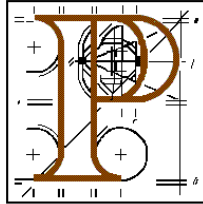


An Bord Pleanála



INSPECTORS REPORT

Proposed Development: 10 year permission for a wind farm – 11 turbines, mast, 110kV substation, new entrance, roads and site works at Cnoc Raithni (Knockranny), Co. Galway.

Planning Application

Planning Authority:	Galway County Council
Planning Authority Reg. Ref.:	13/829
Applicant:	Western Power Developments Ltd.
Type of application:	Permission
Planning Authority Decision:	Grant

Planning Appeal

Appellants:	Martin Walsh, An Taisce, Irish Peatland Conservation Council, Aine Ni Fhogartaigh & Michael O'Raghallaigh, Stiofan O'Cualain & Maire Ni Raghallaigh on behalf of Oldtown/Knockranny Residents for
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Environmental Conservation and
Development Consultation.

Observers: Forbairt Pobail Mhaigh Cuilinn Teoranta, Eamon Kelly, Tomas O'Raghallaigh, Mary Clancy, John Rushe & Annette Collins, Roswell & Susan Stanley, John & Noirin Foden & Others, Carra Mask Corrib Water Protection Group Ltd, Peadar Mac Fhlannchadha, Treasa Bn Ui Raghallagh & Martin O'Raghallaigh, Kevin & Patricia Fitzpatrick, Kevin & Veronica Verney, Sean Hester, Dr Padraig O'Cathain, Fergus Packman, Tomas O'Cainte & Pearl Hynes,

Type of appeal: Third

Date of Site Inspection: 24th September 2014

Inspector: Una Crosse

1.0 SITE LOCATION AND DESCRIPTION

The site of the subject appeal is located approximately 4.5 kilometres north-west of the settlement of Moycullen and c.2.5 kilometres west of the N59 (Galway – Clifden) National Secondary Road. The site can be accessed by a narrow county road from the N59, but a second roadway is also available to the north and west (Letter) which primarily serves large coniferous plantations, bogland and some farmland. While there are very few houses in the vicinity of the application site there are numerous houses located close to N59 junctions from both roads to which access to the site is achievable. The area in the vicinity of the site is a remote upland area interspersed with hills with rough grazing generally to the east, expanses of forestry, and turf cutting on extensive areas of bogland. To the north there are hills reaching 209mOD and 227mOD whilst to the north-west Knocknalee Hill reaches 291mOD. To the south-east Newtown Hill is 198mOD whilst to the south-west Tullaghannoon reaches 169mOD. The hilly terrain slopes down and drains to a network of watercourses on the lower lying land. It is stated that the nearest house or sensitive receptor is located approximately 1.1km from the nearest turbine. There are a large number of existing, extant and proposed wind farms located within c. 10 km of the site located on a mix of bogland (mix of cutover and bog/heath habitat) and within commercial forestry plantations.

The overall site area is in one ownership and is stated to be 313 hectares whilst the area of the site to which the application relates is stated to be 69 hectares. This is a hilly open terrain varying from 90-183mOD with two distinct peaks of which the western one is 134mOD and the eastern 183mOD. The site itself consists mostly of peat, generally lowland blanket bog. There are two coniferous plantations totalling 33 hectares within the landholding located to the west and south with some broadleaf planting to the east. The blanket bog has been cut-over in parts with some parts of the site improved but much of the area showing exposed bedrock with large boulders prevalent within the fields. The Abhainn na nArd-doiriu river flows to the west of the site in a north south direction with two streams draining the site to the north, Sruthan Chnocan Raithni, and to the south, an Sruthan Bui.

2.0 PROPOSED DEVELOPMENT

2.1 DEVELOPMENT AS SUBMITTED

The proposed development as originally submitted comprises the following:

- Excavation and construction of 11 turbine foundation bases of 15.5m x 15.5m with a base of 4.5m in thickness and hardstands of approximately 878m²;
- Erection of 11 no. wind turbines with a maximum base to blade-tip height of 140.5m;
- Expected total installed capacity of a maximum of 33MW;
- Erection of a permanent meteorological mast up to 90m in height with a base of 4x4x1.5m in the southwest of the site to the southwest of T7;
- Upgrading of 0.9km of existing track to 5 metres width;

- Construction of 4.1km of new track to 5 metres in width;
- Construction of a clear span bridge over the Abhainn na nArd Doiriú in the west of the site;
- A surface water drainage system and associated water quality management measures requiring the installation of settlement ponds along road sides;
- Installation of an underground electrical cable to link the wind turbines to the substations with fibre optic cables using the same trench;
- Construction of a 110kV substation located between T14 and T9 to cover an area of 2,771m² including parking area and switchyard with the compound contained within a 2.6m galvanised steel high palisade fence;
- Permanent felling of c. 15.7ha of forestry to accommodate wind farm infrastructure and immediate surrounds. 7.7 ha is being removed to accommodate the proposal, 7ha of this is proposed to be felled in the northwest of the site as well as along southern edge adjacent to the SAC as part of bog and heath habitat restoration measures and 1ha is to be felled for riparian ecological purposes;
- Creation of a peat deposition area for excavated peat in the centre of the site contained by supportive stone berms to accommodate 30,000 m³ of peat to a height of 1m removed from the site with other peat removed to be used on site for drainage bunds and backfilling;
- Temporary site compound adjacent to the proposed substation for secure storage during construction and welfare facilities;
- Toilet facility and holding tank;

The stated minimum separation distance between turbines is 320m (between T1 and T2). All of the turbines have a proposed rotor blade radius of 50.5m with Turbines 5,6,7,9, 11 and 14 having a 90m hub (tower) height (maximum ground to rotor-tip height of 140.5m) and turbines 1,2,3,8 and 13 having a hub (tower) height of 80 metres (maximum ground to rotor-tip height of 130.5m). Turbines T1 (between 1300D and 1400D), T2 (between 1500D and 1600D), T13 (between 1200D and 1300D) and T8 (between 1050D and 1150D) are located to the east of the site at different gradients on the slopes of the western hill. Turbine 3 is located in the centre of the site between 1200D and 1250D effectively between the two hills on the site. To the west of the site in the vicinity of the western hill Turbine 5 is to the north west of T3 at 1300D. T6 (1200D), to the southwest of T6, turbine 7 is located at approximately 1000D. Turbine 11 is further north of T6 and T7 at (between 1100D and 1150D) with T14 (between 900D and 1000D) and T9 (between 1000D and 1050D) further north and northeast.

It is stated in the EIS that there are a number of makes and models of turbines which are suitable for the subject site with the final choice subject to a competitive tendering procedure. For the purpose of the EIA, GE2.85 candidate wind turbines with a potential blade tip height of up to 140.5 metres have been used in order to establish an indicative conceptual layout design. The predominant wind direction on site recorded over a 3-year period is West North-West.

It is stated that the proposed construction period would be approximately 16 to 18 months and that this work would require c. 35-50 employees. The proposal has been designed to have an operational life of 25 years. It is anticipated that the site would connect into a permitted 110kV line which would be less than 1 kilometre to the east running from Galway through Connemara. An EIS has been submitted with this application as has a Natura Impact Statement both of which are addressed in respect of EIA and AA in sections 12 and 13 respectively.

2.2 FURTHER INFORMATION REQUEST

A further information request issued to the applicant dated 27 September 2013. It required as follows:

1. The peat stability for the site is deemed to be of “medium risk” with depths of peat to 3.5 metres. Some 70Km³ of peat is to be deposited in situ up to a metre in depth. Although it will be bunded it has not been properly assessed as to how the site will react to this deposition of material. It may lead to slippage and if so then it is possible for it to flow either north or south based on the contour map. If northwards then the river Sruthan Chnocan Raithni is liable to contamination leading to the Corrib SAC. Similarly the Sruthan Bui to the south could be affected. It is recommended that the deposit site be located away from any rivers/streams/drains or the material to be taken off site. In this regard the applicant is required to address these concerns and submit supporting documentation to alleviate these concerns for consideration by the Planning Authority.
2. There should be another survey for marsh fritillary as the first one was during June with negative results. The ideal time for survey is Autumn (September) with the host plant *Succisa* being searched for webs. The applicant is required to address these issues and submit their response for considerations by the Planning Authority and NPWS.
3. The application refers to necessary improvements to the public road network at the N59 junction and along L54534 in order to facilitate transportation of the turbines. The applicant is requested to submit documentation to confirm that this work will be carried out and completed fully prior to the applicant requiring the use of this route for the turbine delivery.
4. There are concerns regarding the presence of a children’s burial ground in the vicinity of turbine no. 7 and the applicant is required to address this issue by carrying out archaeological pre-development test excavations at the site of turbine 7 and submit its findings for consideration by the Department of Arts, Heritage and the Gaeltacht (Archaeology) and the Planning Authority. In this regard the applicant should be advised that the omission of turbine no. 7 may be necessary. It should be noted that these excavation works are subject to an Archaeological License issued by the Department of Arts, Heritage and the Gaeltacht.

