's reason for refusal was as follows:

***“Having regard to the nature of the receiving environment and the open nature of the immediately adjoining lands and the size and scale of the proposed turbines, it is considered that a wind farm development of the scale proposed would create a significant visual intrusion in this landscape by reason of the height and spatial extent of the proposed turbines which would be excessively dominant and visually obtrusive when viewed from the surrounding countryside and villages. The proposed wind energy development would, therefore, seriously injure the visual amenities of the area, would be contrary to the provisions of the Wind Energy Guidelines for Planning Authorities issued by the Department of Environment, Heritage and Local Government in June, 2006 and would be contrary to the proper planning and sustainable development of the area.”***

4.2 I note that the Inspector in the case of PL.19.242354 recommended refusal on a number of grounds related to visual impact, adverse impact on residential amenity in terms of visual, noise and shadow flicker and potential adverse impact on European Sites by virtue of bird collision risk. The Board however refused the development on the basis of the visual intrusion as outlined above.

4.3 **12/65** was conditional permission granted to Gaeltech Energy Developments Ltd for 100m high anemometer mast for a period of 5 years. Granted on 21/5/2012.

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<sup>2</sup> I note that the two third party appellants in PL19.242354 were Val Martin, Gortnakesh, Cavan and the National Roads Authority NRA.

## **5.0 PLANNING AUTHORITY'S DELIBERATIONS AND DECISION**

### **5.1 Submissions to the Local Authority from Third Parties and Prescribed Bodies.**

5.1.1 A number of submissions were received by the local authority from local residents and other interested third parties who objected on various grounds which I have summarised as follows:

- Inappropriate industrial type development in rural area.
- Proximity to numerous dwellings,
- Impact on ecology – Wildlife.
- Overshadowing and Shadow flicker.
- Negative visual impact. Photomontage unrepresentative.
- Detrimental impact on property values.
- Impact on Tourism
- Insufficient assessment of impact on designated SPAs.
- Noise assessment is insufficient.
- Traffic - impact on local road network and distraction to road users.
- Impact on turbary rights.
- Inadequate public consultation. Many residents were unaware of the re-emergence of the wind farm proposal.
- Health and safety impacts
- EIS inadequate.
- Applicant previously indicated that turbines below 158m in height would be commercially unviable. Location is unsuitable for wind harvesting.
- Sustainability of the proposal is questioned.
- Bog in this area is extremely deep.
- Precedent for further such development. Question of possible project splitting as landowners in wider area have been approached in relation to potential wind developments.

- Settlement in the area of T8 may date back as far as the Bronze Age. Archaeology is vast and unexplored.
- Proposal for floating roads within boglands not suitable as discovered in Derrybrien.
- Local residents pressurised.

5.1.2 A number of third party submissions were received by the local authority from local residents and interested parties which indicated support for the proposed development. I note that a number of letters were subsequently submitted to the local authority from third parties indicating that they had not submitted correspondence in support of the application despite their nomination on the previously submitted letters. I have summarised submissions in support of the proposal as follows:

- Development is welcome as it will generate additional jobs and wider economic benefits to the local community.
- Represents progression in terms of meeting renewable energy targets.
- Positive impact on tourism.
- Development is compatible with established land use.
- Reduction in fossil fuel uses.

5.1.3 **Bord na Móna** submission relates to the potential impact of the proposed turbine layout on the potential development of adjoining Bord na Móna lands. The proposed layout provides for five turbines at less than the required windtake distance (two rotor diameters) with respect to Bord na Móna lands. Proposed turbine layout will impact on the potential for wind energy development on Bord na Móna lands.

5.1.4 **Irish Aviation Authority** submission requests that in the event of permission, the applicants be required to provide an agreed scheme of aviation obstacle warning lighting for the wind turbines and coordinates

and elevation details of the built turbines for charting purposes. IAA to be notified at least 30 days prior to the erection of the development.

5.1.5 **An Taisce** submission notes previous refusal PL19.242354. An evaluation is required that demonstrates that all issues have been resolved which determined the site unsuitable previously.

5.1.6 **National Roads Authority NRA** submission requests that the Council has regard to official policy provisions in the assessment and determination of the application. In particular the DoECLG Spatial Planning and National Roads Guidelines for Planning Authorities 2012. The proposed development is at variance with the provisions of official policy as it involves access directly onto the N62 at a location where the 100kph speed limit applies. Reference is also made to Policy P13—4 of the County Development Plan. It is recommended that the applicant investigate alternative means of access via the local road network.

5.1.7 **Health Services Executive HSE** Environmental Health Service Report notes absence of information in respect of water supply source to adjacent dwellings. Procedure should be put in place to ensure compliance programme in respect of noise.

5.1.8 **Department of Arts Heritage and the Gaeltacht** submission to the local authority refers to the presence of Greenland White fronted geese and Whooper swans from the original wintering bird surveys in 2011/12. Note that no Annex species were recorded during 2014 January to April surveys. Note location adjacent to the Bord na Móna Drinagh Wetlands, a flooded area of cutaway raised bog that is becoming an important habitat for wintering and breeding birds. Any turbines at this location could interfere with bird use of the site. Peregrine falcon and hen harrier have been recorded from the Drinagh Wetland site and Cloghan Hill since the



initial wintering bird surveys for this site were carried out in 2011. Drinagh Wetlands is constantly evolving to become an important bird site to County Offaly as there are few permanent water bodies in the County and Annex 1 Species White Fronted Geese have been recorded crossing the site in the past. Whooper swans are likely to use the area also. Offaly County Council must consider the impact on above when making a decision on this application.

## **5.2 Internal Reports**

- 5.2.1 Fire Officer indicates no objection to the proposed development.
- 5.2.2 Executive Engineer Road Design asserts that the proposed access to the national road is appropriate for the operational phase of development given negligible traffic movements. Alternative access via local road is not feasible. There is no objection subject to conditions including provision for extension of the bridge culvert behind the new boundary fence in the revisions to the entrance. Transport management plan to be provided.
- 5.2.3 Area Engineer's report notes identified impacts and proposed mitigation measures. No objection subject to conditions.
- 5.2.4 Water Services / Environment Report – Conditions recommended.
- 5.2.5 Planner's report refers to the landscape and visual impact and asserts that the photomontages submitted indicate that the turbines will be read with the existing buildings, overhead electricity lines / poles and tree screening. The Planning authority considers the visual impact will be mitigated by the clutter and existence of the above items and the provision of tree planting to the north can be conditioned in the event of permission which will aid in screening. In relation to potential impact on flora and fauna, report asserts

that the installation of avian monitoring system will provide adequate mitigation. In relation to noise and shadow flicker, report accepts findings of EIS that levels will be within the criteria of the Guidelines. In relation to windtake report notes that five of the turbines would not adhere to relevant distance however refusal on basis of unproven potential for windfarm development on the adjoining lands would not be reasonable. Permission recommended subject to conditions.

## 5.2 Decision

5.2.1 By Order dated 7<sup>th</sup> October 2014, Offaly County Council issued a Notification of decision to grant permission subject to 19 conditions as summarised follows:

*Condition 1. Development in accordance with plans and particulars including EIS mitigation measures.*

*Condition 2. Permission for 9 turbines only.*

*Condition 3. Permission duration 10 years. Development permission for period of 25 years from commissioning of the windfarm.*

*Condition 4. Decommissioning.*

*Condition 5. The turbines shall be maximum hub height 100m maximum rotor diameter 103 m and maximum overall tip height of 150m.*

*Condition 6. Undergrounding of cables within the site. Turbines geared to rotate in the same direction.*

*Condition 7. Mitigation measures in the EIS to be adhered to. Merlin SCADA Avian Radar system to be installed. Annual monitoring programme to review interaction by birds and other mammals with the windfarm, survey species and document bird and other casualties. In the event that the operational efficiency of the Merlin SCADA avian radar is found to be inadequate by the NPWS as the primary mitigation measure*

*for the protection of avifauna, the operation of the windfarm shall cease until a satisfactory alternative is found.*

*Condition 8. Details of bridge culvert behind the proposed new boundary fence to be agreed. Liaison with Offaly County Council and Gardai. Site entrance improvements. Transport management plan.*

*Condition 9. Facilities to prevent radio transmission interference.*

*Condition 10. Chain link fence surrounding switch room.*

*Condition 11. Storm water drainage system. Liquid and hydrocarbon storage bunding. Potable water supply portaloo maintenance contracts.*

*Condition 12. Noise levels when measured at nearest habitable house shall not exceed 40dBA  $L_{A90\ 10min}$ . Measurement within six months of commissioning. No shadow flickering to occur at any inhabitable<sup>3</sup> dwelling within 10 rotor diameters of a wind turbine. Sensor to be attached to 20 houses within 10 rotor diameters predicted to experience low periods of shadow flicker. Sensor to be attached to properties which will turn off the offending turbine should shadow flicker be detected.*

*Monitoring study to calibrate the shadow flicker model submitted. If recalibrated model indicates shadow flicker exceeds guideline limits, mitigation measures to be implemented. Construction noise and dust mitigation.*

*Condition 13. Waste management.*

*Condition 14. Development Contribution 28.8 x €10,000 per MW of capacity or €288,000.*

*Condition 15. Obstacle warning lighting.*

*Condition 16. Permission does not consent to agreement to connection to national grid or routing or nature of such connection.*

*Condition 17. Archaeological monitoring of groundworks.*

*Condition 18. Decommissioning plan.*

*Condition 19. Proposed turbines shall be located within 20 metres of the co-ordinates submitted.*

## **6.0 GROUNDS OF APPEAL**

6.1 There are six third party appeals against the decision of Offaly County Council to grant permission. The appeals raise a number of common issues as well as specific issues. The third party appeal submissions also include a diversity of enclosures used to elucidate the various grounds raised. I have summarised the substantive grounds of appeal as follows:

### **6.2 Appeal of Edward John Bulfin, Derinlough House, Birr.**

6.2.1 This appeal is accompanied by a number of enclosures including copies of extracts from sources referenced in the appeal statement. I have summarised the grounds of appeal as follows:

- Negative impact on human wellness, physical health, occupational opportunity, intellectual integrity, social harmony and emotional wellbeing.
- Contrary to justice and fair play.
- If floating foundations are used the density inconsistency of the underlying bog will cause tilt. N62 demonstrates this point.
- Peat polluted groundwater will destroy fresh potable water in local resident's wells.
- Question the economic benefit to local people. Subsidy to wind energy will result in decreased economic competitiveness and burden households. Refer to economist Colm McCarthy who supports this view.
- Cost benefit studies by independent parties have not been provided. Job creation compared to capital investment is minimal.
- Property devaluation.
- Impact on wildlife and natural heritage.

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<sup>3</sup> Assumed to be typographical error and should read habitable.

- Negative impact on farm animals and farm enterprise.
- Negative impact on local business local briquette factory and Erin Peats.
- Social and economic impact in relation to impact on turbary rights.
- Application does little to address the legitimate concerns of An Bord Pleanála
- The 2006 Guidelines are outdated.
- Noise impacts, shadow flicker and destruction of visual amenities of the area.
- Considerable stress caused to the local community.
- Precedent for further wind farm development in the area.
- Historical and Archaeological significance of the area is underestimated by the developers. School project by the appellant's son attached to the appeal statement illustrates this point.
- Request that the Board overturn the decision of Offaly County Council to grant permission.

**6.3 Appeal of Christopher Buckley, Stonestown, Cloghan Birr Co Offaly. Gerard and Lisa Buckley, Eddie and Nora Higgins, John Connell and Joe Kearney and Donna Kearney.**

6.3.1 The appeal is summarised as follows:

- Environmental Consequences of decommissioning.
- Permission in the absence of specific turbine design details inappropriate.
- Undergrounding of cables may interfere with archaeology.
- Importance of monitoring programme by independent and suitably qualified personnel.
- Interference with radio transmission may be inevitable and might not be possible to counteract.
- Shadow flicker uncertainty.

- Site notice was not in place for the requisite period, was not located as indicated on layout maps, was erected away from the road edge and therefore was not clearly visible to the public. Photographs attached seek to illustrate the issue.
- Application should have been invalidated.
- Application is misleading.

#### 6.4 **Appeal of Pierre Greijmans, Garbally, Birr Co Offaly.**

6.4.1 The third of the third party appeals is submitted by Pierre Greijmans, Garbally, Birr Co Offaly. The appeal is accompanied by a number of enclosures and is summarised as follows:

- Offaly County Council has not completed a proper Environmental Impact Assessment and is in breach of Article 3 of the EIA directive.
- Noise assessment is flawed and not in agreement with the standards in IOA Good Practice Guide on Wind Turbine Noise May 2013.
- Question data given about prevailing wind speeds. The previous application quoted average wind speed of around 5 m/s. After a winter of high speed gusts the average wind speed is supposedly 7.2m /s.
- Wind companies talk of an acceptable average wind speed of 9m /s to make a project viable. Clearly the proposed location is not suitable.
- Analysis of wind data from Gurteen Agricultural College (15miles south of Cloghan) over a 546 day period demonstrated that 40% of the time the turbines cannot operate (below 3m / s or above 24m/s) and for the remaining 60% of the time the turbines would operate at low speeds with average of 6.8m /s.
- In previous appeal first party stated that the project would not be viable if height lowered from 170m to below 150m.