2.5 RESPONSE TO FURTHER INFORMATION REQUEST

The applicant's response to the further information request was received from the applicant on 13th December 2013 and is summarised as follows:

Peat Deposition Area

- Site subject to two previous assessments both of which confirm the suitability of large areas of the site for windfarm development;
- A new peat stability and constructability risk assessment (EIS Vol. 3, App. 9) prepared in accordance with recommendations of the Scottish Executive guidelines on peat landscape hazard and risk assessment for proposed electricity developments incorporating the findings of the Geological Survey Ireland Irish Landslides Working Group;
- The statement in the RFI that the site is deemed to be of medium risk is incorrect with the study stating that the layout avoids all areas of risk identified in the previous reports and the site does not present any significant risk of a propagating peat slide. The construction feasibility assessment indicates that the infrastructure presents an overall low construction risk;
- The rationale behind the report in the EIS is outlined noting that the areas of deep peat combined with steep slopes and water features with these areas avoided developing a design layout based on low risk peat stability with other environmental constraints included;
- Layout makes use of the existing road network on site placing roads and infrastructure on shallow soils/peat or in areas of exposed rock where peat is not an issue;
- Council statement that peat depths are 3.5 metres contradicted by statement in report which states that peat depths vary from zero to 5 metres with 90% of peat depths taken less than 2 metres in depth;
- 9 of the 11 turbines located in area where peat depth are less than or equal to 1 metre with peat at turbines T1 and T5 1.2 metres and 1.4 metres deep respectively;
- Statement in RFI that some 70,000m³ of peat is to be deposited is not correct, with total volume of peat/soil/overburden to be excavated on site maximum of 41,000m³ with a total of 30,000m³ to be deposited within the peat deposition area;
- Incorrect that it has not been assessed as to how the site will react to this deposition of material as location for peat deposition area has been assessed in detail with peat probing carried out with locations of probes and depths set out in appendix 3 of the response with the location chosen mainly flat and surrounded by areas of higher ground/peat bank faces providing a defense to any potential peat movement with the design including stone berms and cells means any residual risk removed;
- Peat berms designed to withstand any load or pressure of the proposed deposited peat in a safe manner and with an adequate factor of safety;
- Use of berms for containment is common practice designed as ground bearing mass retaining structures with the design approach conservative in nature with load pressures calculated taking account of peat depths with base of the berm a

minimum of 6.4metres wide and the top 2.5 metres wide with the width at base varying;

- Base of berm excavated to a solid ground level within overburden or to bedrock level with the berm having sufficient height, width and depth to act as a solid ground bearing uniform retaining structure (Drawing 15047-5041 – plan and sections of peat deposition area);
- Peat deposition area has an external containment berm and intermediate berms forming three distinct cells with the cells allowing for filling of excavated peat and soils to be deposited in stages (Drawing 15047-5042 – photographs);
- Construction plan for the peat deposition area set out with the approach taken well proven for upland peat sites in the south and west of Ireland.

Marsh Fritillary Surveys

- Requirement indicated in a letter from the Dept. of Arts, Heritage and Gaeltacht;
- Not possible to undertake survey in September given timing of issuing of letter and RFI;
- No observations of marsh fritillary adults, larvae or web structures over two years of site visits and ecological related surveys with no evidence that species is utilizing proposed site;
- Dedicated devil’s-bit scabious survey, host plant of marsh fritillary carried out in October 2013 (appendix 4) and concludes that no evidence of marsh fritillary was recorded during the ecological, ornithological, peat or vegetation surveys at the site;
- It is noted that the relative abundance of devil’s-bit scabious within the site is considered to be relatively low displaying a scattered distribution with one larger stand in the north eastern corner of the site that lies outside the footprint of the proposed development;

Road Improvement Works to Facilitate Turbine Delivery

- Proposed road improvements part of the GWP and planning permission previously granted;
- Confirm that turbine deliveries to the site will not occur until all necessary road improvements works have been completed;
- Letter from the applicant previously submitted and included at Appendix 5 confirming same;

Archaeological Concerns Adjacent to T7

- Possible Children’s burial ground (cillin) included in the National Monuments Service Inventory Ref. GA067-033;
- Anomaly on numbering system with turbine no. 7 as referenced actually No. 6;
- Figure 2 denoted the possible Cillin relative to the location of proposed T6 and notes that the impact of the proposal on the feature is fully considered in Volume 2, Chapter 14 of the EIS with mitigation also proposed (noted turbine incorrectly referenced in the EIS and should read T6);

- Figure 2 notes that separation distance between T6 and the Cillin is 57 metres with the recommended set back 20 metres with the Cillin more than adequately protected;
- Applicant accepts the recommendations of the Department for both pre-development testing and archaeological monitoring;
- Noted that there is no visible trace of the feature which is based on local unconfirmed information with the separation distance ensuring that there is no impact;
- Considered that given recommendations that eliminating T6 not warranted;

3.0 PLANNING AUTHORITY REPORTS

3.1 Internal Reports

Planners Report

There are two planning reports one leading up to the further information request and the other a continuation of the first report with added information noting the response to the further information and the recommendation. In this regard I refer to the second report in respect of outlining same. The report provides a description of the site, the planning history and the policies and guidelines considered relevant in the Galway County Development Plan. Elements of the wind energy strategy are set out. The proposed development is explained with an outline of the requirement for EIA and it is noted that the EIS complies with Article 94 and Schedule 6 of the Planning and Development Regulations 2001. It is noted that while the turbines are annotated as T1-T14 there are no turbines T4, T10 or T12 with these eliminated during the design evolution process. The expected capacity of the farm is 33MW with six turbines with a maximum blade tip height of 140.5 metres and 5 with a maximum blade tip height of 130.5 metres. It is noted that a total of 15.7ha of forestry must be felled to accommodate T1 and T3. Reference is made to Reg. Ref. 13/658 recently granted to SSE renewables for works to N59 junction with L53453. The EIS is summarised (as per the report in the following section). The issues raised in the 42 submissions are summarised and the reports (internal and external) received by the Planning Authority are also summarised. It is noted that having regard to the issues raised in the reports from the Department of Arts Heritage and Gaeltacht that further information is necessary. The request is outlined (as outlined in section 2.4 above). Reference is made to the response of some of the bodies to whom a copy of the further information response was sent. The assessment of the proposal as set out in the report is as follows:

In the EIA process, issues were raised in relation to a number of aspects of the EIS. Further information was requested in accordance with subsection 172 (1D or 1E) of the Planning and Development Act, 2000 and has been submitted and assessed by the planning authority and the relevant departments. The EIS has covered the direct and indirect effects in the matters set out in Section 171A and is considered to be satisfactory. The mitigation measures proposed by the applicant have been considered and incorporated into the decision through the conditions. As there remains a concern

in relation to the children's burial ground on the development site, pre-development test excavations will be required on the site. A list of elements to which regard was had in the assessment and recommendation is outlined and includes:- the national policy regarding the development of alternative and indigenous energy sources, Wind Farm planning guidelines, County Galway Wind Energy Strategy 2011-2016, Galway County Development Plan 2009-2015, general suitability of the subject site for a wind-powered electricity generating facility due to the wind resource available, location of the subject site within an area zoned 'strategic area' in the wind energy strategy, scale and extent of the proposal and its location relative to the general topography of the area, submissions received, location of the site outside of an European Site and the nature of the habitat arising, information contained in the EIS and the mitigation measures, Appropriate Assessment Statement/Natura Impact Statement and proposed mitigation measures and the further information received.

The Planning Authority considered that the information submitted with the application was adequate to carry out an environmental impact assessment and appropriate assessment of the development which is considered acceptable and in accordance with the proper planning and sustainable development of the area and permission is proposed for 10 years from the date of the order. Permission is recommended.

Environmental Impact Assessment Report

A report was prepared by the Planning Officer which concludes with a decision makers written statement on EIA and states that the EIA was carried out giving full consideration to the EIS, further information and to the submissions made in relation to environmental effects. It is considered that the report of 13 February 2014 is a fair and reasonable assessment of the likely significant effects and the assessment as reported is adopted as the assessment of Galway County Council. The report referred to outlines the proposed development and then summarises the sections of the EIS under each heading i.e. civil engineering and roads, human beings, ecology, ornithology, hydrology and hydrogeology, soils and geology, air and climate, noise and vibration, shadow flicker, landscape and visual resources, traffic and transportation, archaeology and cultural heritage and material assets. It was noted that an EIA of the EIS was carried out and some issues have been raised which require further assessment prior to any decision. The further information request and response to same are also outlined.

Roads

Conditions proposed:

- Application refers to necessary improvements to the public road network at N59 junction and along L-54534 (EIS item 13.2.3, 13.2.1.5) in order to facilitate transportation of the turbines to site – improvements which are proposed by an adjacent development but not yet in place. Prior to construction commencing the applicant should submit evidence that the improvements are completed and sufficient or in their absence show land acquisition agreements for road widening with the adjacent land owners. (It is questioned separately as to why these works

are not shown as part of the application as they will significantly alter the minor road).

- Independent and detailed pavement condition survey of the local public roads (and drainage incl culverts) impacted on by the development.
- Agreement required on proposals to protect the public road pavement from damage;
- Traffic management plans to be agreed for construction and future maintenance;
- Bond or deposit for works required;
- Independent Road safety audit required for all temporary or permanent changes to the road layout or significant changes in the nature of traffic on the local and national road;

Water Services

Adherence to mitigation measures proposed should be emphasised to ensure that the potable water quality is maintained.

Environmental Health

Report is same as the report for the previous application with the date of the report changed.

- In relation to Noise it is stated that clarification should be submitted as to the exact noise readings (including background noise levels) found during the two week monitoring period. In the event of a noise issue arising, operators should undertake appropriate mitigation measures. Consideration should be given to the setting of day and night-time noise levels at these locations.
- In relation to shadow flicker it is recommended that if flicker results in complaints and problems that the operators should take appropriate measures as per the DoEHLG Guidelines 2006.
- An inspection schedule for water quality during construction and a monitoring programme to be undertaken and submitted for the planning authority's approval.
- Full details of wastewater treatment to be agreed;
- A construction management plan should be put in place for the proposed site during the course of site development/construction.

3.2 External Reports

Department of Arts, Heritage and the Gaeltacht

Archaeology – 16 September 2013

Recommendations attached include the following:

Archaeology – fencing off of areas to be disturbed, pre-development test excavations, archaeological monitoring of ground works with pre-development testing and archaeological monitoring of all groundwork's.

Archaeology – 07 February 2014

It is stated that with regard to the potential risk to archaeological remains from groundworks associated with the construction of T6 (which is referred to as No. 7 in the previous correspondence) in the vicinity of GA067-033 (possible children's burial ground), the further information report submitted by the applicant concludes that due to its distance from the proposed turbine site, the feature is more than adequately protected. As there is a lack of precise detail as to the exact location of the possible burial ground and as there is a possibility that human remains may be disturbed, a 20 metre buffer area is not sufficient in this case. Archaeological test excavations will be required at the site of T6, as detailed in this Department's report to the planning referral. If archaeological remains are encountered the Department will advise as to whether or not avoidance, preservation in situ or further work will be required.

Nature Conservation – 18 September 2013

In general the Department has no objection but some issues require further investigation as follows:

Deposit Site

The deposit site is to be positioned in the mid-southern section of the overall plan. The peat stability for the site is deemed to be of medium risk with depths of peat to 3.5 metres. Some 70km³ of peat is to be deposited in situ to a metre in depth. Although it will be bunded it has not been properly assessed as to how the site will react to this deposition of material. It may lead to slippage and if so then it is possible for it to flow either north or south based on the contour map. If northwards then the river Sruthan Chnocan Raithni is liable to contamination leading to the Corrib SAC. Similarly the Sruthan Bui to the south could be affected. It is recommended that the deposit site be located away from any rivers/streams/drains or the material be taken off site.

Brash

Brash from the felled trees to be deposited on site but away from water bodies. Because of the potential risk of contamination to water from the decomposition of brash it is recommended that it be removed from the site in total.

Red Grouse

Because of the presence of red grouse on site all machinery related works should cease from 1st April to end of June – during breeding season.

Marsh Fritillary

There should be another survey for this species as the first one was during June with negative results. The ideal time for survey is September with the host plant *Succisa* being searched for webs. A similar recommendation was made to An Bord Pleanála recently for another development in the Connemara area and results have shown that additional sites for this butterfly have been found.

Kerry Slug

Prior to tree felling efforts should be made to locate the Kerry Slug again as it has been found in similar habitats nearby.

Nature Conservation – 30 January 2014

Conditions are recommended to be included in any permission that may be granted;

- If construction work has not commenced by next August 2014 a further Marsh Fritillary Butterfly survey should be carried out for each turbine site during August/September;
- All brush should be removed from the site within 10 days to avoid pollution of nearby water ways;

An Taisce

Previous refusal needs to be addressed and resolved as a preliminary matter. The site area includes peat of varying depth which raises significant issues of construction impact for access roads and turbines. The overall area is a relict landscape with archaeological layering which extends through the 19th century. Letter from Dr. Audrey Horning FSA raises significant issue which need to be addressed particularly the value of a post 1700 housing cluster and boundaries. Significant issue raised by the development of a new access route from a peat cutting area to the west outside the applicant's control. The effect of this is to include this area within the application site and this site has become part of the development. Not credible that renewable energy project even if acceptable on this site is providing no local renewable benefit and that peat cutting is continuing along the access road to the development.

Inland Fisheries Ireland

Ard doiriu branch of the Owenboliska River and is closed currently for salmon angling; Knockbane River holds a population of brown trout and is significant as a nursery area with all developments requiring to protect this sub-catchment; Initiatives being implemented by the IFI to restore the catchment as a premier salmonid fishery and the control of development pressure in the catchment is viewed as a key element; Key pressures will arise from (a) the internal site tracks on the site, (b) excavation of peats, transport and peat deposition within the site, (c) hard standing area associated with each turbine. Crucial that water quality in the associated river catchments is afforded maximum protection. Waters pumped from excavations and runoff over exposed soils can produce significant pollution. Where necessary onsite treatment of these discharges may be required and silt traps and/or silt fences will also be required. Surface water management plan and detailed method statement to be agreed with IFI and NPWS. Recommended should approval issue that – (a) construction works be confined to June-September annually, (b) peat deposition and stabilisation arrangements be subject to specific controls, (c) regular water quality monitoring (for key parameters such as turbidity, ammonium, phosphorous) during site development, construction and operational phases (d) agreement with IFI on selection of suitable reference sites for the fish population assessment and data reporting on an on-going basis.

Udaras na Gaeltachta

It is submitted that the protection of the language is paramount and that it is essential that the new development gives recognition, support and energy to the social, cultural and language characteristics of the area. Údarás recommends that a language impact statement be sought and proper language conditions be put in place.

3.3 Observations

A large number of observations were made to the Planning Authority with the issues raised reiterated in the appeal grounds and observations submitted to An Bord Pleanála and outlined below.

4.0 DECISION OF THE PLANNING AUTHORITY

The Planning Authority decided to grant permission subject to 28 conditions which included the following (which are abbreviated):

- Permission is for 25 years;
- Period of carrying out the development is 10 years;
- Construction methods and environmental mitigation measures detailed in the EIS to be fully implemented;
- Traffic/roads management plan for the construction phase to be agreed;
- Detailed Environment Management Plan and Construction Management Plan to be submitted, site drainage management plan, silt traps, no stockpiling of materials on site including peat except on the designated peat area, where noise levels interfere with amenity of the area proposals to be submitted detailing proposals for ameliorating excessive noise levels, certificate of compliance to be submitted;
- Irish Aviation Authority to be informed prior to commissioning and informed of co-ordinates of the turbines;
- Wind turbines to be finished externally in a white/grey matt colour and cables to be underground;
- If interference to radio/television/aviation transmissions facilities shall be installed at the developers expense to ensure no interference;
- Areas subject to ground disturbance shall be fenced off to ensure machinery does not track across the site;
- Pre-development testing to be undertaken at site of turbine No. 6 in the vicinity of GA 067-033 with a license required;
- Archaeological monitoring;
- Surface Management Plan and detailed method statement to be agreed with the Inland Fisheries and NPWS;
- If development not commenced by August 2014 a further Marsh (sic) Fritillary Survey to be carried out for each site during August/September, brash to be removed from site, due to Red Grouse all machinery related works to cease from 1st April to end of June, efforts to be made to locate the Kerry Slug;
- Independent and detailed pavement condition survey of the local public roads;
- No micro-siting permitted and permission should not be construed as a form of consent for connection to the national grid;
- Details of phasing to be agreed with planning authority, following consultation with the NPWS and IFI;
- Details of the materials, colours and textures of all the external finishes to the proposed buildings;

- Wind turbine noise not to exceed to greater of 5dB(A) above background noise levels or 43 dB(A) L90, 10 min when measured externally at dwellings or other sensitive receptors;
- Construction management plan;
- Roads, hardstanding areas and other hard-surfaces areas completed to satisfaction of the planning authority and soil, rock or sand excavated during construction not to be left stockpiled;
- Disposal of foul effluent on site not permitted;
- Construction stage details of proposals for management of surface water to be submitted;
- Effective measures to be introduced if interference caused to telecommunications signals;
- If wind farm ceases operation for more than a year on full or partial decommissioning then turbines, foundations etc to be removed;
- Bond and Contributions and community gain agreement.

5.0 RELEVANT PLANNING HISTORY

The following planning application and appeal has been made on the site and is relevant to the current application:

5.1 SUBJECT SITE

An Bord Pleanála Ref: PL07.239053 (Galway County Council Ref. 11/375)

Permission was sought by Western Power Developments Ltd. for 14 no wind turbines (retention of met mast), control building, substation and ancillary works and was granted permission by Galway County Council.

A recommendation to Grant Permission was made by the Inspector (report dated 20th October 2011) following which the Board issued a Section 132 Notice (Board Direction dated 24th November 2011) to the applicant requiring further information from the applicant as follows:

A) Peat slippage risk

- (a) Provide confirmation on site suitability, from a site walkover by an independent qualified and experienced geotechnical engineer, also taking into account the drainage conditions on site, including seasonal drains, flush areas or any ponding, and;
- (b) (i) consider whether amended locations for Turbines 8 and 13 might be desirable, to provide a greater separation distance between these turbines , streams and drains (or flushes) and identified peat slippage risk areas, or
(ii) Provide clarification that the turbine locations as proposed are acceptable in terms of peat slippage risk, and
- (c) Review the locations Turbine 6 and the pear deposition area in a similar context, noting the greater separation distance available from these locations.

(d) Provide confirmation on the suitability of the location of Turbine 9 which although stated to be located in 1.7m deep peat at a slope of 5 degrees, and not in the vicinity of detains, is nonetheless located in an identified peat slippage risk zone; humification rates and shear vane test results are noted in this regard; a slight re-location out of the risk zone might be considered.

In each case, the revised plans or clarification to be provided are to be supported by a report from the independent geotechnical engineer appointed, confirming the suitability of the design choice made.

In this context the Board noted the following:

1. The location of existing streams and seasonal drains, as illustrated in Appendix 8-B of the EIS and in particular the locations of Turbines 8 and 13 in proximity to an established stream and a seasonal drain, respectively.
2. The identification of peat stability risk zones, as illustrated in Drawing No. 13496-7006 (Rev. A) of Appendix 10 of the Peat Stability Report submitted with the EIS, and the location of Turbines 8 and 13 in proximity to and upslope of identified peat slippage risk zones.

In addressing the queries of the Board, regard should be had to standard risk assessment methodologies, for example, those outlined in the “Peat Landslide Hazard and Risk Assessments – Best Practice Guide for Proposed Electricity generating Developments” (2006), including calculations of the Factor of Safety for slope stability analysis, as well as a thorough qualitative hazard and risk ranking, as outlined in the said guidelines. It might be preferred that hazard ranking not be assessed solely in relation to the number of particular hazards accruing at each location; in discussion of results, appropriate weight may also need to be given to such risks. The applicant might wish to take the opportunity to consider whether the slope risk threshold of 6 degrees is acceptable. Convex slopes and flush areas should be considered where relevant among other potential risk factors. Construction areas in addition to turbine locations also require consideration in the assessment. Mitigation by avoidance is the preferred approach.

B). Archaeology

The Board noted the concerns raised in relation to archaeology in Appendix A4 of the observation submitted to the Board on the 4th July 2011 by the Oldtown/Knockranny Residents for Environmental Conservation and Development Consultation (report by John Magean). This was further elaborated on in the submission to the Board on 28th July 2011 by Susan Stanley.

The Board might consider that these concerns might not have been satisfactorily addressed, and the applicant is required to respond to the concerns arising. The possibility (or absence) of further archaeological features being present on site, which were not previously identified, as indicated by the submissions noted above, should be specifically addressed by an archaeologist with appropriate qualifications and experience.

Following a response to same the Board decided to Refuse Permission for the following reasons:

1. The Galway County Development Plan 2009-2015 sets out policies in relation to the protection of archaeological heritage. Policy HL23 seeks to “support the preservation, conservation and maintenance of archaeological sites, together with the integrity of the setting of these monuments and sites. Development, which would destroy, alter or damage monuments or archaeological sites, or cause inappropriate change to their settings and character will be prohibited”. Policy HL25 seeks to “protect and preserve archaeological sites, which have been identified subsequent to the publication of the Record of Monuments and Places”. The archaeological surveys submitted on file identify an archaeological landscape of post medieval settlements with intact associated fields systems and several prehistoric features newly-documented on the site, including fulachtaí fia, kilns and huts. It is considered that the number and layout of wind turbines and the locations of the associated access roads, do not take into account of the archaeological heritage of the site. The development, as proposed, would therefore be seriously detrimental to the archaeological and cultural heritage of the site. The Furthermore, recorded national monument GA067-029 is located at the peak of Knockranny Hill, and the Board is not satisfied, on the basis of the submissions on file, that the turbine layout, which surrounds the hill, takes sufficient account of the visual impact on this monument or would not seriously injure the setting of the monument. The proposed development would therefore contravene the policies of the Development Plan and would be contrary to the proper planning and sustainable development of the area.