- In relation to background noise levels the first party presents two sets of data for four houses in both applications
- Limited background noise data is provided contrary to good practice.
- Noise prediction levels are underestimated.
- Houses to the north west of the site are a lot higher than receiver height of 4m.
- Concave landscape will result in bounce back of noise from the Cloghan hill. Suggested adjustment 3dB(a)) would bring H23 outside the allowed night time limit of 40 dB(A)La90. H22 and H23 exceed the condition requirements and condition cannot be complied with.
- Evidence from Monaincha windfarm in Co Tipperary (similar concave landscape) demonstrates complexity in noise prediction. The sound spectrum, sound generation, cumulative effects of turbines, wind directions wind speeds gusts, dry / wet, icy day night position barriers high low sensitivity of the hearing. etc.
- Shadow flicker prediction model worst case scenario results indicate that 11 no receptors out of 27 exceed the 30 hours annually. The derated calculation produced different results with 2 receptors experiencing 15.5 and 15 hours of shadow flicker annually. Question why the average sunshine daily hours were taken from period 1971-1994 instead of the more recent period 1979-2008. These figures show a marginally higher average which would affect the outcome of the prediction exercise and possible result in high shadow flicker potential.
- It is inappropriate that developer should monitor shadow flicker and determine if it is an issue.
- Potential strobe effect of red aviation lighting at night time.
- Offaly County Council hasn't taken due account of public participation as stipulated in Aarhus.

**6.5 Appeal of Concerned Residents of Cloghan, CROC. Bernard and Kathleen Kennedy, Stonestown, Peter and Kathleen Devery, Stonestown, Tom and Claire Daly, The Grove, Brendan and Sandra Devery, The Grove, Pascal and Phil Foley, Cloghan Hill, and Jim and Mary Cannon. Newtown.**

6.5.1 The fourth third party appeal is submitted by David Mulcahy, Planning Consultants Ltd on behalf of the Concerned Residents of Cloghan, (referred to as CROC) namely Bernard and Kathleen Kennedy, Stonestown, Cloghan. Co Offaly, Peter and Kathleen Devery, Stonestown, Cloghan, Tom and Clair Daly, The Grove, Cloghan, Brendan and Sandra Devery, The Grove, Pascal and Phil Foley, Cloghan Hill, and Jim and Mary Cannon. Newtown, Cloghan. The appeal statement is accompanied by a number of enclosures including a landscape analysis by Michael Gregan, Landscape Architect and a report by ecologist Niamh Ni Bhroin, Dúlra is Duchas. The grounds of appeal are summarised as follows.

- CROC infuriated with the decision of the Council to grant permission for turbines of this scale in close proximity to established dwellings.
- First party is on record in stating that a reduction in height under 158m will render the wind farm unviable.
- Net difference between this application and previous proposals refused by the Board is immaterial in terms of the overall impact on visual amenity. This was accepted by the applicant in the previous application where it was stated that the difference in visual impact between a 150m and 170m tall turbine is negligible.
- Having regard to the concentration of water based conservation sites with a high number of bird species including protected species in close proximity to the site, it cannot be concluded beyond reasonable scientific doubt that the development will not have an adverse impact on protected species.



- The proposed development will seriously injure the residential amenity and depreciate the value of properties in the vicinity.
- Windtake has not been properly accounted for.
- There are significant tracts of bogland in Co Offaly which are isolated and removed from dwellings or sensitive environmental areas which are more suited to wind farm development. This site unsuitable due to proximity to numerous dwellings, village and national secondary road.
- Proposal materially contravenes Policy EPO3 of the CDP requiring wind energy developments on cutaway bogs to be developed from the centre out and Policy requiring a 2km buffer zone from village cores.
- Remarkable decision of the Council to grant permission on basis that the existing clutter of buildings, overhead electricity lines / poles tree screening will ensure that the 150m high turbines will blend into the landscape.
- Remarkable that there is no view in the EIS of the existing anemometer from the vicinity of H15. EIS only contains two viewpoints along the L7009 namely LC2 and DR3.
- Site would be categorised as a low noise environment. EIS refers to 5 houses being selected for measurement however only 4 measurements are referred to. This is very small sample given the amount of dwellings in the area and spatial extent of the dwellings. Notably no measurements for row of 5 dwellings to the west end of the L700 (H12-H16) despite close proximity to turbines or any dwellings to the north and these turbines being downwind. The methodology is flawed.
- Background noise measurements are strange in that the daytime measurements are quite flat in terms of increasing wind speeds yet the nighttime measurements increase significantly. No explanation is given for this discrepancy.
- Potential pollution risks to aquifer during construction and operational phase.

- Issue of windtake is a substantive planning issue (PL88.239280 and PL01.243364) Applicant has not provided any letters of consent from adjoining property owners in respect of windtake. Proposed development is therefore contrary to the provisions of the wind energy guidelines 2006.
- Landscape analysis by Michael Cregan, Landscape Architect concludes that the methodology adopted for the LVA is complicated and arguably the outcome of such a methodology would result in a dilution of the assessment of impacts.
- Many of the assessments seem to downplay the level of visual impact and landscape effects.
- Reduction in height to 20m will not significantly reduce the level of visual impact on the landscape.
- Aesthetic evaluations in the LVA are disputable and subjective.
- View to Cloghan Hill is protected in the CDP.
- Landscape capacity study is required.
- LVA adopts a highly complicated methodology involving definitions and fine grading of sensitivities and impact levels. The effect of this approach leads to a dilution or confusing of the issues.
- The impacts will be significant and negatively adverse.
- LVA advances a series of aesthetic judgements as a defence of visual ratings. These are difficult to understand and are subjective and cannot therefore be deemed as objective criteria for adjudicating on ratings.
- LVA asserts that the turbines are an addition to an existing productive landscape - and turbines can be readily accommodated with minimal impacts. This view is at variance with findings from a range of agencies including the heritage council. Heritage Council and Scottish Natural Heritage view is that complex issues require landscape capacity studies as the basis for assessment on wind farm development proposals. A landscape capacity study would encourage local participation in the assessment process and would provide an understanding of how local

people perceive and value their surroundings and their sense of place. LVA did not appear to take into account the presence of ‘receptors’ associated with residences in the study area.

- Report by Ecologist Niamh Ni Bhroin, Dúlra is Dúchas comprises a review of the Ecological Report and Natura Impact Statement. Notes that NIS identifies that 12 months of baseline monitoring will be required to “train” the Merlin Avian Radar System, and once in place, the Merlin System will monitor birds in the vicinity for the lifetime of the wind farm. The EIS and NIS could not ascertain with complete certainty that no flight paths for winter migratory wildfowl exist across the proposed development site. The flock of wildfowl observed in 2012 were deemed to be once off crossing across the development site. Residents of Cloghan hill are aware of regular flight paths of birds.
- The ecological report did not elaborate on the potential movement of winter migratory wildfowl between the Natura 2000 conservation sites along the River Shannon and Lough Boora Wetland complex.
- Irish Wetland Birds Survey (I-WEBS) data shows Whooper swan was recorded in all locations surveyed. No direct flight path routes between wetlands in the Cloghan Boora area and the river Shannon callows were identified in the ecological report and no proposed alternative fly routes were discussed to assess the potential barrier effect that may be caused by the wind farm.
- In the absence of November to December baseline data for winter migratory species there is limited knowledge on flight paths crossing the site or adjoining lands given the proximity of Lough Boora wetland complex and the Natura 2000 designated conservation sites along the River Shannon.
- Evidence is provided that bat populations are producing young and surrounding habitat can support maternity roosts.
- The Development Applications Unit of NPWS is submission of 29.9.2014 highlighted the presence of Peregrine Falcon (*Falco peregrines*) and Hen

Harrier (*Circus cyaneus*), Annex 1 species of the Birds Directive at Drinagh wetlands, since the first bird survey undertaken as part of the EIS data in 2011.

- A monitoring programme commenced 19<sup>th</sup> October 2014 by the residents to record the number and species of migratory bird populations within the vicinity of Cloghan Hill and the mapping of bird flight paths. Frequency of sightings increased through November and December when the water table on the adjoining peatlands rises. Details provided in Table 2 and Direction of Migratory Routes mapped on Fig 3.
- Significant conservation works undertaken locally to enhance Biodiversity. Lough Boora Discovery Park reintroduction of the grey partridge. Corncrake chick breeding programme.
- The site is situated between the Lough Boora parklands and the designated Natura 2000 sites of the Little Brosna Callow and the Middle Shannon Callows. The site is potentially located on flight path for winter migratory wildfowl species. Whooper swans and duck species have been observed on all sites surveyed as part of the I-WEBS monitoring programme however the Greenland White Fronted Goose has only been observed on the Little Brosna Callows. With the development of Drinagh wetlands as a wildlife refuge there is an opportunity to increase the habitat for the Greenland White Fronted Goose as more cutover bog is taken out of production.
- The proposed development site has the potential to link the Natura 2000 sites adjoining the River Shannon with Boora Parklands.
- No evidence of an avian radar system in Ireland and some questions remain to be resolved. In light of obligations under Article 6(3) Of Directive 92/43 a plan project may only be authorised in where there remains no reasonable scientific doubts as to the absence of adverse effects on the integrity of the Natura 2000 site. All information should be ascertained in advance of the planning permission.

- Bird Detection Radar Technology should have been employed to inform the application. It is not possible to conclude beyond reasonable scientific doubt that the protected bird species will not be adversely affected.

## **6.6 Appeal of Agnes Doolan, 13 Cluain Raighne, Banagher.**

6.6.1 The fifth third party Appeal is submitted by Peter Crossan, Planning and Research Solutions on behalf of Agnes Doolan, 13 Cluain Raighne, Banagher. The appeal is also accompanied by a report by Dick Bowder Acoustic consultant. Grounds of appeal are summarised as follows:

- Applicant has failed to address previous reasons for refusal.
- EIS contains numerous inaccuracies and discrepancies.
- Application site within a concentration of SACs, SPAs and Lough Boora Parklands.
- NRA submission note that variance with the National Roads Policy.
- Importance of the location in terms of migratory species and national species of conservation concern cannot be downplayed or overlooked.
- Condition 7 cannot provide certainty that harm will not result to protected migratory species or other indigenous species of avi fauna utilising the site. The measure is experimental.
- Development will undermine and detract from the local landscape and enjoyment and amenity of the area.
- During the course of the previous application the applicant argued that a reduction in turbine height would diminish viability and have little variance in terms of visual impact.
- Concerns in respect of micro siting of turbines.
- Proximity to N62. Distraction to road users on national primary road.
- Site is unsuitable for this scale and type of development.

- Appropriate Assessment is inadequate. The magnitude of impacts and the time scale of such impacts must be identified and evaluated.
- Report of Mr Dick Bowdler, Acoustic Consultant concludes that not enough background data is provided. Turbine noise levels are incorrectly calculated and are significantly underestimated at noise sensitive properties.
- Applicant selectively interprets existing noise guidance and provides no verifiable confirmation of existing ambient noise.
- Noise limits within condition 12 cannot be achieved.
- Background noise survey states that five locations were surveyed however only four are reported. These are the same as the previous application and same dates however results differ slightly.
- Graphs show all daytime measurements are almost completely flat when related to wind speed. Noise level does not increase or hardly increases when a wind speed of 4m/s and one of 12m/s. One night time measurements show a rise in noise level between 4m/ s wind speed and 12m/s wind speed of some 20 to 30dB. Data is unreliable.
- Accurate background noise levels are required as they are crucial to the accuracy of the assessment. The whole background noise survey data needs thorough investigation before it can be considered reliable.
- Turbine is a 3.2MW, 103 diameter rotor on 98m hub. According to the noise assessment the sound power level of the turbine at 7m/s and above is 105.6dB. The propagation calculations have used a ground factor of  $G = 0.5$  – mixed hard and soft ground. However no manufacturer’s data has been provided to show details of the noise measurements, in particular to show whether any uncertainty has been included in the quoted levels. Institute of Acoustics Good Practice Guide says that when using  $G = 0.5$  sound power levels should incorporate an allowance for measurement uncertainty. The level of information provided is not adequate to provide a check for uncertainty therefore in accordance with good practice a 2B

uncertainty should be added giving a sound power level of 107,6dB. Calculations on this basis give results which are exactly 3dB more than those in the ES.

- Author of ES has interpreted guidelines loosely as setting a fixed daytime level of 45dB and fixed level of 43dB for night time. Background noise levels are required to determine whether this is a low noise locality to assess whether turbines can meet the limit of 5dB above background noise. Reliance on compliance with a fixed limit is dubious.