2. Notwithstanding the detailed geotechnical surveys undertaken, the Board is not satisfied that all geotechnical/peat slippage risks have been fully resolved for all turbine locations, and it is considered that the resultant risk of environmental damage is unacceptable, that the proposed development would therefore pose an unacceptable risk of environmental pollution and would be contrary to the proper planning and sustainable development of the area.

The Board further noted that in deciding not to accept the Inspector’s recommendation to grant permission, the Board considered that the information on archaeology and geotechnics submitted to An Bord Pleanála at Further Information stage was significant, and having regard to all the submissions on archaeology, considered that the layout proposed would not be acceptable and did not consider it appropriate to grant permission. Moreover, notwithstanding the detailed geotechnical survey work undertaken, some concerns remained with regard to turbine locations, and particularly those of turbines 8 and 13.

Note 1: Having regard to the archaeological concerns, the Board did not think it was appropriate to address the geotechnical concerns by means of condition.

Note 2: Furthermore, it appeared to the Board that, in the response provided to the Board's request for further information, the redesign of the turbine layout might have been unduly restricted by confining the relocation of turbines to within 20metres of the original turbine locations, and to within the original red line boundary.

5.2 SITES IN THE VICINITY

There are a large number of applications for wind farms in the wider area within which the subject site is situate both to the northwest and west of the site and to the south and south east. The following applications are referenced on a map within the pouch.

Northwest/West of the Appeal site

Map Ref – 1, 2 & 3

Ref. 06/5623 – Refused - to erect an electricity generating windfarm consisting of 14 (fourteen) wind turbines of hub height 70m and rotor diameter 90m, a control building and a transformer substation and associated site roads and services. This planning application is accompanied by an Environmental Impact Statement.

Ref. 07/5148 – Granted - to erect an electricity generating windfarm consisting of 8 (eight) wind turbines of hub height 70m and rotor diameter 100m, a control building, a transformer station and associated site roads and services.

Ref. 10/1454 – Granted - for a ten year permission to construct a wind farm consisting of 8 no. wind turbines, with a maximum height of up to 130m and ancillary structures, 1 no. meteorological mast, 1 no. substation, access tracks and all associated infrastructure (gross floor space 257.65sqm)(Environment Impact Statement)

Map Ref. 4 & 5

Ref. 11/429 – Conditional – Appeal upheld PL 07.239118 (Seecon Wind Farm) - for a ten-year planning permission to construct a wind farm consisting of 23 wind turbines, (each with a maximum hub height of 90m, maximum rotor diameter of 101m, and with a total tip height of 140.5m), two permanent 90m meteorological masts, a sub-station including two control buildings and associated equipment, expansion of one existing borrow pit and three new borrow pits, new internal access roads, upgrading of existing internal access roads, expansion of drainage system, turbine hardstands, wastewater holding tank, underground cables, and ancillary works.

Ref. 14/533 – Conditional - for relocation of one 90m high permitted permanent meteorological mast at Cloosh Wind Farm (planning reference 10/303) and the provision of associated hard standings, fencing, gates and access tracks in the townland of Finnaun; Relocation of one 90m high permitted permanent meteorological mast from Seecon Wind Farm (planning reference PL07.239118 - An Bord Pleanála, 11/429 Galway County Council to Cloosh Wind Farm and the provision of associated hard standings, fencing, gates and access tracks in the townland of Finnaun; the provision of hard standings, fencing, gates and associated access tracks at one previously permitted permanent meteorological mast at Seecon Wind Farm (planning reference PL07.239118 - An Bord Pleanála, 11/429 - Galway County Council in the townland of Seecon

Map Ref. 6

Ref. 10/303 – Conditional (Cloosh Wind Farm) - for a 10 year permission to construct a wind farm consisting of 22 wind turbines, each with maximum hub height of 90m, maximum rotor diameter of 101m and with a total tip height of 140.5m, one permanent 90m meteorological mast, a sub-station including three control buildings and associated equipment, expansion of three existing borrow pits and two new borrow pits, new internal access roads, upgrading of existing internal access roads, expansion of drainage system, turbine hardstands, wastewater holding tank, underground cables and ancillary works (gross floor space 368.48sqm)

Map Ref. 7, 8 & 9

Ref. 03/6992 – Conditional - to erect an electricity generating windfarm consisting of twenty (20) wind turbines of hub height 70m and rotor diameter 80m, a 70m meteorological mast, a control building incorporating a transformer substation and associated site roads.

Ref. 09/1987 – Extension of duration of Ref. 03/6992 – granted for 5 years.

Ref. 10/1434 – Incomplete application - for revision to a previously approved development (pl. ref. 03/6992). The proposed revision is to change the wind turbines to increase the tip height of the 20 approved wind turbines from 110m to 125m. All other aspects of the approved development are to remain unchanged.

Map Ref. 10

Reg. Ref. 13/658 – SSE Renewables – Conditional - for modifications to existing roads and tracks for the Galway Wind Park turbine delivery route. The development comprises the following improvements to the N59 Junction with the L53453-0 Doon road in the townland of Doon; Widening, strengthening and regrading of approximately 0.85km of the L53453-0 Doon road in the townland of Doon; Widening, strengthening and regrading of approximately 7.2km of the existing forestry track continuing from the L53453-0 Doon road in the townlands of Doon, Leitir, Uggool, and Finnaun; Widening, strengthening and regrading of approximately 1.875km of the L-1311 Shannapheasteen road in the townlands of Seecon and Lettercraffroe.

South/Southeast of Appeal Site

Map Ref. 11

Ref. 07/4635 – Conditional – Refused on Appeal – Ref. PL07.229362 - for construction of a wind farm comprising six wind turbines, six transformers, an electrical substation and control building, a meteorological mast, site tracks and all associated site works and services.

Map Ref. 12

Ref. 11/1573 – Conditional – Granted on Appeal – Ref. PL07.240612 - to construct a wind farm of 12 no. wind turbines (with an overall maximum height of up to 126metres), anemometry mast (up to 85m), electricity substation, underground electricity connection to site boundary and all ancillary site works, including two borrow

pits, upgrade of existing and provision of new internal access roads and facilitating works to existing road junctions. A 10 year permission is being sought. ((Environmental Impact Statement (EIS) and Natura Impact Statement (NIS)).

Map Ref. 13

10/1225 – Conditional – Granted on Appeal – Ref. PL07.238762 - for a ten-year planning permission to construct a windfarm of 7 wind turbines (each with a maximum hub height of 78m, a maximum rotor diameter of 82m and total tip height of 119m), anemometry mast (80m), underground electricity connection to site boundary, associated equipment, all ancillary site works including borrow pits, upgrade of existing and provision of new internal access roads and facilitating works to existing road junctions. (Environmental Impact Statement)

Map Ref. 14, 15, 16, 17 & 18

Ref. 03/4656 – Conditional - for construction of a wind farm comprising 8 No. Wind Turbines, small control building, site tracks, hard standing areas, underground cabling and site signage.

Ref. 09/519 – Incomplete

Ref. 09/573 – Conditional – granted on Appeal – PL07.235051 - Alterations to hub heights and blade lengths of wind turbines together with an increase in wattage from 1.75 megawatt to 2.3 megawatt.

Ref. 09/1326 – Conditional – Granted on appeal – PL07.234861 - Alterations to hub heights and blade lengths of wind turbines together with an increase in wattage from 1.75 megawatt to 2.3 megawatt and alterations to turbine layout and internal access arrangements.

Ref. 09/1239 – Unconditional – Extension of Duration of 03/4656.

New Application

PA0036 - A Strategic Infrastructure Development Application has been submitted on 16 September 2014 to An Bord Pleanála for the construction of a total of 29 no. Wind Turbines and all associated works in the townlands of Killaguile, Letter, Uggool, Ardderroo, and Finnaun, County Galway. This site is located almost directly to the west/northwest of the subject site.

6.0 POLICY CONTEXT:

6.1 County Policy

6.1.1 Galway County Development Plan 2009 - 2015

The County Plan addresses wind farm development primarily through Objective IS18 which states *“Facilitate wind farm developments in suitable locations, having regard to any designations of areas of the County for this purpose, government guidelines and the need to protect, inter alia, designated heritage sites, designated sensitive rural landscapes, visually vulnerable areas, scenic routes and scenic views. The Planning Authority will have regard to DoEHLG Guidelines for Planning Authorities on Wind Energy development 2006 in the assessment of any proposals for wind energy*

production". Map IS1 of the plan shows the areas with wind farm potential in the County with 3 wind resource zones outlined – strategic areas, areas for consideration and no go areas. The subject site is located within a strategic area as set out in map IS1. Wind farm development is considered appropriate in these areas subject to environmental and scenic factors. Objective IS19 states that it is an objective of the Council to *"undertake a review of the areas of Wind Farm potential in the County, having regard to the designation of lands as Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas or as habitats capable of supporting Annex 1 species"*. The Wind Energy Strategy detailed in the next section is the result of the review proposed in Objective IS19. The Wind Energy Strategy supersedes the guidance outlined in the County Plan.

The County Plan sets out policies and objectives in relation to other relevant environmental factors as follows: Heritage policies are set out at section 9.1.1 of the Plan policies, HL1 – HL7. Section 9.2.5 deals with Archaeological Heritage with policies HL22 – HL30 with the archaeological objectives HL17 – HL21. Policy HL23 seeks to support the preservation, conservation and maintenance of archaeological sites, together with the integrity of the setting of these monuments and sites. Development, which would destroy, alter or damage monuments or archaeological sites, or cause inappropriate change to their settings and character will be prohibited. Policy HL25 states that it is the policy of the Council to protect and preserve archaeological sites, which have been identified subsequent to the publication of the Record of Monuments and Places. Natural Heritage is dealt with at section 9.3 with policies HL31-35 and objectives HL22 – HL24. Policy HL31 states that it is the policy of the Council to implement Article 6(3) of the EU Habitats Directive, and to subject any plan (including County Development Plan, Local Area Plans) or projects likely to impact Natura 2000 or European Sites (SACs, SPAs), whether directly (in situ), indirectly (exsitu) or in combination with other plans or projects, to an Appropriate Assessment in order to inform decision making. A plan or project may only be authorised after the competent authority has made certain, based on scientific knowledge, that it will not adversely affect the integrity of the site; in the case of derogations, authorisation must be pursued under Article 6(4). Section 9.4 of the Plan deals with Landscape Conservation and Management with Policies HL93 - HL97 and objectives HL44 – 45 set out. Map HL2 shows the Focal Points/Views, Map HL3 shows the Landscape Value Rating and Map HL4 shows the Landscape Sensitivity and Character Areas.

DM Standard 25 refers to Wind Farm Development and states that wind farm development will generally be considered favourably in the areas designated as suitable, subject to acceptable visual and environmental impact assessment and availability of connections to the National Grid (Map IS1). The provision of electricity generation from wind energy shall be subject to the following:

1. Guidelines - Compliance with the DoEHLG *Wind Energy Development Guidelines 2006* and having regard to the *Best Practice Guidelines for Wind Energy Development*

published by the European Wind Energy Association and the *Best Practice Guidelines for the Irish Wind Energy Industry 2008* published by the Irish Wind Energy Association.

- 2. Landscape Areas** - Be located in the landscape areas shown suitable for such development (Map IS1), subject to visual and environmental impact assessment, including consideration of designated environmental sites.
- 3. Residential Amenity** - Be so located as to avoid injury to existing residential amenity due to noise or flicker effect.
- 4. Landscape Sensitivity** - Avoid where possible interconnecting with the electricity grid either overground or underground across the landscape where sensitivity rating is Class 5 – Unique.
- 5. Public Roads** - Shall provide appropriate securities towards the strengthening and maintenance of public road that serve the development.
- 6. Redundancy** - Shall be decommissioned, on it becoming redundant and the plant removed from the site and restoration works put in place.

6.1.2 County Galway Wind Energy Strategy 2011

The aims of the Strategy are set out in section 1.3. The report outlines the methodology used to develop the strategy. At section 3.3, wind energy objectives, Objective WE1 outlines the principle considerations for defining the strategic areas – generally good/excellent wind resources, access to the grid, distance from properties, outside Natura 2000 sites or NHA's and outside Landscape Sensitivity Class 4 & 5 areas. It is stated that wind energy projects within this area must:

- *Demonstrate conformity with existing and approved wind farms to avoid visual clutter.*
- *Be developed in line with the Planning Guidelines for Wind Energy Development (DoEHLG 2006) in terms of siting, layout and environmental assessment.*
- *Be accompanied by a HDA under Article 6 of the Habitat Directive where they may result in adverse effects on any Natura 2000 site.*
- *Be developed in a comprehensive manner avoiding the piecemeal development of the land designated as Strategic Areas.*

It is also stated that is a requirement to “*suitably manage land use and infrastructure development within this area*”.

Table WE11 sets out the separation distances for turbines in wind farm developments. This includes a preferred minimum distances such as 500m from noise sensitive property, outside Natura 2000 sites subject to HDA and advice from NPWS, 100 metres from recorded monuments on RMP. Table WE12 sets out potential impacts of wind energy development and includes: - habitats, birds, bats, freshwater species and habitats, peat, ground conditions and landscape susceptibility, amenity, landscape and settlement, transport, infrastructure and safety, construction and built heritage.

Section 5.2.12 refers to the cumulative impact of wind farms and notes that the cumulative impact in particular in areas close to Natura 2000 sites will be carefully monitored over the lifetime of the strategy. Increases in the density of wind farm

development within or adjacent to Natura 2000 sites will only be considered where it can be shown following AA that the development will not have an adverse effect on the conservation management objectives of the site. Section 5.3 deals with wind farm layout, design and construction. There are a series of maps which show the strategic area and other areas acceptable in principle and open for consideration in relation to landscape character areas, views, prospects etc. These are included in the pouch.

Map WE-5A – WE-5F shows the strategic wind farm development areas and transmission network. The site is located within the strategic area.

6.1.3 Gaeltacht Local Area Plan 2008-2014

The Gaeltacht Plan was adopted in February 2008 with an amendment and extension adopted in March 2013. The subject site is located within District ‘D’ – Cois Fharrage. The landscape sensitivity is stated to be Class 3, High Sensitivity.

6.2 Habitat Designations

The site is not within any Natura 2000 sites nor NHA’s however, the Connemara Bog complex cSAC (site code 002034) is located c. 100/250metres to the south of the site. As outlined above, an NIS accompanied the application and an Appropriate Assessment is carried out below at section 13.

There are a number of other sites within 15 km of the site as follows:

- Ross Lake and Woods SAC (001312) – 2.1km/2.7km northwest;
- Gortnandarragh Limestone Pavement SAC (001271) – 4.3km/4.9km northwest;
- Connemara Bog Complex SPA (004181) – 4.5km/5.1km – southwest;
- Lough Corrib SAC (000297) – 4.7km/5km – east;
- Lough Corrib SPA (004042) – 6.4/6.9km – north, northwest;
- Lough Corrib Ramsar Site (Ramsar No. 846) – 6.8km – east;
- Galway Bay Complex SAC (000268) – 12.1km – southeast;
- Inner Galway Bay SPA (004031) – 13.1km – southeast;
- Inner Galway Bay Ramsar Site (Ramsar Site No. 838) – 13.1km – southeast;

6.3 National Guidelines

6.3.1 Guidelines for Planning Authorities on Wind Farm Development and Wind Energy Development

National planning policy guidance in respect of wind energy is outlined in “Wind Farm Development: Guidelines for Planning Authorities”, dated June 2006. The guidelines provide a brief outline of the technology employed in wind energy development as it applies to planning. In relation to Development Plans, Chapter 3 provides a step by step guide to the analysis of suitable areas for wind energy and refers to the use of GIS. Chapter 4 deals with planning applications and EIA and outlines the issues likely to arise prior to and during the application process. These include access to the electricity grid, public consultation with local communities which the guidelines encourage although not mandatory. These considerations include ease of vehicular access and connection to the

electricity grid. It is stated that in order to fully assess the impact of a wind energy proposal that some if not all of the following matters should be addressed: ground conditions, including peat stability; site drainage and hydrological effects; size, scale and layout and degree of visibility; impact on natural heritage; impact on built heritage including archaeological heritage; landscape; visual impact of ancillary developments; local environmental impacts including noise, shadow flicker and electromagnetic interference; adequacy of local road network; information on cumulative effects; information on location of quarries to be used; disposal or elimination of waste; decommissioning considerations. The need for Environmental Impact Assessment and sub-threshold development are also outlined.

Chapter 5 of the guidelines refers to other environmental considerations, including the impact on habitats and bird species, ground conditions and archaeological heritage, noise and electro-magnetic interference. Section 5.3 states that a planning application must be accompanied by information on issues such as slope stability and whether the development could create a bogburst or landslide. Chapter 6 of the guidelines consider aesthetic considerations in siting and design. Such aesthetic considerations include: landscape sensitivity, spatial extent and scale and the cumulative effect of two or more developments. Other considerations include spacing, layout, height and the landscape character type of the receiving environment. The landscape impact of wind energy development construction and the impacts of associated development.

6.3.2 Revisions to Wind Energy Guidance

The Minister for Housing and Planning announced on 11 December 2013 a proposed public consultation process in respect of revisions to the 2006 Guidelines. The revisions relate primarily to noise (including distance) and shadow flicker. The main proposals are as follows:

- The setting of a more stringent absolute noise limit (day and night) of 40 decibels (dB) for future wind energy development. This limit is an outdoor limit and it is noted that in general the reduction of noise levels between the outside and inside of a dwelling is approximately 10 decibels.
- A mandatory setback of 500 metres between a wind turbine and the nearest dwelling for amenity considerations.
- Proposes to attach a condition to all future permission for wind farms to ensure no shadow flicker at any dwelling within 10 rotor diameters of a wind turbine with the requirement that necessary measures are taken if shadow flicker does occur to eliminate same, such as turbine shut down.

Submissions on the revisions were sought up to February 21st 2014 with no further details currently available on the process of adopting the revisions.

6.4 Regional Planning Guidelines for the West Region 2010-2022

The eight Regional Authorities were dissolved on the 1st June, 2014 and the functions, staff, assets and liabilities of the former Border Regional Authority, Midland Regional Authority and West Regional Authority were transferred on a transitional basis to the

Border, Midland and Western Regional Assembly. Prior to their dissolution, the three Regional Authorities in the BMW Region produced individual Regional Planning Guidelines (RPG's) which set out a strategic planning framework for the 3 NUTS III regions and these guidelines will remain in force until at least 2016 when it is proposed that they will be replaced by new Regional Spatial & Economic Strategies. The following objectives included in the Guidelines are of note in respect of wind energy which is outlined in section 5.5.4 where it is stated that:

The West Region contains Ireland's premier wind resource and holds the potential for this region to become a sustainable exporter of renewable energy. Areas identified for wind farms must have regard to the level of the resource, the nature of the landscape, the status of surrounding lands and the Department of the Environment, Heritage and Local Government's 'Wind Energy Development Guidelines, 2006'. Where wind energy developments are proposed in or near a Natura 2000 site, a Habitats Directive 'Appropriate Assessment' Screening must be undertaken along with other relevant environmental assessments. The following objectives are relevant:

IO53: Support the use of the existing and necessary upgrades of the electricity grid to facilitate the production of electricity in the region from renewable sources.

In particular the grid extending to the areas with high potential for wind energy, should be sufficient to cater for consumer demand and the supply of renewable energy to the national grid.

IO54: Support the sustainable development of wind energy developments through the initiation of a Regional Policy on windfarm location. The Policy will be informed by Habitats Directive Assessment and by other environmental assessment including landscape character assessment and will follow DoEHLG's Wind Energy Development Guidelines (2006) In identifying areas suitable for wind energy developments. Natura 2000 sites, and other ecological sites, should be placed in the 'not normally permissible' category unless project level HAD and/or other relevant environmental assessment determines otherwise.