## **6.7 Appeal of Bord na Móna**

6.7.1 The sixth third party appeal is submitted by Bord na Móna. The grounds of appeal are summarised as follows:

- No objection in principle to the development of a wind farm on the site. Applications have been lodged by Bord na Móna for electricity grid connections in relation to two adjacent bog complexes Drinagh and Clongawney indicating a clear intention by the company for these specific areas.
- Five of the proposed turbines are located less than two rotor diameter windtake distance from Bord na Móna lands.
- Bord na Móna was not consulted in respect of the proposed turbine location or any impact they might have on the potential for Bord na Móna to develop windfarms on its holding.
- Proposed development prejudices the development of a wind farm on the adjacent Bord na Móna lands.
- Bord na Móna intends to develop wind energy on the adjoining land and wishes to preserve its potential in a fair and equitable manner based on established guidelines.

- Set back of two rotor diameters from property boundaries is in accordance with the 2006 guidelines and is industry best practice.

## **7.0 Observer's Submissions**

7.1 There are a number of observers to the appeal. I have summarised observations as follows:

### **7.2 Pauline Cahillane, Ballingowan, Belmont, Co Offaly.**

7.2.1 Objects to the proposed wind farm on grounds of negative visual impact, noise and other negative effects on residential amenities. Proposal will result in devaluation of property and will have a detrimental impact in wildlife. There is no significant change from the previous proposal refused by the Board.

### **7.3 Joseph Caulfield. Kilcormac**

7.3.1 Submission includes copies of correspondence with Offaly Co Council requesting copies of the Appropriate Assessment in accordance with Article 6 (3) of the Habitats Directive and a copy of the EIS carried out in accordance with Article 3 of the EIA Directive 2011/92/EC. Offaly County Council has failed to provide or understand the need to provide assessments under the legislation. Fake letters were submitted to demonstrate a false sense of support for the project. The community is against the development. Recommend that the Board overturns the decision of Offaly County Council.

### **7.4 Damien Buckley, Stonestown. Cloghan Co Offaly**

7.4.1 Submission also includes a number of enclosures to illustrate the points raised. Objects to the development on grounds of negative visual impact and impact on residential amenity. The historical importance of the site



has been underestimated. It is noted that on the site there is a mushroom stone in the vicinity of T1 which is listed in the publication Mushroom Stones of Ireland. Major historical investigation of the site should be completed. A letter attached from a local historian and ecologist suggest significant negative impact on the tourism potential of the area. The water table in the area sits just 3m to 4 below ground the domestic wells in the area are very shallow meaning any excavations to build roads or turbine bases will send chemicals into water courses which supplies drinking water. The piles required to support 8 of the 9 proposed turbines would have to rapture the 'lack' seal under the peat and would cause water from the bog which is ascetic to mix with the underground water reservoir which supply the local springs causing an ecological disaster. Carbon estimates for the project are vastly understated. Offaly County Council have failed to supply proof of adequate assessment in line with recent high court rulings despite repeated requests. Development will have significant negative impact on local bird and animal life. There was no public consultation by Gaeltech Cloghan Ltd.

## **7.5 Prescribed Bodies.**

### **7.5.1 Irish Aviation Authority.**

7.5.1.1 In the event of permission an agreed scheme of aviation obstacle warning lighting for the turbines to be provided. Co-ordinates and elevation details of the as built turbines to be supplied for charting purposes. IAA to be notified at least 30 days prior to the erection of the development.

### **7.5.2 An Taisce**

7.5.2.1 Site is located in an area of good quality small scale landscape containing a significant density of residential units. The policy to allow development of dispersed rural dwelling is difficult to reconcile with wind energy development and with the requirement for less carbon intensive sources of energy. The windfarm would constitute a dominant and obtrusive feature

in an Area of High Amenity, namely Lough Boora Parklands would interfere with the character of the landscape. In the absence of a national spatial strategy for the location of windfarms and having regard to the possibility to accommodate of windfarms in the extensive cut over peatland areas of the county, it is considered there are more appropriate sites are available for wind turbines in the county. The development would not be in accordance with the overall development objectives of the current County Development Plan which seeks to protect areas of high amenity. The proposed development would therefore be contrary to the proper planning and sustainable development of the area.

### **7.5.3 Department of Arts Heritage and the Gaeltacht submission.**

7.5.3.1 In relation to Archaeology the assessment of visual impacts is inadequate in terms of the visual impact of the development on the Monastic City of Clonmacnoise and its cultural Landscape (National Monument 81 and 601) which is included in the tentative list of world heritage sites for Ireland as a single entry and as part of the Early Medieval Monastic Sites Group.

7.5.3.2 It is noted that V4, a view listed in the CDP 2009-2015 is the view from Road R444 in the townlands of Clonmacnoise and Creevagh to the River Shannon and boglands. According to the “relevance to proposal” site category in EIS Table 11.2 the views from this road are not considered relevant to the proposal – it is recorded that the principal view does not take in the proposed development site. However in relation to the assessment visual impacts of the proposed development site, the VRP is selected at a location on this roadway. As the VRP was selected in proximity to the National Monument (R444 near Clonmacnoise) but not within there has been no analysis of the visual impact from within the monastic complex.

7.5.3.3 According to the Archaeological assessment included in the EIS (as part of Chapter 12 archaeological architectural and cultural heritage) a recommendation is made that photomontage be prepared between the sites of Clonmacnoise and Durrow. Conclusion that the distance and terrain will protect the visual amenity of the National Monuments is not demonstrated. Considering that some of the important monuments within the ecclesiastical complex include structures of considerable height (eg round towers) it is of concern to the Department that the visual impact assessment of views to and from the National Monument is incomplete.

7.5.3.4 Conditions imposed by Offaly Co Council do not include the requirement for archaeological monitoring which is proposed to be carried out under licence. Due to the high potential at the site for material of archaeological significance being identified during construction. It is recommended that all archaeological observation of construction works be carried out as an activity licensed under the National Monuments Acts, (as amended).

7.5.3.5 In relation to nature conservation, the details of condition 7 are noted. The condition places a key importance on the establishment and successful operation of a Merlin SCADA avian radar system in order to protect important bird species associated with the adjacent Drinagh wetlands. The Merlin SCADA avian radar system is crucial in the safe operation of this windfarm. In order to demonstrate the effectiveness of the system in the current setting, it should be installed before the windfarm is constructed and a report on its findings including appropriate mapping should be forwarded to NPWS for review. This will advise the approach taken during the construction of the windfarm. All future bird monitoring reports should be forwarded to NPWS. Habitat enhancement measures for Grey Partridge and also to discourage bird species sensitive to bird strike should be forwarded to NPWS for review and approval.

## **8.0 RESPONSE SUBMISSIONS**

### **8.1 First Party Response to Appeal**

8.1.1 The response by IWCM on behalf of the first party addresses the six third party appeals and is summarised as follows:

- First Party welcomes the notification of decision to grant permission and notes the robust assessment undertaken by Offaly County Council.
- The proposed development will make an important contribution to achieving Ireland's binding commitments as part of 'Europe 2020' targets.
- Development has been designed and sited to the highest standards to ensure that a viable renewable wind energy resource can be produced.
- Any potential environmental or human impacts can be fully monitored and mitigated.
- All issues raised in the context of the third party appeals are fully addressed by way of the conditions and comprehensive mitigation and monitoring measures contained in the EIS and NIS.
- Notably none of the third party appellants objected to the previous application PL19.242354 (which had a greater footprint and larger turbines). The issues now raised are not well founded and cannot be logically justified.
- A considerable amount of public support exists for the proposed development. (169 valid and verified submissions were received by Offaly Co Council Of these 65% expressed support for the project and for wind energy in general.)
- Highlight a fundamental error in the previous Inspector's report relating to the previous appeal which may have contributed to the refusal of the previous appeal. In the inspector's report it was stated that

“It is further submitted that reducing the height of the turbines from the proposed 170m to 150m would result in a 50% reduction in the generating capacity.”

In fact what was stated in the further information response was

“...a reduction from the proposed 170m tip height to 150m tip height would have the same impact as removing 1.25MW of the total generating capacity (i.e. removing 50% of the generating capacity from one of the proposed turbines)...”

- In relation to allegations of deficiencies in EIA by Offaly County Council the applicant is satisfied that the proposed development has undergone a thorough and robust assessment.
- Question validity of noise analysis in third party submissions. The WindPRPO model clearly sets out the parameters of assessment and assumptions made based on detailed baseline data including specific Grid Co-ordinates and elevation of every receptor and each of the proposed turbines.
- It is not scientifically possible to directly compare the proposed development of operational wind farm at Monaincha Co Tipperary, given the wide number of variables.
- Contents of submissions made in relation to suggested amendments to the Guidelines for Wind Energy Development 2006 do not fall for consideration in this appeal.
- The predicted noise from the proposed development falls below the current 43dB(A) limit and the suggested limit of 40dB(A) which still remains under consideration by the Department of Environment, community and local government.
- Wind speed, data from Gurteen Agricultural College, some 15km from the site, is not relevant given that typically met eireann weather stations recorded close to ground level at elevations below 10m which would be significantly lower than those recorded at the applicant’s 80m mast or indeed at the proposed turbine hub height.

- Dismiss claims on viability. Notably Gurteen Agricultural College installed a 50kW wind turbine in 2010 thus indicating that wind speeds of 6.8m/s are a viable energy resource.
- Shadow flicker predictions prepared in relation to the development demonstrate that the levels which will be experienced are considerably lower than the maximum limits which are set out by the Wind Energy Development Guidelines 2006. Critically whilst there are no properties within 500m of the proposed turbines none of the residences surveyed are predicted to exceed these limits. Model used to calculate shadow flicker from the proposed development uses WindPRO Version 2.8.579 software which is internationally recognised as a relevant package for wind farm design and assessment. The shadow flicker analysis presented provides a calculated and scientific method of assessment and the potential impact cannot be based on a general estimation or opinion.
- No evidence of conclusive peer reviewed studies on the strobe or nuisance effect of aviation lighting. Specification of such lights is entirely a matter for the Irish Aviation Authority.
- In relation to concerns about decommissioning, material will be removed and recycled for other uses.
- In relation to turbine specification, EIS and NIS are based on use of 9 no GE 3.2-103 wind turbines and all the relevant technical assessments have considered this turbine model.
- Chapter 12 of the EIS provides a comprehensive assessment of the potential impacts on interests of cultural and historical importance. Greatest impacts identified are minor and temporary.
- Road damage is not expected but in the event that it occurs the applicant willing to accept reasonable conditions to ensure that any deterioration of the road network attributable to the development is adequately and promptly repaired.
- Reasonable steps will be taken to address any radio interference.

- In relation to shadow flicker – predictive model is very accurate and can be relied upon with considerable confidence.
- Application was advertised entirely in accordance with the requirements of the Planning and Development Regulations 2001 as amended.
- Nearest dwelling is located 510m from the nearest turbine and is occupied by a person who is financially involved in the project.
- Acknowledge a number of typographical errors within the EIS. However these issues not critical to the consideration of the appeal.
- Chapter 1, Section 1.6.2 of the EIS notes that in accordance with Part 2(d) of Schedule 6 of the Planning and development Regulations 2001, no significant difficulties were encountered in compiling the information required as part of the EIS.
- Site has been identified by Offaly County Council as a suitable area for wind energy development.
- In relation to impact on Avi fauna, the site and surrounding area has been the subject of extensive ecological survey which has taken place over a number of years. Findings are verified with local wildlife experts including NPWS and Bord na Móna staff.
- Chapter 11 of the EIS sets out a full landscape and visual assessment and concludes that the receiving landscape is in the low order of sensitivity and that the magnitude of the visual impact is in the mid to low range.
- Area is not a low noise locality based on actual background level which were recorded at the site. Average background noise levels recorded at receptors near the site show readings well in excess of 30dB(A). The applicable maximum levels are therefore 45dB(A) during day and 43dB(A) at night time as outlined in the guidelines. The development has been designed to comply with the 40dB(A) limit.
- Micrositing is not proposed due to uncertainty in relation to ground conditions. A detailed geotechnical assessment has already been undertaken at each turbine location and the type of foundation required

identified. It is prudent to make provision for micro-siting for a variety of reasons.

- Comments in relation to potential impacts on drivers using the N62 are not well founded.
- Proposed wind farm will operate in harmony with existing activities in the area including peat harvesting and agriculture.
- Negative impacts on human beings as outlined in Chapter 18 of the EIS are greatly outweighed by the positive impacts such as employment significant reduction in CO<sub>2</sub> emissions and sizable investment in the local economy.
- Disagree that CDP 2014-2020 is appropriate to the case as application was lodged under CDP 2009-2015.
- In reference to Policy EP-03, the proposed development is located within a preferred area for wind energy development and is clearly not at odds with the requirements of policy EP-03. The word “generally” has been included within this policy for a reason and cannot be rigidly applied. In relation to the 2km buffer zone the proposed development is not located within 2km of the village core.
- In relation to visual impact, the first party remains of the view that a reduction of 20m in the proposed tip height would be difficult to perceive, particularly at medium to long range distances. The proposed reduction would be more obvious at close range views and this is an important factor when considering visual impact from Cloghan village and local receptors.
- Critically the overall number of turbines have been reduced but the two turbines which were closest to Cloghan Village have been removed from the proposed layout. The visual impact on Cloghan is greatly reduced as evidenced in photomontage imagery comparing previous application to current proposal.



- Comparison to Mount Lucas and Straboy Co Donegal not appropriate. Each development site possesses unique features, attributes and constraints and should be assessed on its own merits.
- Visual impact Assessment carried out by Mosart Landscape Architects who are eminently qualified to assess the visual impact.
- Landscape and Visual Assessment is conducted primarily to consider the visual impact from public viewpoints and not those from private lands.
- In relation to ecological impact, notably previous decision did not cite ecological concerns as a reason for refusal.
- The impact of wind energy development on property value is a subjective issue and there is little evidence to support the claim that merely the presence of a wind turbine will devalue property in the surrounding area.
- Wind Energy Development Guidelines state “.... a distance of not less than two rotor blades from the adjoining property boundaries will generally be acceptable...” “Where significant commitment has been made to developing a neighbouring wind farm. It is considered best practice to allow a minimum of two rotor diameters distance between the intervening boundary and the proposed turbines,” Use of the word “generally” indicates that the suggested separation distance to adjoining properties should not be rigidly applied and that other site specific factors must be considered.
- IWEA recommendations clearly state that an appropriate set back distance should apply where a significant commitment has been made to developing the adjacent site. No evidence to suggest any firm commitment to wind energy development on adjacent lands. Due to the extent of Bord na Móna lands a sizable wind farm could be accommodated without any impact on turbine performance at either location. It is suggested that the underlying reason for objection by Bord na Móna relates to the potential implications for a future cumulative assessment.

- Note first paragraph of section 5.23 of the Wind Energy Development Guidelines which details that “the question of windtake should be dealt with at scoping stage and / or during pre-application discussions.”
- Separation distances as presented in Bord na Móna submission are not consistent with the map submitted and the map cannot be relied upon
- Current design proposal has been developed over a period of approximately 5 years at considerable cost. Bord na Móna had ample opportunity to voice concerns and to do so at this stage unreasonable.
- All concerns raised in previous appeal PL19.243254 have been fully addressed in the revised proposal.
- Appropriate consultation was conducted by the applicant throughout the preparation of the EIS, NIS and planning application. This consultation considered all relevant stakeholders including local people and statutory bodies.

## **8.2 Response of Offaly County Council to third party appeals.**

8.2.1 The response of Offaly County Council to the third party appeals has been summarised as follows:

- Note that the application was assessed under the previous Offaly County Development Plan 2009-2015.
- An assessment was carried out within the planner’s report which looked at the substantive issues raised in the appeals.
- Planning Authority notes comments of previous Bord Inspector PL2423554 which states “ it may be considered appropriate to reduce the overall hub height of the turbines to minimise the visual impacts”
- Application was referred to the Department of Arts Heritage and the Gaeltacht.

- Appropriate Assessment and Environmental Impact Assessment are enclosed within the planning report.
- Impact on bird and animal life was assessed and mitigation measures conditioned in the grant of permission.
- All third party submissions were considered within the planner's assessment.
- In relation to comments of the Department of Arts Heritage and the Gaeltacht, the conditions of permission can be augmented to take cognisance of their views.
- Offaly County Council respectfully requests the Board to uphold the decision to grant permission.

### **8.3 Submissions in response to cross circulation of observations.**

#### 8.3 Submissions on behalf of Agnes Doolan.

- Supports the appeal by the CROC. Notable that only three of the involved landowners reside in the general vicinity.
- The proposal will have a negative impact on the area, the natural environment will give rise to visual intrusion in the landscape and nuisance to local residents.
- Supports the Department's submission that assessment of visual impact is inadequate for the proposed development in respect of the Monastic City of Clonmacnoise and its cultural landscape. The Clonmacnoise Heritage site is accorded a very high sensitivity rating. The applicants have not proven their contention that this important international site would be screened due to the terrain.
- Condition 7(b) fails to adhere to the requirement for measures intended as crucial to the safety of listed species to be proven before they can be introduced as a mitigation measure.

- Concern arises that measures to be introduced after permission has been granted will not be subject of further consultation. This is not what was intended by the EIA Directive.

#### **8.4 Submission of Pauline Cahillane, Ballingowan, Belmont.**

- 150m high turbines will dominate the skyline.
- Note recent serious failure of wind turbine in Co Tyrone.
- T1 is dangerously close to the N62.
- Concerns in respect of self regulation of construction quality.
- Noise levels monitored at houses 18, 22 and 23 (all landowners) but selectively omitted house 21 who resides the width of the road from house 22.

#### **8.5 Joseph Caulfield.**

- Submission refers to high court judgement in respect of windfarm at Ballingeary, Cork. Judge Michael Peart ruled that the issue of grid connection should have been considered as part of the application in compliance with EU Directive on Environmental Impact Assessment.

#### **8.6 Submission of David Mulcahy, Planning Consultants on behalf of Bernard Kennedy and others.**

- Support Department's assessment that VIA is inadequate with specific reference to the Monastic city of Clonmacnoise in the absence of visual impact assessment from within the complex such as the round tower.
- Numerous defects in the information contained in the EIS.

- Proposal for layout to be informed by Merlin SCADA Avian Radar system is wholly unsatisfactory as it would deprive third parties of input on layout.
- Entirely unacceptable to omit such critical scientific information from the EIS and NIS and then try to deal with it by condition.
- Such an approach has been previously criticised by the European Court. Note judgement of *O Griana v An Bord Pleanála*. Cork Co Council and Framore Limited in which justice Peart ruled that planning permission should not be granted for a windfarm requiring a grid connection unless the grid connection details are provided in the EIA process. This ruling is directly relevant as the grid connection, which is an integral part of the project has been split from the application with no details provided in the EIS.

#### **8.7 First Party Submission in response to the comments of Department of Arts, Heritage and the Gaeltacht.**

- Comprehensive landscape and visual assessment undertaken by Mosart Landscape Architects. DNA Archaeology carried out Archaeological impact assessment.
- V3 and V4 of Offaly County Development Plan not affected by the development.
- Zone of theoretical visibility map clearly shows that no views of the development can be achieved from the monastic complex at Clonmacnoise.
- The EIS recognises the archaeological and cultural importance of Clonmacnoise. While no views of the development may be achieved from Clonmacnoise VRP KR1 was selected for assessment to provide a representative view of the proposed development. Due to the considerable

viewing distance the visual impact at this location is deemed to be of low magnitude and moderate slight significance.

- There will be no impact on views towards the monastic site.
- As stated within section 12.7.2 of the EIS archaeological monitoring under licence is proposed as a mitigation measure during the construction phase.
- Extensive ornithological surveys have confirmed that the proposed development site does not lie on a regular flight path of any bird species of conservation importance. The proposed development site is not within a SPA and is not designated as being nationally or internationally important for birds. The risk of bird collision as a result of the proposed development (without the proposed mitigation measures) is very low and is calculated at 6.3% as demonstrated within Volume II, Appendix B of the EIS.
- As the site is not an important flyaway for birds and the risk of collision is already low, the impact on birds is deemed to be imperceptible (EIS Section 6.6.3.2). In this context, the proposed mitigation measures have been put forward in an attempt to reduce what is already a low risk of bird collision at this location. It is submitted that whilst the MERLIN Radar System will offer an additional element of protection, without the system the impact on birds would not be unacceptable.
- The applicant is willing to accept any reasonable condition put forward in relation to the proposed MERLIN Radar System. The MERLIN system benefits from proven capabilities and is widely used in a number of challenging environments. The MERLIN technology was originally developed by the US Air Force and NASA and is most commonly used to avoid bird strikes at commercial airports and military airfields. The MERLIN wind farm mitigation system has been operational since 2009 and is currently installed at more than 100 wind farm sites worldwide.
- Applicant is pleased to provide any data collected to NPWS and is committed to mitigation and monitoring and has confirmed that these

commitments shall be enacted with the agreement and direction of the relevant statutory authorities.

## **9.0 ASSESSMENT AND RECOMMENDATION**

9.1 Having examined the file, considered the prevailing local and national policies inspected the site and assessed the proposal, the appeal and all submissions, I consider the key issues to be considered in the Board's de novo assessment can be considered under the following broad headings:

- Policy Compliance – Principle of Development
- Impact on the amenities of the area - Shadow Flicker, Noise & Vibration, Electromagnetic radiation and Telecommunications Interference.
- Archaeology, Architectural and Cultural Heritage
- Impacts on drainage, hydrology and hydrogeology
- Roads & Traffic Impact
- Ecological Impact
- Landscape and visual impact
- Windtake
- Other Matters
- Appropriate Assessment.
- Environmental Impact Assessment.

## **9.2 Policy Compliance**

9.2.1 The proposed development is in accordance with national and EU policies which seek to promote the reduction of greenhouse gases and the advancement of renewable energy resources. As noted above, the application was determined by Offaly County Council under the previous

County Development Plan 2009-2015, however the relevant plan for consideration is the Offaly County Development Plan 2014-2020 which was adopted on September 15<sup>th</sup> 2014 and came into force on 13<sup>th</sup> October 2014. I note policies EP-01 and EP-03.

Policy EP-01 is *“to support national and international initiatives for limiting emissions of greenhouse gases and to encourage the development of renewable energy sources.”*

Policy EP-03 *“It is Council policy to encourage the development of wind energy in suitable locations, on cutaway bogs within the wind energy development areas open for consideration identified on Map 3.2, in an environmentally sustainable manner and in accordance with government policy, having particular regard to the Wind Energy Strategy for the County and Section 3.5.1 which states that appropriate buffers should be provided, which shall be a minimum of 2km from Town and Village cores, European designated sites, including Special Areas of Conservation (SAC) and Special Protection Areas (SPA), and national designations, Natural Heritage Areas (NHA). Wind Energy developments on cutaway bogs should generally be developed from the centre out.”*

9.2.2 Map 3.2, Wind Energy Strategy Map, shows that the appeal site is within an area which is open for consideration for wind energy proposals subject to site specific considerations and layout. The wind Energy Strategy Methodology Statement for County Offaly, which accompanies the County Development Plan shows the process by which such areas were selected. Within the analysis the site is within Area No 7 “Area south of Cloghan”. It is stated that *“having regard to low levels of adjacent dwellings, reasonable access to grid, proximity to access and areas of cut-over bog this area is suitable for windarms.”*

9.2.3 I note the requirement for a minimum 2km buffer from town and village cores. The “settlement core” for Cloghan is defined on Cloghan Village



Plan Map contained within the Offaly County Development Plan 2014-2020. The proposed layout achieves the minimum buffer of 2km from the settlement core. As regards designated sites SACs, SPAs and NHAs the minimum buffer is also achieved the closest such site being the Lough Coura pNHA which is located approximately 2.5km to the south.

9.2.4 I note Policy EP03 and the requirement that “*wind energy developments on cutaway bogs should generally be developed from the centre out*”. The precise obligation here is somewhat vague and open to various interpretation. Clearly this could be interpreted as a strategic requirement to have regard to the cumulative development of a number of windfarms, within the areas identified a suitable for wind energy development. This would clearly be a difficult requirement to enforce. Alternatively it could be interpreted to relate to the scheduling of construction or development progress of an individual wind farm development site.

9.2.5 Having regard to policies and objectives of the Offaly County Development Plan 2009-2015 and the identification of cutaway bogs as suitable for wind energy development and the location of the site within an area where such development is open for consideration, I consider that there is no policy objection to the principle of development of a windfarm on the proposed site which is furthermore acceptable having regard to EU, National and Local policy considerations. The policy support is clearly subject to the detailed site specific matters and development specific issues which are considered in detail under the relevant headings below.

### **9.3 Impact on the amenities of the area - Shadow Flicker, Noise & Vibration, Electromagnetic Radiation and Telecommunications Interference.**

9.3.1 As regards shadow flicker, the Wind Energy Development Guidelines (2006) note that the effect known as shadow flicker occurs where the blades of a wind turbine cast a shadow over a window in a nearby house and the rotation of the blades causes the shadow to flick on and off. This effect lasts only for a short period and happens only in certain specific combined circumstances. It is recommended that shadow flicker at neighbouring dwellings within 500m should not exceed 30 hours per year or 30 minutes per day.

9.3.2 At distances greater than 10 rotor diameters from a turbine, the potential for shadow flicker is very low. Turbine diameter in this case will typically be 103m, such that ten rotor diameters would equate to a maximum distance of 1030m. It is outlined within the EIS that there are 27 houses within the 1030m zone of the proposed wind farm. Shadow Flicker assessment is set out in Chapter 14 of the EIS. The possible occurrence of shadow flicker was assessed using WindPRO software. Based on a worst case scenario, eleven dwellings could, in theory, experience shadow flicker durations greater than 30 hours per year. The de-rated calculation for the “expected” scenario predicts that none of the 27 receptors will experience shadow flicker in excess of 30 hours per annum. The highest predictions of shadow flicker relate to H22 (15.4hours) and H23 (15 hours). Both these receptors are financially involved in the proposed development. All remaining dwellings will experience less than 12 hours per year with 24 dwellings experiencing less than 8 hours per year. On this basis it was concluded that the frequency of shadow flicker is very low and unlikely to cause significant nuisance. Mitigation measures are set out in the event that they are required, including provision for sensor to relevant property and shutting down of the relevant turbine to address any nuisance.