7.0 GROUNDS OF APPEAL

There are 5 third party appeals against the decision of Galway County Council to grant planning permission for the proposed development. The grounds of appeal are summarised under the following headings:

Preliminary Legal Issue

- Preliminary legal issue on EIS site boundary delineation and enforcement of EIA mitigation measures with four boundary designations raising issues on the enforceability of mitigation measures proposed in the EIS or any additional conditions which may be imposed;
- Request that this issue addressed and resolved as a preliminary matter with revised public notices sought for the entire landholding;

Impact on Archaeological Heritage

- OKREDC engaged three competent archaeological professionals to comment on the current application;
- Current assessment returned a total of 68 features but assessment failed to address probability that the settlements discussed may have been constructed on the site of a much older series of linked features rather than a series of disconnected features;
- Archaeological assessment deficient despite previous refusal as it does not address the overall value and interest of the site as a multi-layered archaeological landscape from bronze age cairn to post famine settlement abandonment;
- A probable prehistoric possibly late bronze or early iron-age ringfort has been identified on land adjacent to the site of proposed development known as Mulach A Leasa raising the profile of the site with the area a palimpsest of archaeology and significant as if it is a hill fort it is the only one identified west of the Corrib in Co. Galway;
- Since the Wind Energy Strategy was prepared in 2011 three registered monuments have been identified and registered and consider Knockranny should be removed from the strategic area set out in the Wind Strategy in light of the increased number of SMR's;
- Proposal inconsistent with Policy HL22 and HL23 which seeks to preserve and maintain archaeological heritage sites and development which would destroy, alter or damage monuments or archaeological sites, or cause inappropriate change to their settings and character will be prohibited;
- Policy HL29 aims to protect burial grounds identified on the RMP with a Cillin listed on the National Monuments Register (GA067-033) on site which would be destroyed by proposed T6 which has been located on the Cillin despite knowledge of same with mitigation measures in respect of the Cillin including excavation to locate it which given that it's a burial ground is deemed to be offensive;
- Meeting with Galway Co Co Heritage Officer sought actions including an independent study of the significance of the ring fort on Knockranny Hill and its interrelatedness with other similar forts;
- Locations CH16 and CH40 suggest late medieval date rather than post 1700 indicating a Gaelic vernacular building tradition;

Geotechnical Analysis/Impact on Peatland and Drainage

- Dr. Olivia Bragg and Dr Pdraig O Cathain provided the appellants with commentary in respect of peat stability.
- Lack of clarity on existing peat depths on site, slope gradient, land area to be used for peat repositories and volumes of peat to be used for drainage bunds;
- No consideration to proposed internal routes becoming drainage routes within the site and consequent pollution risks with design of the roads driven by engineering and drainage considerations destroying integrity of the peatland with sloping graded peat banks remaining exposed;
- Measures to maintain peat stability in the Peat Stability report (Appendix 9) problematic due to the scale of peat removal and significant remodelled gradients;

- Proposed removal of 41,000m³ of peat excessive and inappropriate intervention in a peatland area rendering site unsuitable;
- EIS does not reconcile the peat cutting which is not proposed to cease with the peatland conservation of the overall landholding;
- While Irish Peatland Conservation Council support renewable energy cannot support proposal which would result in the destruction of a mosaic of blanket bog and upland heath habitats with blanket bog rare habitat comprising less than 3% of worlds peatlands with only 27% of original area of blanket bog in Galway intact;
- Wet heath which is predominant on the site is protected under the Habitats Directive with the site adjacent to Connemara Bog Complex SAC (2034) with some of the 5 listed habitats in the SAC identified as the main habitat type on the proposed site indicating that the site is an extended buffer zone to the designated site;
- Negative impacts of the development on the hydrology of the SAC will have a knock on effect on the structure of the peat mass in the protected bog, its water content and on the area of peat forming vegetation on its surface;
- IPCC against construction of wind turbines in an area of significant peat depth and do not support any development within an area of intact peatland habitat;
- Previous refusal noted an unacceptable risk of environmental pollution notwithstanding the geotechnical analysis;
- Council Planners report notes concerns relating to peat deposit still unresolved and will require further assessment which is contrary to Habitats Directive (Article 6) and nature conservation policies in the Galway Plan;
- Slopes at turbines T1, T3, T6, T7, T11, T14 and T9 of proposal significantly in excess of the slopes quoted for the turbines removed by the Board in PL07.240612 with that site also leading down to the Connemara Bog Complex cSAC;
- Turbine 8 has a stated slope of 11.82°, Turbine 13 slope of 10.62° (table 2 App 9, EIS) with Dr O Cathain stating that slopes greater than 5° are susceptible to slippage with T8 and T13 located above an area where peat depth is greater than 2m and the wider area drains into the Sruthan Chnocan Raithni;
- Potential for negative impact on the Connemara Bog Complex cSAC from T3 as it is at an elevation of 25 metres above the cSAC with a localised slope of 7° and directly adjacent to an area of peat with a depth range of 2-4 metres;
- Peat deposit area located on blanket bog with depth of 1-2 metres at setback of 200m from the cSAC at an elevation of 25m;
- Peat depths of 2.5-4.5 metres noted along the boundary with the SAC with forestry noted as being a contributory factor to peat slippage;

Planning History on Site and Decision of Galway County Council

- Reduction of number and relocation of some turbines within the site does not address the fundamental reasons for the previous refusal;
- Essentially the same development as previous refusal with the change of the address not sufficient to alter the development;

- PA failed to perform an adequate EIA and did not address obligation in European Court judgement in Case c50-09 and does not consider adequacy of EIS;
- Lack of site suitability evaluation;
- Report fails to address effect of proposal on the receiving environment, consistency with the Wind Energy Guidelines, the potential adverse effect on fauna, freshwater species or habitats, potential impact on functioning of intact peatland systems;
- Archaeological concerns raised in previous refusal have not been addressed;
- No assessment of proposal against planning policy, turbine height, assessment of cumulative impact, visual dominance or of clutter, amenity of nearby residents or impact on property values;

Landscape and Visual Amenity

- Site is within an area of high scenic value (Landscape category 3 area) with the proposed structures having a blade tip height of 140.5 metres with the application pre-emptively determined by the PA on the basis of its designation as a 'strategic area' in the Wind Energy Strategy with the impact not properly addressed;
- Cumulative impact on the landscape of proposed and other wind developments within the area;
- Wind Strategy is a general guidance document and not subject to level of evaluation required for EIA in individual projects.
- Visual Impact on national monument GA067-029 at top of Knockranny Hill outlined in previous reason for refusal still remains despite relocation of some turbines;
- Motion of the turbines present an additional visual intrusion to the turbines themselves;
- Views 78, 79 & 80 are protected views over the east Connemara Mountains south of the N59 route which include the proposed development site with proposal, which has a significantly negative impact on a protected view, contravention of policies in the County and Gaeltacht Plans;
- Section 3.28 of Galway County Council's Landscape and Landscape Character Assessment notes that development should not protrude above the existing ridgelines in order to maintain long distance views of the Connemara Mountains;
- Decision inconsistent with Galway County Plan aims to facilitate wind farm development (Policy IS18) in suitable locations having regard to any designations of areas of the County for this purpose, government guidelines and the need to protect designated heritage sites, designated sensitive rural landscape, visually vulnerable area, scenic routes and scenic views;
- Proposal negatively impacts the N59 unlike other proposed/permitted developments in the area whose visual impact is less as they are bounded by east Connemara Mountains;
- Location of T1 & T3 will intrude over the Knockranny Road which is popular with walkers, cyclists and tourists and would contravene policy CS26 which prohibits the intrusion of development along public walking routes with part of the road proposed as the turbine track;

Impact on Residential Amenity

Health Impacts including Noise and Shadow Flicker

- No site specific or development specific health report carried out for the proposed development with two chapters of the EIS referring to two different Guidelines used to assess noise impact with the limits in the DoEHLG wind Energy Guidance used rather than the lower ETSU-R-97;
- Use of 10 metre met mast questioned with higher mast considered more beneficial measuring wind speed at two heights for the purposes of deriving the 10m wind speed for noise prediction purposes;
- Tonal audibility referred to as that of manufacturers at smaller or equal to 4dB measured at the turbine. Not clear why author of noise chapter has not used the tonality penalty levels clearly described in ETSU-R-97 with regard to determining the rating levels for each turbine which should then be used in the prediction process;
- No baseline monitoring carried out at residential properties located to the north west of the proposed windfarms at Leitir;
- Academic studies outlined including a scientific study on sleep which highlighted the negatives in respect of sleep attributed to those within 1.4km of a windfarm compared to those greater than 3.3km;
- Proposal herein closer than 1.4km to local residents with annoyance leading to stress associated with low frequency noise;
- Vibroacoustic disease is a condition associated with very high exposure to low frequency noise in some occupational settings developed over years of exposure with Wind Turbine Syndrome generally recognised as the collection of health related symptoms from people living in close proximity to wind turbines;
- Reference made to Inspectors report in Ref. PL05B.240166 and statement that wind turbine noise in a rural area with low background baseline noise would be perceived by those sensitive to noise to change the character of this noise environment where it is audible;
- Flicker a particular issue on this site as the turbines located between the setting sun in the western skyline and the local houses;
- Risks associated with electromagnetic wave frequencies and construction and operational safety associated with the development of the site are outlined;

Proximity to Houses and Impact on Property Values

- Turbines are excessive in size given their proximity to houses in the area;
- Health problems will arise given their proximity;
- Reference made to Inspectors Report (Ref.240166) and to statement that value of houses without a windfarm would be notably greater;
- Community Impact Statement would have detailed the impact on property values with mitigation;

Impact on Tourism and the Gaeltacht

- Proposal is not consistent with Policy ED28 of the Galway Plan which seeks to maintain water quality in order to enhance special interest tourism such as fishing;
- Proposal will impact on the visual experience of the visitor entering Connemara altering the regional context;
- Proposed access route follows the Sli Connemara a popular hiking route with a danger to walkers and cyclists during construction;
- Section 8.3.1 (Galway County Plan) commitment to the rejection of proposals which would negatively impact the Irish language and the Gaeltacht with industrial nature and scale of the proposal disincentive to retaining Irish speakers within the community and encourage those who left to come back;

Flora and Fauna

- Site survey for Marsh Fritillary Butterfly requested by NPWS not undertaken but applicant declined to undertake same stating limited evidence of Devils Bit Scabious on the site with the Council granting permission conditional on such a survey with this approach contrary to Appropriate Assessment Guidelines and to Galway County Plan policy HL35 which seeks to protect and conserve habitats and special designated under the Directives and Acts;
- Survey of the protected Kerry Slug requested by condition, contrary to the Habitats Directive and Guidelines which state that it is entirely unacceptable to grant permission conditional on the undertaking or completion of surveys in assessing likely effects;
- Proposal inconsistent with Policy HL44 relating to the protection of fisheries habitats with a tributary of the Knockbane River rises within the site;
- Inland Fisheries note one of the few remaining sites in the (Owenboliska-Casla-Screeb) catchment that sustain salmon fry there are concerns that any development may be detrimental;
- Proposal will impact negatively on Salmon which is included in list of conservation objectives in the adjoining cSAC with EIS noting potential of the Owenboliska River and considered 'fair salmon spawning ground';
- While freshwater pearl mussel not occurring in the Arderoo River but exists in the Owenboliska system;
- EIS notes the presence of Red Grouse on the appeal site and within the adjacent cSAC;
- Bat survey undertaken in previous application was inadequate;

Community Engagement

- Limited advertising of public meetings with limited information supplied;
- No engagement in relation to archaeology and heritage;
- No information provided at first two meetings for Irish speakers;
- Community engagement with archaeology and heritage increasingly regarded as good practice with no evidence of same in the EIS;
- Community Impact Statement a requirement of the Wind Energy Strategy;

- Record of public consultation in the EIS incomplete with meetings omitted;

9.0 RESPONSES

9.1 Planning Authority

The Planning Authority has not responded to the appeals.