9.3.3 As regards noise levels, the wind energy guidelines 2006 state that generally noise at receptors should not exceed 45dBA or represent a maximum increase of 5dBA above the background noise level. The guidelines also provide that in very quiet areas, the use of a margin of 5dB(A) above background noise at nearby noise sensitive properties is not necessary to offer a reasonable degree of protection and may unduly restrict wind energy development which should be recognised as having wider national and global benefits. In low noise environments, where background noise is less than 30dB(A), it is recommended that the daytime level of the LA90 10 min on the wind energy noise be limited to an absolute level within the range of 35-40dB(A). The guidelines recommend that separate limits should apply for day-time and night-time. During the night the protection of external amenity becomes less important and the emphasis should be on preventing sleep disturbance. A fixed limit of 43dB(A) will protect sleep inside properties during the night.

9.3.4 The noise assessment within the submitted EIS Chapter 13, is based on noise modelling using the WindPRO model. Baseline noise data involved survey of 4 houses (closest properties) to the north and west of the site. From this data the relationship between wind speed and noise level was assessed. The sound power level for the wind turbine reaches its highest at 7m/s at 10m height above ground. Noise levels for 27 houses in the vicinity were predicted for this wind speed. Predicted noise levels demonstrate that the noise generated by the proposed development will fall below the 43dBA level for all non-involved properties.

9.3.5 The third party appellants have questioned the reliability of the noise assessment within the EIS based on the limited sample of background noise, in particular noting the failure to survey cluster of dwellings located to the northwest of the appeal site. They further highlight the anomalies between the background noise figures now provided compared to those

provided in the previous application in respect of the same noise survey locations. I have reviewed these discrepancies and observe that the level of deviation is marginal. I note however that no explanation for the anomaly is provided in the first party response to the appeal. The third party appellants further question the validity of the noise analysis and highlight a number of the complexities of noise prediction. The third parties further seek to draw comparison with an operational windfarm at Monahincha, Co Tipperary.

9.3.6 I note that the parameters of assessment and assumptions made in the WindPRO model are set out within the EIS and this is an accepted methodology. I would concur with the first party that a comparison with another site is not practical given the wide numbers of variables. As regards the third party assertions that this location would be a “low noise environment” I note from the baseline results that background noise levels are in excess of 30dB(A) and therefore the site would not be categorised as such. Based on my site visit, it is evident that proximity to the national road, peat harvesting activities and an industrial peat processing plant feature and influence background noise levels. As regards mitigation for operational noise measures, these include post development noise monitoring and warranty agreement with manufacturer to ensure no significant audible tones. Based on the distance to noise sensitive locations, and having regard to the evidence as presented within the EIS, it is considered that noise is unlikely to be a significant problem and could be reasonably mitigated.

9.3.7 As regards electromagnetic radiation and telecommunications interference potential, appropriate mitigation measures are outlined. No negative impact on aviation is predicted subject to compliance with the lighting and notification requirements of the IAA. In the event that interference radio

signals should occur, the developer is committed to providing remedy for the problem in conjunction with RTE Transmission Network Ltd.

9.3.8 On the basis of the information provided within the EIS, I consider that it has been demonstrated that the development is acceptable in terms of impacts on the amenities of the area relating to noise, shadow flicker, and telecommunications. The most significant impact of the proposed development on the residential amenities of the area will be the visual impact. Having regard to the sheer scale of the proposed turbines and the flat open nature of the receiving landscape, the proposed development will create a significant visual intrusion and this effect on residential amenity is not in my view adequately assessed. This is addressed at 9.8 below.

9.3.9 I note that the developer proposes to establish a community fund to provide financial support to local community groups. The operator of the wind farm proposes to place €3,200 per turbine per annum into a community fund. Based on the 9 turbines this would equate to €28,800 per annum. In addition to the community fund, the applicant proposes to contribute €500 per annum to each non financially involved household which is within 10 rotor diameters (1030m) of a proposed turbine. This contribution will be made towards the annual electricity costs for each dwelling and includes a total of 24 no properties. (€12,000 per annum and €300,000 over the operational lifespan of the project)

#### **9.4 Archaeology, Architectural and Cultural Heritage.**

9.4.1 Archaeological , Architectural and Cultural Heritage impact is addressed in Chapter 12 of the EIS. An archaeological study area of 1km was imposed around the proposed development area and an area of 5km assessed for the presence of protected structures or statutorily protected archaeological

architectural or cultural heritage features. There are no RMP sites within the development area and there are no protected structures, proposed protected structures, architectural conservation areas, NIAH sites or NIAH historic gardens or designed landscape within the development area. There is one RMP site RMPOF22-016 Enclosure and an unlocated RMP (OF022-025 Stonestown Castle – unclassified) within the 1km study area. There are no protected structures within 1km while there is one proposed protected structure within the 5km study area. An archaeological geophysical survey carried out on the site revealed increased magnetic responses in the southern part of the site which may be of archaeological significance or may be naturally occurring magnetic variations. Mitigation measures include archaeological monitoring in all areas of the proposed land take with provision for full excavation and recording of any archaeological features or deposits. Written and photographic record will be created in relation to where the access track truncates the townland boundary.

9.4.2 The third party objectors assert that the archaeological significance of the site is underestimated within the EIS. I note that the submission of the Department of Arts Heritage and the Gaeltacht recommends that due to the high potential at the site for material of archaeological significance being identified during construction, archaeological monitoring should be carried out under license under the National Monuments Acts.

9.4.3 I refer to the concerns raised in the submission of the Department of Arts Heritage and the Gaeltacht in respect of the potential impact of the development on Clonmacnoise and its cultural landscape, (National Monument 81 and 601), which is included in the tentative list of world heritage sites for Ireland as a single entry and as part of the Early Medieval Monastic Sites Group. The first party relies on the ZVI maps and indicates that due to terrain screening views of the development cannot be achieved

from the monastic complex. A single VRP KR1 is provided to illustrate the photomontage from the R444 near Clonmacnoise Heritage site. As noted in the submission of the Department as some of the important monuments within the ecclesiastical complex at Clonmacnoise include structures of considerable height and further assessment of visual impact is required. The description of Clonmacnoise within the tentative world heritage list submission refers to the setting of the monastic city of Clonmacnoise within “a superlative semi-natural landscape that deepens its spiritual qualities adding greatly to its authenticity and integrity”. I would refer to Map 7.21 of the Offaly County Development Plan 2013-2020 outlining Clonmacnoise Heritage Zone and relevant policies AHAP-01 in relation to the protection and preservation of the areas of high amenity including Clonmacnoise Heritage Zone. I am not entirely satisfied in terms of the level of information and scrutiny provided. In my view further detailed analysis is required to inform the assessment of the visual impact of the development on Clonmacnoise. This issue is further addressed in relation to landscape and visual impact assessment at 10.9 below.

## **9.5 Impacts on drainage, hydrology and hydrogeology**

9.5.1 Chapter 7 of the submitted EIS deals with soils and geology. It is outlined that the main residual impact will be the permanent removal of soil including some peat and given the size of the development this is considered to have minor significance. No residual impacts in terms of geology are identified. Chapter 8 addresses hydrogeology. No abstractions from groundwater are proposed therefore no impacts on water levels are anticipated. Mitigation measures are set out to eliminate risks posed by direct impacts on groundwater including use of settlement ponds, controlled discharge using floated pump houses and appropriate timing of excavations, restricted material storage, bunded storage and spill

containment measures. Alterations to recharge patterns are not envisaged given the number of turbines. It is anticipated that there will be any residual impacts on groundwater as a result of the construction and operation of the Cloghan Wind Farm.

9.5.2 Hydrology impacts are assessed in Chapter 9. Residual impacts on surface water as a result of the construction and operation of the proposed wind farm are termed negligible. MPA Drainage Report included at appendix 9.1 contains detail on the design of the storm water drainage system which incorporates an attenuation based system on the site involving a series of open drains constructed along the road edge which will convey storm water from the concrete and hardstanding areas of the site to the arterial drains around the site. An Environmental monitoring programme involving tiered monitoring approach is proposed to be put in place during the construction period.

9.5.3 The geotechnical impact assessment of the site is set out in Chapter 10 of the EIS. It is noted that 37 exploratory trial holes to a maximum depth of 5.5m were excavated and details of ground conditions and strata encountered were recorded. Based on analysis it is expected that with the exception of T9 piled foundations will be required to provide a suitable bearing capacity. As regards slope stability having regard to the relatively flat topographic nature of the site the risk of slope instability is insignificant. On the basis of the information provided within the EIS, I consider that the potential impacts on geology, hydrology, hydrogeology and peat stability have been assessed and can be appropriately mitigated.

## **9.6 Roads & Traffic Impact**



9.6.1 Chapter 17 deals with the access impact assessment. A Stage 1 road safety audit and traffic impact assessment was undertaken by Traffic transport and Road Safety Associates Ltd. The proposed access to the site is via an existing entrance off the N62. Improvements are proposed to the entrance to provide for widening, sightline visibility splay and suitable drainage infrastructure. I note the NRA submission to the local authority suggesting that the proposal is at variance with national policy in regard to access to primary roads. I note also that the NRA were one of the two third party appellants in the previous case 19.242354 on the basis that the access would be at variance with the policy to preserve the level of service and carrying capacity of national roads and to protect public investment in such roads. The Board did not include any reason for refusal on roads impact or traffic grounds in the previous appeal.

9.6.2 I note third party concerns in relation to potential for motorist distraction having regard to the proximity of the proposed turbines, particularly T1 and T3 to the public road. I note that the 2006 guidelines state

*“In general, turbines may distract motorists when they are being constructed or when they are new. Over time the turbines become part of the landscape and in general do not cause any significant distraction to motorists. The provision of appropriately sited lay-bys for viewing purposes can help distraction by giving an opportunity to view the wind energy development in safety; lay-by size should be adequate to cater for tour buses. Although wind turbines erected in accordance with standard engineering practice are stable structures, best practice indicates that it is advisable to achieve a safety setback from National and Regional roads and railways at a distance equal to the height of the turbines and blades.”*

The proposed layout achieves the advisory minimum set back the closest turbine being T1 which is approximately 170m from the National Secondary road. Having regard to the flat topography and open nature of the landscape resulting in extensive visibility of the proposed windfarm, I

do not consider that the issue of motorist distraction is a significant issue in this instance.

9.6.3 Having regard to the temporary nature of the construction period, I consider that the traffic impact of the proposed development would be acceptable and could be appropriately mitigated. I accept the first party assertion that the proposed development will have no material impact on the existing capacity of the N62 during construction phase and operational phase impact will be negligible and the proposed development is acceptable from a traffic perspective. On this basis, I consider that traffic and roads issues are not an impediment to the proposed development.

## **9.7 Ecological Impact**

9.7.1 Chapter 6 of the EIS addresses the issue of ecology. Field Survey Work included a botanical survey, habitat survey, mammal surveys, daytime bat habitat surveys and night time activity surveys, breeding bird survey and detailed wintering bird surveys. All watercourses / water bodies which could be affected directly within the site or indirectly (within 500m) were assessed. Aquatic habitat assessments in relation to fish and aquatic ecological interests and reptile and amphibian surveys were also completed. Further surveys included sampling of benthic aquatic macro invertebrates and a butterfly survey.

9.7.2 In relation to the habitat survey it is outlined that in general the habitats on site are of low ecological value due to the level of disturbance and their fragmented nature. There is nothing remarkable botanically on the site and no rare, notable or protected plant species are present. Anthropogenic influence on habitats is significant especially with regard to raised bog habitat with extensive areas of peat being harvested annually over past

decades. Habitats are described in detail and depicted in Table 6.7 and Fig 6.5.

9.7.3 In terms of Fauna, Table 6.8 presents a summary description and evaluation of the fauna recorded or considered likely to occur within the study area and an evaluation of the importance of same. The site was rated as being of insignificant importance to breeding birds. Notably the site is surrounded by a number of areas that are of importance to birds, of primary importance for their wintering bird populations. Shannon Callows is 4.9km to the northwest of the site. Turraun wetlands is 11km to the northeast. Boora Park is located 9km to the east of the site and Ashton's Callow on the Little River Brosna is located 9km to the southwest of the site. The Middle Shannon Callows SPA (004096), All Saints Bog SPA (004103), Dovegrove Callows SPA (004137) and the Little Brosna Callows SPA (004097) are all located within the 5-10km range from the site. The River Suck Callows SPA (004097) is located 13.6km to the northwest. Drinagh, Turraun and Boora Park wetlands are new wetland areas created in the exhausted open cast mine bogs in these areas. One of the newest of these sites at Drinagh which is located 2km east of the site is already of significant importance for wintering birds and it is expected that its importance will increase in the future as the site matures and a decline in milled peat harvesting around the site occurs. It currently has no conservation designations.

9.7.4 Based on the detailed wintering bird survey carried out during the period it was concluded that the proposed development site does not lie on a regular flight path or flyway of any bird species of conservation importance. On one occasion, during an extreme cold spell when many waterbodies in the area had frozen over (early February 2012), a flock of 45 Greenland white fronted geese (endangered species listed on Annex 1 of the EU Birds Directive) were observed travelling from the Drinagh

wetland area and crossing diagonally through the site and crossing the site at rotor blade height 100m. During two surveys in February 2012 no further sighting of Greenland White fronted geese were made. Notably white fronted geese have not been recorded in the Irish Wetland Bird Surveys (I-WeBS) at Drinagh lakes. I-WeBS data further indicates that Greenland white fronted geese are not regularly encountered at the wetland areas of Turraun or Boora. The main site for Greenland White-fronted geese is Little Brosna Callows, located almost 10km to the southwest.

9.7.5 The first party case as set pit within the EIS is that based on surveys it is evident that the crossing of the site by Greenland White fronted Geese was an isolated rather than a regular event, however occasional such events are acknowledged to be likely to occur. It is also clear that other occasional events such as a large flock of Whooper Swans crossing the site at some stage is also possible. Furthermore it is recognised that the pattern of bird movement in the area could change going forward. On this basis mitigation measures will have to include provision for avoiding or significantly reducing collision risk during such events.

9.7.6 As regards potential impacts affecting designated conservation sites, the only cSAC identified as potentially being affected is the River Shannon Callows cSAC a water dependent watercourse downstream of the site. The cSAC is in excess of 8 river kilometres downstream. On the basis of distance it asserted that it would be unlikely to be affected even without mitigation. The Middle Shannon Callows, SPA which has the same area coverage and extent as the River Shannon Callows cSAC lies approximately 5km west of the site and is the only SPA potentially affected by the development.

9.7.7 The development site is partially drained by the Little River (and Silver River) which are tributaries of the River Brosna which eventually flows into the River Shannon. The confluence of the Little River and River Brosna is circa 7km downstream of the site and the River Brosna flows a further 1km to meet the designated Callows of the River Shannon (River Shannon Callows cSAC and Middle Shannon Callows SPA. The distance between the site and the River Shannon via the eastern drains that eventually drain into the Silver River catchment is over 15 river km.

9.7.8 Mitigation measures in terms of fauna impact include best practice pollution control during construction phase, the adoption of statement for protecting rivers and streams on site, surface water management plan, measures to prevent the establishment or spread of invasive species, waste management, replanting mitigation for loss of hedgerow and immature woodland. As regards flora, the implementation of a habitat and species management plan is intended to increase biodiversity at the site. It is proposed that this plan will be designed to favour grey partridge. A surface water management plan will seek to control silt laden water and other pollutants within the site, and works adjacent to or over watercourses will be carried out outside the salmonid / brook lamprey seasons with no instream work during the period October to June. A method statement for works within or affecting watercourses is to be developed in consultation with NPWS and Inland Fisheries Ireland. Monitoring by an independent ecologist during the construction phase and operational phase is proposed.

9.7.9 As regards the potential collision risk to Greenland White Fronted Geese and Whooper Swans both in relation to the turbines and associated transmission cabling, mitigation involves An Avian Monitoring System (e.g. MERLIN Avian Radar System, Accipiter Bird Protection Radar System or equivalent, which would monitor bird flights through the windfarm for the

lifetime of the installation, and would also serve as an anti-collision mechanism on the rare occasion on which flocks of sensitive birds pass through the site. Other mitigation measures include retention of vegetative corridors, in stream works, culverts, installation of bat boxes and replanting. Monitoring programme is to be agreed with NPWS.

9.7.10As regards the residual impacts, it is asserted that the integrity and consideration interest of the River Shannon Callows cSAC and Middle Shannon Callows SPA would not be affected by the proposed development. The overall residual impact on habitats would be slight positive taking account of loss of habitat and improvements and implementation of the Habitat and Species Management Plan. It is asserted that the proposal will bring ecological benefits to the site and also improve the monitoring of regional bird populations.

9.7.11I note third party concerns in relation to Ecological impacts. Concerns are expressed that the proposed development will conflict with future potential to enhance biodiversity within the wider area. It is asserted that baseline data in relation to winter migratory species is limited and that the potential for the site to link the Natura sites adjoining the River Shannon with the Boora Parklands is not appreciated. Third parties indicate that monitoring by local residents demonstrates that the site is affected by regular flight paths for migratory species. It is asserted that the Avian Radar system is an unproven technology. It is suggested that the need for the 12 month monitoring to train the technology, represents an information gap. European Court has stated in a number of judgements that prior assessment is required for EIA and AA and has not accepted any qualification or the deferral of any studies, assessments or mitigating measures.

9.7.12 I note that as outlined by the First Party the proposed MERLIN Radar system has proven capabilities and is used in a variety of challenging environments. MERLIN technology is commonly used to avoid bird strikes at commercial airports and military airfields. The MERLIN wind farm mitigation system has been operational since 2009 and is currently installed at more than 100m wind farm sites worldwide. The first party makes the case based on baseline data that the proposed mitigation measures are proposed to reduce what is already a low risk of bird collision. I note the submission to the Board of the Department of Arts Heritage and the Gaeltacht which outlines that the MERLIN Scada Avian Radar system is crucial to the safe operation of this windfarm. It refers to the need for the system to be installed before the windfarm is constructed to demonstrate the effectiveness of the system “in the current setting”. I conclude that the need to “train the system” is site specific rather than an experiment with new technology. I note Appendix 5 of the NIS which provides detail on the MERLIN Avian Radar System including peer reviewed research of the effectiveness of the Merlin System.

9.7.13 As noted above the Board in its previous decision PL19.242354 did not refuse on basis of the potential ecological impact. I note the detailed assessment of the site and the extensive ecological surveys and consultations. Based on the information submitted, I consider that the proposed development, subject to the detailed mitigation measures as set out, is acceptable in terms of its impact on ecology.

## **9.8 Landscape and visual impact**

9.8.1 The issue of landscape and visual impact is a key issue for consideration in the appeal having regard to the Board’s previous decision in relation to the 10 turbine proposal. The refusal reason was as follows:

***“Having regard to the nature of the receiving environment and the open nature of the immediately adjoining lands and the size and scale of the proposed turbines, it is considered that a wind farm development of the scale proposed would create a significant visual intrusion in this landscape by reason of the height and spatial extent of the proposed turbines which would be excessively dominant and visually obtrusive when viewed from the surrounding countryside and villages. The proposed wind energy development would, therefore, seriously injure the visual amenities of the area, would be contrary to the provisions of the Wind Energy Guidelines for Planning Authorities issued by the Department of Environment, Heritage and Local Government in June, 2006 and would be contrary to the proper planning and sustainable development of the area.”***

9.8.2 Within the EIS, a 20km zone of theoretical visibility radius was applied, to landscape impact assessment. Theoretical visibility, as outlined on the ZTV Maps (Figs 23, 24 and 25) is extensive with over 80% coverage within 15km of the site dropping to approximately 60% between 15-20km. From those locations that have a theoretical view of the proposal there is little differentiation between the numbers of proposed turbines visible. If one turbine is theoretically visible they all tend to be. The assessment of the impact on protected views and prospects is set out at Table 11.2 and designated views are represented by viewshed reference points VRPs. It is outlined that the choice of viewshed reference points take account of scenic amenity routes, local community views, centres of population and major routes and amenity and heritage features.

9.8.3 The EIS notes that the character of the landscape is strongly influenced by human intervention and modification particularly in relation to energy production. It is asserted that one of the key landscape values of the area



is that of productivity and this must be balanced against the ecological and recreational amenity initiatives that have been undertaken to regenerate areas of cutaway bog as part of the Lough Boora Parklands project. It is asserted that whilst the landscape to the east is designated as of high sensitivity, this is more on the basis of aspiration for regeneration rather than on the current contribution to naturalistic landscape character. On this basis the sensitivity of the landscape is classified to be medium. Coupled with an impact magnitude of medium, the significance of landscape impact is deemed moderate.

9.8.4 The assessment of landscape impacts is based on a comparison of landscape sensitivity against the magnitude of effects on the physical landscape and on landscape character. The magnitude of the landscape impact is considered to be medium on the basis that there are not currently any windfarms within the study area and therefore the proposal represents a relatively new and uncharacteristic feature in this landscape context. On the basis of the judgements relating to landscape sensitivity and the magnitude of the landscape impact expected from this proposal, the overall significance of impact on the landscape is deemed to be 'moderate'.

9.8.5 In the analysis of VRPs, the magnitude of visual impact registers as in the range between high, medium and low. Three locations are registered as high due to the prominence of the scheme at close range. As regards mitigation, it is asserted that the proposed wind farm is appropriately designed for this landscape type in terms of the DoEHLG Wind Energy Guidelines 2006. The turbines are commonly seen in pairs or as a line in a legible layout. Whilst turbines are often seen to overlap with each other, due to the double row layout of the scheme, this tends not to involve more than two turbines at a time. As regards cumulative impact there is only one other permitted wind farm within the study area and this is a small 2

turbine Leabeg scheme some 8km to the east of the proposal. Although there is reasonable degree of intervisibility between the schemes there is little sense of wind farm proliferation.

9.8.6 In terms of visual impact significance it is asserted that the vast majority of judgements are in the range moderate to slight. This reflects a balance of the generally low order sensitivity of receptors in close proximity to the site coupled with impact magnitudes that are predominantly in the mid to low range. The highest rating for visual impact significance is DR3, which is along the local Road at Cloghan Hill (scenic view) rated significant moderate. I note VPR LC1 from the village of Cloghan at a distance of 2km from the nearest turbine. The significance of the visual impact is termed moderate slight. The visual impact significance of the three closest VRPs to the site LC1, LC2 and LC3 are rated as moderate – slight. I would take issue with this rating and consider that the extent of the visual impact is underestimated. I note the significant number of dwellings in close proximity to the site and I consider that the failure to assess and represent the potential visual impacts from these properties is a significant omission in terms of the assessment of visual impact. I note also third party comments in relation to landscape capacity studies.

9.8.7 The first party acknowledges, in response to the appeals that the reduction in height of the turbines by 20m has little impact in terms of the visual impact from longer views and asserts that the immediate views from the locality are lessened by the height reduction. I am not satisfied that this is the case. Having completed a comparative analysis between the photomontages of VRPs submitted in respect of the previous proposal and the current proposal I do not consider that there is any significant change. In this regard I do not agree with the conclusions of the landscape impact assessment that visual impact of the proposed wind farm is not significantly detrimental. I consider that the proposed development will

have a significant detrimental landscape and visual impact. I consider that the Board's previous reason for refusal has not been overcome. On this basis I consider that the proposal should be refused on visual amenity grounds.

## **9.9 Windtake.**

9.9.1 The appeal of Bord na Mona raises the issue of windtake. I note section 5.13, of the Wind Guidelines for Planning Authorities on Wind Farm Development and Wind Energy Development 2006 where the issue of 'windtake' is addressed. It is stated that distances between turbines will generally be 3 rotor diameters in the crosswind direction and 7 rotor diameters in the prevailing downwind direction. This section goes on to state- 'Bearing in mind the requirements for optimal performance, a distance of not less than two rotor blades from adjoining property boundaries will generally be acceptable, unless by written agreement of adjoining landowners to a lesser distance. However, where permission for wind energy development has been granted on an adjacent site, the principle of the minimum separation distances between turbines in crosswind and downwind directions indicated above should be respected'.

9.9.2 The Bórd na Móna appeal notes that the proposed layout involves five turbines which do not the requisite distance from the property boundary and therefore the proposed layout will impact on the potential for wind energy development on Bórd na Móna lands. I consider that this is a valid issue and is indicative of the limited size of the site relative to the development proposed and gives rise to questions in terms of site capacity. On the basis of the current layout and in the absence of relevant consents from the proposed development is contrary to the wind energy guidelines and would therefore be contrary to the proper planning

and sustainable development of the area. I note that the issue of windtake was not raised in the previous appeal to the Board.

## **9.10 Other Matters**

9.10.1 In relation to public consultation, I note that the third parties were critical of the failure to carry out public consultation in respect of the proposal. The first party notes that extensive public consultation was previously undertaken in relation to application 12/293 and on this basis repeat public consultation for the development now proposed was not considered to be necessary. Some third parties also questioned the adequacy of public notices. On this issue I cannot verify the circumstances of the site notice retrospectively. Whilst the third parties assert that many members of the local community were unaware of the re-emergence of the wind energy proposal, given the numerous public submissions and the comprehensive and detailed nature of these submissions, the evidence would suggest that the third parties were not prejudiced in any way, were fully informed and involved in the planning process. As regards allegations of fraudulent submissions to demonstrate a false sense of local support for the proposed development, there is insufficient information to be definitive on this issue.