9.2 First Party Responses to the Appeal

The first party's representative submitted 5 separate responses to the 5 third party appeals. I have summarised the responses in issue format as follows:

Procedural and Decision Making Issues

- Three boundaries identified in the EIS – planning boundary or development site boundary, EIS study (project) area boundary and landholding indicated by red, purple and blue lines respectively;
- Applicant committed to environmental mitigation, compensation and enhancement measures within the entire planning boundary and the entire EIS study area boundary on the eastern side of the Abhainn na nArd-Doiriu river all of which is within the applicants control with enforceability of mitigation not an issue;
- Board's decision made in relation to development previously proposed rather than overall suitability of the site with the board's direction pointing to requirements in order to have a viable application on the site i.e. addressing the location of T8 and T13 by redesign and resolving the archaeological issue;
- The appellant's company credentials are outlined with the applicant having sufficient legal interest to make the application;
- The Arderroo Co-operative committee signed the planning consent letter;
- Suitability of the site set out in the Galway Wind Energy Strategy which was subject to SEA and AA with a number of projects within this area already approved following project level scrutiny;
- EIS contains the information specified in Schedule 2 of the EC (EIA) Regulations 1989 as amended and Schedule 6 of the Planning and Development Regs 2001 as amended;

Archaeology and Cultural Heritage

- Response provided by author of assessment Dr Eoin Grogan;
- Relevant portion of policy HL23 is to support the preservation of archaeological sites with the development having carefully limited any direct impact;
- Key policy is HL27 with close engagement with the DoHELG and due cognisance of policies HL22, HL23, HL28 and HL30 and proposal not impacting directly on any existing or new archaeological evidence;
- All sites registered within the site are avoided with associated buffers and setback to each with the Cairn (GA067-029) and hut site both avoided with significant separation;

- Preservation, conservation and maintenance of Cillin (GA067-033) can only apply if the existence and exact location of such a site can be identified with current layout providing a buffer to the potential cillin and the condition requiring pre-testing;
- Suggestion that excavations are offensive makes no sense in terms of the practice of archaeology as its purpose is to establish the importance and value of any potential archaeology;
- No new significant archaeological heritage identified and no evidence to support contention that new finds have been made, other than the possible cillin which has yet to be fully identified, with all aspects of archaeology assessed in the EIS and in consultation with the DAHG;

Peat Slippage/Peat Risk/Peat Cutting

- Previous application refers to two locations and their distance from risk areas with the red line limiting potential for adjustment with the peat issues with the movement of these turbines removing the peat issue;
- Appellant's experts have not visited the site with site investigation, mechanics of road construction and turbine bases fundamental to understanding associated risk;
- Peat stability report carried out in accordance with the Scottish Executive guidelines on peat landslide hazard and risk assessments for proposed electricity developments incorporating findings of the GSI Irish Landslides Working Group;
- Both previous peat stability assessments confirm suitability of large areas of the site for wind farm development;
- Peat depths vary on site from zero to 5m with 90% of peat depths taken less than 2m in depth with 9 of the 11 turbines located in area where peat depth are less than or equal to 1m with peat at T1 and T5 1.2m and 1.4m deep respectively;
- Site is predominately flat or of moderate slope with only significant gradients on eastern part of the site and most of turbines located where the surface gradient is low and peat stability risk correspondingly low;
- Conservative factor of safety (FOS) analysis was carried out for the full site using Infinite Slope Stability analysis;
- Rill drainage perpendicular to the ground slope is not considered to present the same potential risk of propagation of a peat slide as cutting the peat fabric across the slope.
- Output of the assessment was that the selected area for the peat deposition area represented an insignificant risk of peat slide as it is located predominantly in an area of low slope <math><3^\circ</math> with over 80% of the area having a FOS in excess of 8 with the remaining 20% between 4 & 8;
- Ground bearing rock fill berms will not be bearing on peat as the berms will be excavated to rock with details set out in drawings 15047-5041-A and 15047-5042-A;
- Extensive site reconnaissance completed in gathering the peat dataset confirms none of the infrastructure is located in the type of peat that could result in extremely low shear values;

- Selection of constant value of 5kpa for shear and its application in FoS analysis entirely consistent with best practice when used in a manner informed by the actual site conditions;
- Construction Feasibility Assessment uses a graduated risk allocation for each of the risk criteria so that once peat depth of slope individually exceed a certain level they move up a band with the risk combination matrix arrived at through site experience based on the constructability output of the assessment;
- Uncertainty associated with measuring in-situ peat strength has been removed using a conservative constant value thereby ensuring reliability of the outputted assessment with the assessment methodology implemented on many sites around the country;
- Derrybrien bogslide occurred on a site with significant peat depth, slope and where sausage cutting practices had taken place with none of these characteristics applying here;
- Reference and comparison to Derrybrien does not take account of advances through experience in understanding and the approach to assessment and construction in the peat environment since 2003;
- Applicant has adopted the Scottish Executive Guidelines from the outset with a thorough site investigation followed by a full quantitative and qualitative risk assessment of the site;
- Reference to the slopes at T8 (11.82°) and T13 (10.62°) do not take account of the nominal peat cover at these locations with no recorded failures of peat at this combination of depth and slope;
- Blanket bog in study area subject to various management practices including afforestation, cutting, draining, burning and grazing with quality of blanket bog varying across the site;
- Restoration of selected lowland blanket bog and wet heath from historic turf cutting and restoration of c.7ha of blanket bog and wet heath habitat currently under coniferous plantation;
- No development on site will see continuation of existing management – peat cutting, conifer planting;
- Perceived contradiction of peat cutting and renewable energy operations matter to be resolved at national level with a national strategy on peatlands proposed;

Impact on SAC/NIS/Ecology

- Connemara Bog Complex SAC set back 200 metres and deemed appropriate by the NPWS with nearest turbine T3 set back 230 metres;
- Conclusion of the NIS was no adverse effect on the integrity of the SAC with no negative impact on hydrology of the SAC with the blanket bog habitat within the SAC separated from the proposal by An Sruthan Bui along the S-W boundary;
- Devil's-bit scabious recorded as occasional and not abundant during the summer of 2013 within the site and applicant not aware of survey data supporting contention that it was abundant;

- Given timing of the RFI a survey for Marsh Fritillary conducted after September of no use with an alternative survey of Devil's-bit scabious, the host plant carried out;
- No observations of marsh fritillary adults made in two years of survey;
- Following consultation with NPWS red grouse management plan to be implemented which limits construction during the breeding season;
- Kerry Slug is not a qualifying feature of conservation interest in any of the sites identified in the NIS with no slugs recorded on site with the surveys precautionary;
- Lesser horseshoe bat qualifying interest in the Ross Lake and Woods SAC situated c.2km from the site and not recorded on site with contention that bat survey inadequate unfounded;
- Applicants no opposition to inclusion of post construction ornithological monitoring recommended in the EIS and a requirements to undertake same as per condition 4 of the notification;

Layout Changes and Project Design

- Re-design of the proposal was done by identifying environmental sensitivities, analysing and mapping environmental constraints and then the iterative design process and was not driven by engineering and drainage concerns;
- Current proposal makes a number of modifications to the original application made having regard to archaeology and peat slippage risk;
- Changes include:- T2 repositioned and T4 and T12 excluded to address visual concerns on monument GA067-029 at peak of Knockranny Hill; Positions of T7, T11 and T14 moved to remove T7 from within the farm complex facilitating rerouting of internal roadways to a less sensitive area; T8 repositioned to increase buffer to 20 metres of cultural feature CH53 also increasing distance from zone of identified peat risk; T13 repositioned to facilitate move of T8 above with same results; T10 excluded to increase separation distance of onsite infrastructure to residential receptors to over 1km; Substation moved to western section of the site to address concern of proximity to existing roadway; Number of turbines reduced to 11 reducing excavation required and extent of road; Siting of infrastructure on peat stability risk zones has been avoided; T8 located constructability risk area relating to slope which can be addressed by design and does not pose a peat stability risk with entrance located across the Arderroo River changed because of changes to the onsite internal road network;

Consultation Process

- Consultation process outlined in detail with no unwillingness on the applicant's part to engage;
- Issues raised at information days and consultation undertaken were dealt with by a series of design changes and assessments during the preparation of the layout and EIS;

- Fundamentals of a Community Impact Statement (CIS) undertaken and results recorded in the EIS with revised layout and community benefit scheme reflecting this;
- A heritage resource project proposed which would provide on-site interpretive resources;

Surface Water and Hydrology

- Incorrect that negative hydrological impacts associated with adjacent SAC recognised in previous application as the findings of NIS accepted by Galway Co Co and the Boards Inspector with the reasons not related;
- Design of the water crossing is more conservative at 0.5% AEP and a design flow rate of 9.6% which is more conservative than the OPW's requirement that there should be a freeboard of 300mm between bridge soffit and the water surface level with a storm event with 1% annual exceedence probability (AEP);
- Identification of fresh water pearl mussel in the Owenboliska system in the Galway wind park EIS later confirmed as a misidentification;
- Reference to quote in Aquafact report of a tributary in Knockbane River not in context as no flow patterns proposed to be altered and proposed site not hydrologically linked to the stream referenced;
- Distance between nearest stream and turbine (T1) is 60m;
- Inland Fisheries have visited site and satisfied proposal can be constructed without detrimental adverse effect on river systems;