9.10.2 In relation to the issue of wind capacity and viability of the proposed windfarm, I note that during the course of the previous application and in response to the request of Offaly County Council to reduce the overall height of the proposal it was stated that “by locating smaller turbines on the site energy yield would dramatically drop and obtain much lower capacity factors which would be below the threshold of viability for such a development”. It was indeed stated that “a reduction from the proposed 170m tip height to a 150m tip height would have the same impact as

removing 1.25MW of the total generating capacity (i.e. removing 50% of the generating capacity from one of the proposed turbines). It was further outlined that “if the tip height of the proposed turbines were reduced to below 158.3m it is likely that the subsequent reduction in energy yield may make the project non-viable from a commercial perspective”. Having regard to the laws of commerce, I consider that the submission of the current proposal clearly indicates that the proposal is potentially a viable commercial proposal. In any event I consider that the matter of commercial viability is not strictly a planning matter and the parameters of viability may vary over time.

9.10.3 The third parties are also critical of the procedures and assessment process by the Local Authority with particular reference to its obligations in accordance with Habitats Directive 92/43/EEC and EIA Directive 2011/92/EC. I consider that the procedures adopted by the Local Authority in its determination of the application are not matters for the Board.

9.10.4 As regards grid connection it is likely that the proposal will connect to the nearest substation at Lumcloon which is located approximately 5km to the northeast of the site. An indicative route is presented in Appendix 2.1 of Volume 1 of the EIS. I note O’Grianna Judicial Review decision [HC 2014/19 JR] and the judgement that a wind farm and its connection are one project neither being independent of the other and therefore the impacts of grid connection need to be considered as part of the EIA process. In the absence of this information it is not possible to complete the EIA and AA in relation to cumulative impact. Additional information would therefore be required in this regard.

## 9.11 Appropriate Assessment

9.11.1 The obligation to undertake appropriate assessment derives from Article 6(3) and 6(4) of the Habitats Directive. Essentially it involves a case by case examination for Natura 2000 site and its conservation objectives. Appropriate Assessment involves consideration of whether the plan or project alone or in combination with other projects or plans will adversely affect the integrity of a European site in view of the site's conservation objectives and includes consideration of any mitigation measures to avoid reduce or offset negative effects. This determination must be carried out before a decision is made or consent given for the proposed plan or project. Consent can only be given after having determined that the proposed development would not adversely affect the integrity of a European Site in view of its conservation objectives.

9.11.2 Guidance on appropriate assessment is set out in the European Commission's '*Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*' (European Commission 2002) and in the Department of the Environment's '*Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*', (December 2009, revised February 2010).

9.11.3 The Natura Impact Statement, dated July 2014 is prepared by Ecofact, Environmental Consultants. The report notes that the site is not within a designated nature conservations sites however there are eighteen Natura 2000 sites within 15km of the study area; six SPAs and twelve SACs namely:

- River Shannon Callows cSAC (00216) 4.9km west.
- Middle Shannon Callows SPA (004096) 4.9km west.
- Moyclare Bog cSAC (00581) 6.8km north.

- All Saints Bog SPA (004103) 8km southwest.
- All Saints Bog and Esker cSAC (00566) 8km southwest.
- Ridge Road, SW Rapemills cSAC (000919) 9km southwest.
- Dovegrove Callows SPA (004137) 9km southwest.
- Ferbane Bog cSAC (00575) 9.4km north.
- Little Brosna Callow SPA (004086) 10km southwest.
- River Suck Callows SPA (004097) 13.5 km northwest.
- Fin Lough (Offaly) cSAC (000576) 13.5km northwest.
- Redwood Bog cSAC (002353) 13.4km southwest.
- Ballyduff Clonfinane Bog cSAC (000641) 14.3km southwest.
- Mongan Bog cSAC (000580) 14.5 km northwest.
- Mongan Bog SPA (004017) 14.5km northwest.
- Pligrim's Road Esker cSAC (001776) 15km northwest.
- Lisduff Fen cSAC (002147) 15km south.
- Island Fen cSAC (002236) 15km south.

9.11.4 In relation eleven of the cSAC sites namely Moyclare Bog cSAC, All Saints Bog and Esker cSAC, Ridge Road, SW Rapemills cSAC, Ferbane Bog cSAC, Fin Lough Lough (Offaly) cSAC, Redwood Bog cSAC, Ballyduff / Clonfinane Bog cSAC, Mongan Bog cSAC, Pligrim's Road Esker cSAC, Lisduff Fen cSAC and Island Fen cSAC on the basis of the distance involved and the absence of hydrological / ecological pathways for impacts the screening assessment identifies no potential impacts affecting the relevant qualifying interests.

9.11.5 The Natura Sites identified as being potentially indirectly affected by the proposed development are as follows:

- River Shannon Callows cSAC (000216)
- Middle Shannon Callows SPA (0004096)
- All Saints Bog SPA (004103)

- Dovegrove Callows (SPA (004137))
- Little Brosna Callows SPA (004086)
- River Suck Callows SPA (004097)
- Mongan Bog SPA (004017)

## Characteristics of Sites and Predicted Impacts

9.11.6 The **River Shannon Callows cSAC** is 4.9km to the west of the site. Its qualifying interests include

- Otter (*Lutra lutra*) [1355]
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410]
- Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*) [6510]
- Limestone pavements [8240]
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0]

9.11.7 In terms of potential for impacts the proposed development is within the surface water catchment of the Little River a tributary of the River Brosna and will require development work adjacent to and crossing this watercourse. There is therefore connectivity to the River Shannon Callows cSAC and potential for indirect water quality impacts. The First Party submits that due to the small size of the Little River with regard to the River Brosna and River Shannon, dilution factors within the cSAC and the limited potential for water quality impacts arising within the site that could affect otter within the River Shannon channel, it is evaluated that the potential for impacts adversely affecting the species would not be likely or significant.



9.11.8 As regards the Annex 1 habitats of the River Shannon Callows SAC, it is noted that the development will not affect flooding / flow regime of the River Shannon corridor therefore there is no potential for significant adverse effect on the habitats dependent on the hydrological regime of the River Shannon corridor. Limestone Pavement is a terrestrial habitat, and is not connected via hydrological or ecological pathways therefore there is no potential for adverse impact.

9.11.9 The **Middle Shannon Callows SPA** (004096) is 4.9km west of the site.

Its qualifying interests are as follows:

- Whooper Swan (*Cygnus cygnus*) [A038]
- Wigeon (*Anas penelope*) [A050]
- Corncrake (*Crex crex*) [A122]
- Golden Plover (*Pluvialis apricaria*) [A140]
- Lapwing (*Vanellus vanellus*) [A142]
- Black-tailed Godwit (*Limosa limosa*) [A156]
- Black-headed Gull (*Chroicocephalus ridibundus*) [A179]
- Wetlands & Waterbirds [A999]

9.11.10 The Middle Shannon Callows qualifies as a site of International Importance for wintering wildfowl both on the total numbers regularly exceeding 20,000 birds and for the Whooper Swan population. Small numbers of Greenland White-fronted goose (listed on Annex 1 of the EU Birds Directive) use the Shannon Callows and these are generally associated with larger flocks which occur on the adjacent Little Brosna Callows and River Suck Callows. In summer the site supports importance populations of breeding waders. The Shannon Callows continues to hold approximately 40% of the Irish population of corncrake, a species of global conservation concern that is also listed on Annex I of the EU Birds Directive.

9.11.11 The proposed development gives rise to the potential for collision with regard to migratory bird species associated with this internationally important site which would have an indirect impact on the SPA, particularly with regard to Whooper Swan. Both migratory flight routes and local flight paths to associated wetland sites during the wintering season may potentially be disrupted by the proposed development. There is also potential for indirect effect arise in terms of collision disturbance and barrier impacts.

9.11.12 The **All Saints Bog SPA (004103)** is located 8km to the southwest of the site. The site is designated for its function in providing available habitat for Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]. The proposed development gives rise to potential for collisions with regard to migratory bird species associated with this internationally important site. Both migratory flight routes and local flight paths to associated wetland sites during the wintering season may potentially be disrupted by the proposed development. The potential for indirect effect arises in terms of collision disturbance and barrier impacts.

9.11.13 The **Dovegrove Callows SPA** is 9km to the southwest of the appeal site. The site is designated for its function in providing available habitat for Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]. The proposed development gives rise to potential for collisions with regard to migratory bird species associated with this internationally important site. Both migratory flight routes and local flight paths to associated wetland sites during the wintering season may potentially be disrupted by the proposed development. The potential for indirect effect arises in terms of collision disturbance and barrier impacts.

9.11.14 The **Little Brosna Callows SPA** is located 10km southwest of the appeal site. The qualifying features of Interest are

Whooper Swan (*Cygnus cygnus*) [A038]

Wigeon (*Anas penelope*) [A050]

Teal (*Anas crecca*) [A052]

Pintail (*Anas acuta*) [A054]

Shoveler (*Anas clypeata*) [A056]

Golden Plover (*Pluvialis apricaria*) [A140]

Lapwing (*Vanellus vanellus*) [A142]

Black-tailed Godwit (*Limosa limosa*) [A156]

Black-headed Gull (*Chroicocephalus ridibundus*) [A179]

Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]

Wetlands & Waterbirds [A999]

**9.11.15** The site is designated for both the wintering and breeding bird populations it supports. The proposed development gives rise to potential for collisions with regard to migratory bird species associated with this internationally important site particularly with regard to populations of Whooper Swan and Greenland White Fronted Geese. Both migratory flight routes and local flight paths to associated wetland sites during the wintering season may potentially be disrupted by the proposed development. The potential for indirect effect in terms of collision disturbance and barrier impacts.

**9.11.16 The River Suck Callows SPA (004097)** is located 13.5km northwest of the appeal site. The site is designated for the bird populations:

Whooper Swan (*Cygnus cygnus*) [A038]

Wigeon (*Anas penelope*) [A050]

Golden Plover (*Pluvialis apricaria*) [A140]

Lapwing (*Vanellus vanellus*) [A142]

Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]

## Wetlands & Waterbirds [A999]

9.11.17 The proposed development gives rise to potential for collisions with regard to migratory bird species associated with this internationally important site particularly with regard to populations of Whooper Swan and Greenland White Fronted Goose. Both migratory flight routes and local flight paths to associated wetland sites during the wintering season may potentially be disrupted by the proposed development. The potential for indirect effect arises in terms of collision disturbance and barrier impacts.

9.11.18 The **Mongan Bog SPA** is located approximately 14.5km northwest of the appeal site. The site is designated for the Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]. The proposed development gives rise to potential for collision risks affecting migratory bird populations of Greenland white fronted geese.

### Significance of Impacts

9.11.19 As regards cumulative impacts affecting Natura 2000 sites a number of considerations are relevant. Cumulative impacts on wintering and breeding birds arise in terms of barrier effect, displacement and collision. It is noted that past arterial drainage and land improvement has reduced the area of naturally flooded grassland in the River Suck Callows SPA and this remains the main threat to the site. Agricultural Intensification is noted as the cause for the decline and eventual absence of breeding Corncrake.

9.11.20 Within the submitted NIS the screening assessment concludes that the proposed development is not likely to give rise to significant adverse effects on the hydrology or water quality regime of the River Shannon with regard to the wetland habitats it supports designated as a special conservation interest of the Middle Shannon Callows SPA. There are no

potential impact affecting wetland habitats listed as special conservation interests in the All Saints Bog SPA, The Dovegrove Callows SPA, the Little Brosna Callows SPA and the River Suck Callows SPA or the Mongan Bog SPA. The main issue arising relates to the implications of the proposed development on migrating birds, particularly Whooper Swan and Greenland White Fronted Goose, where the potential exists for collisions when wintering birds are migrating in conditions of poor visibility / low light. The proposed development is therefore assessed as having the potential for indirect impact on migratory birds listed as of special consideration interests within these Natura 2000 SPA sites. These impacts include bird collision with turbines and disturbance / displacement.

9.11.21 As regards the Whooper Swan (*Cygnus Cygnus*), which are listed under Annex 1 of the EU Birds Directive (EU 79/409/EEC) the threat to movement between feeding and roosting areas is addressed. The threat arises not only from direct collisions with turbine rotors but also from associated installations including powerlines. (Notably whooper swans are prone to collisions with thin horizontal objects ahead of them such as telephone and power lines) trees and wind turbines during their typical low-altitude flights between roosting and foraging sites. There is also the potential for barrier effect, where bird species have been observed to alter their migration route to avoid wind turbines.

9.11.22 As regards the Greenland White Fronted Goose (*Anser albifrons flavirostris*) listed on Annex I of the Birds Directive, identified threats include inappropriately located wind energy developments giving rise to collision risk. The increasing number of wind farms pose a threat to moving between feeding and roosting areas. Notably the threat is not solely from direct collisions with turbine rotors but also from associated installations. As regards Golden Plover (*Pluvialis apricaria*) Annex 1

species there is evidence of avoidance of turbines and species potentially at risk from collisions.

9.11.23 The First Party case asserts that based on bird monitoring, the site is not part of an important flight path of these species. Whooper swans were never recorded flying over the development site; in 86 hours of vantage point watching and no whooper swans were seen to be foraging on the site. As regards Greenland White Fronted Goose only a single flock (n=45) was recorded during vantage point surveys 2012 at the proposed site and this was considered a once off and unusual event. No Greenland white fronted geese were recorded during the 2014 survey and the species are not regularly seen in the vicinity and have never been recorded in I-WeBS counts for Drinagh. The precautionary collision risk Model, (Table 9) outlines that taking a worst case scenario and assuming 10 passes of a flock of 45 per annum (10 times the observed number) the collision rate would equate to one collision with a turbine every 6.1 years. There are circumstances where the barrier effect might lead indirectly to population level impacts. Cumulative interaction of wind farms could create an extensive barrier.

9.11.24 As regards Golden Plover it is suggested that the main negative effects of wind farms may be through disturbance displacement during construction. It is asserted that based on the distances involved and abundance of suitable habitat for the species, construction phase disturbance is not evaluated as being a likely significant impact affecting Golden Plover populations within SPA designations.

### **Mitigation**

9.11.25 Mitigation measures for the protection of water quality include the preparation of a detailed Environmental Management System inclusive of

a construction method statement for works, bunded storage of hydrocarbons, oil interceptor, and implementation of best construction practices and procedures and a waste management plan. Mitigation measures for the reduction and avoidance of impacts affecting designated SPA sites include appropriate seasonality of works whereby turbines will be erected over the summer period and will be in place when birds arrive on their wintering grounds in October. A Site Environmental Management Plan will seek to avoid preventable impact on the ornithological resource.

10.11.26 The NIS notes that bird survey data indicates that the location of the proposed development avoids any of the known feeding and roosting sites of Greenland White Fronted Geese and Whooper Swan and does not intersect any of the obvious flight paths between regular feeding and roosting sites designated as SPA sites within the Natura 2000 network. However as the movement of Whooper Swan and Greenland White-fronted Geese between waterbodies and the potential for collision are identified as key concerns an MERLIN Avian Radar Monitoring System is proposed as a precautionary measure. This will monitor bird flights through the wind farm for the lifetime of the installation and will also serve as an anti-collision mechanism on the rare occasion on which potential collision events may arise. As noted in the NIS (page 79) a further 12 months baseline monitoring will be required to train the system, and once in place, the system will monitor birds in the vicinity of the windfarm for the lifetime of the windfarm. During the training in period the efficacy of the Avian Monitoring system to shut down in response to avifauna entering the site will be examined in detail regarding likely impacts. In the event that the monitoring of the Avian Monitoring System indicates a failure in the system to respond to the requirements of the receiving environment or in the event that bird mortalities are identified as being significant, the wind farm development will cease operation until a satisfactory alternative is found and implemented with the agreement of the NPWS and relevant

statutory authorities. The Avian Monitoring System will provide collision protection during operation and will also provide invaluable research data as to the ways in which these and other bird species interact with wind turbines. It is asserted that this mitigation measure represents a unique opportunity to use this technology in a relatively low risk environment in which, on rare occasions, migratory birds may pass through the turbine field.

### **Appropriate Assessment Conclusion.**

**9.11.27**The NIS concludes that the proposed wind farm development, in addition to the implementation of the prescribed mitigation measures, would not give rise to significant impacts affecting the integrity of any designated site within the Natura 2000 network. In terms of cumulative impact it is noted that the NPWS Site Synopsis for the SPA sites within the study area indicated that the main threat the special conservation interests of these sites is the degradation of the wetland habitats as a result of drainage and current farming practices. Non native invasive species introduction is also identified as a significant threat to biodiversity. The cumulative impact of windfarms and powerline risk of electrocution, collision and reduction in availability for birds of staging and wintering areas are also discussed.

9.11.28 Having considered the submitted report, I am satisfied that the methodology used in the NIS report is clearly explained and information sources set out. Having regard to the mitigation measures proposed including the habitat and species management plan, implementation of the Avian monitoring system, construction and environmental management plan and surface water management plan significant detail is provided in relation the effect on the integrity and conservation status of any Natura 2000 sites. I consider that the conclusions that the proposed development of the windfarm will not adversely impact on the qualifying interests of the



River Shannon Callows cSAC, Middle Shannon Callows SPA, All Saints Bog SPA, Dovegrove Callows SPA, Little Brosna Callows SPA, River Suck Callows SPA and Mongan Bog SPA with regard to the range, population densities or conservation status of the habitats and species for which these sites are designated is reasonably supported.

9.11.29 I note O’Grianna and Others v An Bord Pleanála, Judicial Review decision [HC 2014/19 JR] which clarified that a wind farm and its connection are one project, neither being independent of the other and therefore the impacts of grid connection need to be considered as part of the EIA and AA process. In the absence of information in relation to grid connection and particularly having regard to the identified threat of powerlines in relation to collision risk to the Greenland White Fronted Goose and Whooper Swan, I consider that the proposal would constitute project splitting and the level of information provided is not adequate to allow the Board as competent authority to assess the impact of the proposed development on the integrity of the adjacent Natura 2000 sites. It is not possible to complete the Appropriate Assessment in relation to cumulative impact. Additional information would therefore be required in this regard to determine whether the proposed development will have adverse effect on the adjacent Natura 2000 sites in the light of their conservation objectives.

## **9.12 Environmental Impact Assessment**

9.12.1 On the matter of the Environmental Impact Assessment, I note that that the proposal involves the erection of 9 turbines, each with a rated capacity of approximately 3.2 megawatts MW with a total output of 28.8MW. The relevant threshold in terms of the prescribed development for the purposes of part 10 provides that EIA is required for “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”, as set out in Category 3(i) of Part 2 Schedule 5 – Development for the purposes of Part 10 (Environmental Impact Assessment) of The Planning and Development Regulations 2001, as amended. An EIS is therefore mandatory for the proposed development. The Environmental Impact Statement submitted is dated August 2013 and is in four volumes in the grouped format structure. Volume I contains the Main Document. Volume II contains the appendices. Volume III contains the photomontages and Volume IV the Non Technical Summary. I consider that the EIS provides a significant level of detail and scientific evidence.

#### **9.12.2 Compliance with Requirements of Articles 94 & 111 of the Planning and Development Regulations 2001 (as amended)**

I consider that the proposed development, in overall terms, is in compliance with Articles 94 and 111 of the Planning and Development Regulations, 2001, as amended. To this extent I would observe that- The EIS contains the information specified in paragraph 1 of Schedule 6 of the Regulations. The EIS-

- Describes the proposal, including the site and the development’s design and size;
- Describes the measures envisaged to avoid, reduce and, if possible, remedy significant adverse effects;
- Provides the data necessary to identify and assess the main effects the project is likely to have on the environment;
- Outlines the main alternatives studied and the main reasons for the choice of site and development, taking into account the effects on the environment.

- The EIS contains the relevant information specified in paragraph 2 of Schedule 6 of the Regulations. This includes-
- A description of the physical characteristics of the project and its land use requirements;
- The main characteristics of the wind energy process to be pursued;
- The emissions arising;
- A description of the aspects of the environment likely to be significantly affected by the proposal;
- A description of the likely significant effects on the environment resulting from the development's existence, the development's use of natural resources, the emission of pollutants and creation of nuisances, and
- a description of the forecasting methods used; and
- There is an adequate summary of the EIS in non-technical language.
- A summary indication of any difficulties (technical deficiencies or lack of know-how) encountered by the developer in compiling the required information.

9.12.3 The main likely effects can be identified under the range of headings as follows:

**Human Beings**

- Employment and economic impact at the construction stage and operational phase
- Health and Safety impacts during construction.
- Shadow flicker.
- Visual impact
- Traffic

**Noise and Vibration**

- Noise & other disturbance to residents.

**Ecology - Flora & Fauna**

- Effects on SPA, SAC pNHA

- Impacts on on-site habitats.
- Species impact.
- Avifauna disturbance.

### **Aquatic Ecology**

- Undermining water quality in streams during construction phase.
- Affecting important habitats downstream of the site.
- Fisheries.

### **Soils, Geology and Hydrogeology**

- Removal of soil
- Increased potential for soil erosion / compaction
- Peat stability.
- Impact on natural drainage patterns

### **Hydrology and Water Quality.**

- Sediment release
- Surface water runoff
- Water quality

### **Landscape and Visual Impact**

- Scale, height and extent of visibility.
- Impact on landscape character.
- Impact on important views.
- Cumulative impact with other permitted wind farms.

### **Cultural Heritage**

- Effects on archaeology.
- Impact on structures of heritage significance.

### **Air Quality and Climate,**

- Dust
- Climate Change.

### **Material Assets**

- Tourism and amenity.
- Impact on local road network.
- Electromagnetic radiation

- Shadow cast shadow flicker
- Interference with telecommunications.
- Impact on land use

#### **9.12.4 Interactions Matrix Table 19.2.1.**

- Humans and noise, shadow flicker, landscape and visual, infrastructure and telecommunications, traffic impact,
- Landscape and Visual Impact. Tourism, Archaeology.
- Flora and Fauna, soils and water
- Archaeology Soils and Water, access.

9.12.5 As regards **alternatives**, consideration is given to alternative sites, alternative designs and layouts, alternative land use, alternative turbine.

#### **9.12.6 Assessment of the Likely Significant Effects Identified having Regard to the Mitigation Measures Proposed**

The assessment preceding this section of the report under the relevant headings fully considers the range of relevant likely significant effects with due regard given to the mitigation measures proposed to be applied if the to address the range of potential significant impacts arising from the proposed development.

#### **9.12.7 Conclusions Regarding the Acceptability or Otherwise of the Likely Residual Effects Identified**

The conclusions regarding the acceptability of the likely main residual effects of this proposal are clearly addressed under the various headings of the main assessment. The principal areas of concern focus on visual and landscape impact, and impact on ecology.

**9.12.8** I note O’Grianna and Others v An Bord Pleanála, Judicial Review decision [HC 2014/19 JR] which clarified that a wind farm and its connection are one project, neither being independent of the other and therefore the impacts of grid connection need to be considered as part of the EIA. In the absence of information in relation to grid connection and particularly having regard to the identified threat of powerlines in relation to collision risk to the Greenland White Fronted Goose and Whooper Swan, I consider that the proposal would constitute project splitting and the level of information provided is not adequate for the proper assessment of the overall development.

## **10.0 CONCLUSION & RECOMMENDATION**

10.1 The site is within an area which in the context of the development plan is open to consideration for wind development subject to normal planning criteria. Having considered the contents of the application, the decision of the planning authority, the provisions of the development plan, national policy as set out in the Windfarm Development Guidelines issued by the Department of Environment Heritage and Local Government, the grounds of appeal and third party submissions, my site visit and assessment of the planning issues, the planning history on the site, in particular decision of the Board in respect of PL19.242354, I conclude that subject to the stated mitigation the proposed development would not seriously injure the amenities of the area or of property in the vicinity in terms of noise and shadow flicker impact and would be acceptable in terms of traffic impact. However having regard to the open nature of the site, proximity to numerous dwellings and to the scale design and layout of the development, I consider that the proposal would create a significant visual

intrusion in this landscape and would be excessively dominant and visually obtrusive. Having regard to the submitted layout the proposed development would Accordingly, I recommend refusal.

## **REASONS**

1. Having regard to the nature of the receiving environment and the open nature of the immediately adjoining lands and the size and scale of the proposed turbines, it is considered that a wind farm development of the scale proposed would create a significant visual intrusion in this landscape by reason of the height and spatial extent of the proposed turbines which would be excessively dominant and visually obtrusive when viewed from the surrounding countryside and villages. The proposed wind energy development would, therefore, seriously injure the visual amenities of the area, would be contrary to the provisions of the Wind Energy Guidelines for Planning Authorities issued by the Department of Environment, Heritage and Local Government in June, 2006 and would be contrary to the proper planning and sustainable development of the area.
2. The proposed development by reason of its layout is contrary to section 5.13 of the Wind Energy Guidelines for Planning Authorities issued by the Department of Environment, Heritage and Local Government in June 2006, regarding wind take due to the location of a number of turbines being below the recommended distances from third party boundaries. The proposal would therefore be contrary to the proper planning and sustainable development of the area.

3. On the basis of the information lodged with the application including the Natura Impact Statement and Environmental Impact Statement, and having regard to the ruling *O Grianna and Others v An Bord Pleanála*, Judicial Review decision [HC 2014/19 JR], as the proposed development does not include as part of the application a proposed connection to the national grid, the proposal would constitute project splitting and the Environmental Impact Statement and Natura Impact Statement lodged with the application are inadequate. On this basis an Environmental Impact Assessment and Appropriate Assessment cannot be undertaken. The proposed development would therefore be contrary to the proper planning and sustainable development of the area.

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**Bríd Maxwell,**  
**Inspectorate**  
**February 2015**