Residential Amenity/Health/Property Devaluation

- Guidelines on EIS caution on inclusion of topics outside the scope of EIS including property prices;
- EIS includes comprehensive noise and shadow flicker assessment and does not fail to consider appellants (Walsh) property with the residence denoted as no. H2 in the shadow flicker assessment and House N1 in noise assessment with no significant effect;
- Noise limits adopted for the purpose of the wind farm noise assessment are clearly described in the EIS;
- Permanent met mast no longer installed on site and therefore not possible to determine hub heights at two different wind speeds;
- 10 metre mast used in accordance with IOA best practice guidelines with a correction to take account of the wind shear characteristics on the site;
- Issue of tonality dealt with in an appropriate manner common at pre-planning stage;
- Guidance taken from the Institute of acoustics – a good practice guide to the application of ETSU-R-97 for the assessment and Rating of Wind turbine noise;
- Location of the 10 metre mast proximate to T2 is considered appropriate for the purpose for the assessment undertaken;
- Regardless of background noise monitoring the predicted worst case scenario results at all locations were below the lowest applicable limit (L_{90} 40dBA) demonstrating

that planning limits would be achieved at these locations regardless of wind speed and wind shear considerations;

- To avoid noise impacts number of turbines excluded to ensure separation distance between turbines and nearest house increased to over 1000m;
- Shadow flicker assessment carried out using conservative input parameters provided in EIS and indicated that shadow flicker that may be experienced is significantly below the DoEHLG Guidelines and the threshold for annoyance;
- House locations at Knockranny beyond 1 km, with a number not having windows in western gables and with topography protecting them from un-obstructed line of sight of any source of flicker;

Amenity/Landscape Issues

- Proposed site not part of Connemara Mountains and proposal would not obstruct, obscure or significantly detract from views of the Connemara Mountains with the proposal part of a cluster of permitted wind farms in some long distance views;
- Only limited views of proposal from the N59 with no significant negative visual impact;
- Table WE11 of the Galway Wind Energy Strategy summarises separation distances to other features and states that distance to public roads is context specific and to be agreed between planning and roads with the Local Authority agreeing with subject proposal;
- Existence of turbines (T1 & T3) would not restrict the use of the local Knockranny Road for amenity uses with the proposal improving road access;
- Criticism that negative visual impacts are not communicated in the EIS contrary to photomontages 10, 11 and 12 viewpoints representative of local views with the assessment of same acknowledging the negative visual impact;

Tourism/Language

- Proposal is located within the Galway Cluster Zoning for wind farms with other wind farms granted in the general area and will not impact on tourism;
- Proposal will not have an impact on the Irish Language with the issues around the language relating to other matters;

9.3 Third Party Response to Other Third Party Appeals

Martin Walsh responded to the other third party Appeals supporting content of same referencing elements of the appeals which the appellant supports and noting a number of matters which include the following:

- Applicant and Planning Authority failed to demonstrate site suitability and appropriate mitigation of environmental impact of peatland displacement consequential upon the development of the proposed site;
- Archaeological assessment in the EIS inadequate as it does not address the overall value and interest of the site as a multi-layered archaeological landscape;

- EIS submitted fails to adequately address the importance of the development site as a significant buffer zone to protect the Connemara Bog Complex SAC 2034;
- Proposal is inconsistent and in conflict with the report of the NPWS' Assessment, Monitoring and Reporting under Article 17 of the Habitats Directive 2006;
- Overwhelming view of the local community is hostile to the proposal on archaeological, environmental and ecological grounds with no appropriate regard to the informed views;

9.4 National Roads Authority

The Board forwarded the application documentation to the NRA who note in their response that they had no record of having received the initial application from Galway County Council. The NRA note that the development accesses the non-national road network but that junction upgrade requirements to junction of L54534/N59 are outlined in Section 13.2.1.3 of the EIS. The NRA welcome the inclusion of Condition No. 15(f) of the Decision of Galway County Council and that any such works to the junction are in accordance with the NRA DMRB and subject to RSA as required by condition 15(e). The cumulative impact of projects on the capacity of the national road network in the area is also noted as identified in section 13.3.3.2 and recommend an appropriate Traffic Management Plan as identified in section 13.4.1.3 should be a requirement of any decision.

10.0 OBSERVERS

There are 17 no. observers noted in relation to this appeal. Many of the issues raised have been raised in the appeals outlined above so the issues where already raised are briefly summarised and outlined in more detail where not previously raised as follows:

Archaeology

- Only site locally within the wind strategy area that contains any archaeology of any significance with the site on the edge of the wind zone;
- Desecration and destruction of a listed monument (GA067-033 – children's burial ground) inconceivable contravening policy HL29 (protection of burial grounds);
- T2 negative impact on the Knockranny ring fort (as noted by ABP in the previous application) with a negative impact also likely on the recently discovered Mullach A Leasa Hillfort;
- T6 would destroy a cillin – a registered national monument;
- T8 and T13 negative impact on the Knockranny ring fort (as noted by ABP in the previous application);
- No evidence for applicant's archaeological expert to dismisses claims relating to a number of prehistoric sites of fulachtaí fia;
- The applicants report appears fixated with demonstrating that all aspect of the site which are not clearly of prehistoric vintage must date from the 19th century;

Peat Stability/Landslide

- Questioned why permission granted when the Planner's report notes that further investigation on this matter is required. Cited risks from experts referenced agreed with.
- T3, T5 and T7 and the peat deposit area would pose a significant risk of contamination of and peat slippage into the Connemara Bog Complex;
- T13 and T8 would pose a risk of contamination and peat slippage into the Sruthan Chnocan Raithni;

Turbine Noise

- Reports on background noise levels challenged as two large engines were working when the study was being carried out. Need for a private and independent study.

Excessive wind farm development in the district

- Due to the number of outstanding permissions for wind farms in the area the observer is opposing applications until the others are built.
- Wind farms permitted for 15 years with no such assessment undertaken in relation to impacts on sustainability.

Wind Energy in General

- Sustainability of wind farm development questioned in light of new technologies and the ceasing of subsidies in the UK outlined;
- No Community Impact Assessment prepared as per Section 5.1.5 of the Galway County Wind Energy Strategy;
- EIS understates the impacts of the proposal on the local community with no proposals to address same;

Ecology

- EIS not complete in the absence of a report on the marsh fritillary butterfly;
- Serious impact on ecosystem of the area already from coniferous forests with further disturbance of the ecosystem likely to create irreversible damage;

Hydrology

- Abhainn na n-Ard Doiriu is part of Boluisce system which is habitat for Atlantic Salmon and Sea Trout and the Knockbane River is habitat for the Lough Corrib Brown Trout with the rivers important spawning and nursery sites;
- Serious risk of silt and mineral run-off from such an extensive site into all of the local streams having a detrimental effect on the fish populations;
- T1 pollution risk to the Sruthan Chnocan Raithni water course on the eastern boundary of the site with T11, T14 and T9 a risk of contamination of the Owenboliska River System which is adjacent to the western boundary of the site;

Lack of Public Contribution

- If permission granted it is necessary for a condition requiring a large donation to be made to the local community.

Site Selection & Property Prices

- Site selection based on guidelines devoid of a specified code of practice.
- Value of property in the vicinity will be negatively affected;
- People put off buying properties near windfarms and within wind farm zones;

Monitoring

- There is inadequate information on how monitoring will take place on the community and the environment. No provision on independent monitoring and on proposals to stop works where necessary.

Decommissioning

- No provisions have been made on this matter. If permission given an adequate bond before going onto the site. Emphasised that the applicant is not a registered company in Ireland.

Irish Language Issues

- It is an objective to raise the number of daily Irish speakers in the Gaeltacht. Families will be lost from the area as a result of the development and damage will be done to the status of the language and to the aim of the Strategy.
- No translator available in the Gaeltacht area at the consultation.
- The EIS is not in Irish.
- Reference is made to the role of Údarás na Gaeltachta in the protection of the Irish language, the value of the living spoken language, and the modern day pressures thereon with Údarás recommending that a language impact statement be sought and proper language conditions be put in place.

Arderroo Co-Op

- Some members opposed to allowing access to Knockranny with legality of the permission questioned as not all members of the Co-op present or informed of the meeting;

11.0 ASSESSMENT:

Introduction

I would note the applicant's reference within their documentation to the decision of the Board in the previous application which they state gave clear direction on the two issues to be dealt with and they contend that it importantly did not identify any other issues based on the extent of information and opinion submitted. I would suggest that this is a very narrow interpretation of the Board's role and consider that the application herein is a new application considered de novo on its own merits and the Board must address all

of the salient matters arising in respect of this application. The issues arising in relation to the proposed development will be addressed in turn and include:

- 11.1 Preliminary Legal Issue
- 11.2 Compliance with Policy
- 11.3 Archaeological Impacts
- 11.4 Peat Stability
- 11.5 Landscape and Visual Impact
- 11.6 Residential Amenity
- 11.7 Ecology
- 11.8 Water Quality and Surface Water Drainage
- 11.9 Other Issues

11.1 Preliminary Legal Issue

The appellants suggest that the use within the application of three different boundaries planning application area, EIA project area and landholding jeopardises the validity of mitigation measures and/or conditions on the EIA project area/landholding outside the red line boundary. The appellants contend that the enforceability of any mitigation over the area indicated in Fig 2.2 with regard to peatland management, ecology and archaeology is in question with particular concerns for the part of the planning application area to the west of the Abhainn na nArd Doiriu. It is requested that this issue is addressed and resolved as a preliminary matter and if consideration of the application proceeds that revised public notices be sought for the entire landholding.

The EIS states at section 1.2.2 that the EIA project area differs to that of the planning application development boundary. The planning application project area includes all lands subject to direct disturbance from the project and associated infrastructure with the proposed development lands as per the planning application shown at Figure 1.1. The project area for the EIA study relates to the extent of lands which were available to the applicant for the subject development. It is stated that Figure 1.2 shows the minimum extent of the lands considered as part of the environmental assessment. The EIA takes account of the spatial limits of individual environmental components outside the EIA project area boundaries where an effect can be reasonably expected. I consider that as long as the applicant has sufficient legal interest in the lands within the EIA study area where it is proposed to undertake many of the mitigation measures then this is not a matter of concern to the Board. I would refer all parties and the Board to Section 34(13) of the Planning and Development Act 2000, as amended which states that “*A person shall not be entitled solely by reason of a permission under this section to carry out any development*”. I do not consider that there is any legal issue arising in this regard.

11.2 Compliance with Policy

While, the appellants raise a raft of policies from the current Galway County Development Plan throughout their grounds of appeal there are, in my opinion a

number of more specific matters arising in respect of compliance with policy. Firstly, the policies included in the previous reason for refusal and secondly, the Galway Wind Energy Strategy both the strategy itself and also the policies relevant to the consideration of development within the Strategic Area. I deal with each in turn.

While I consider the matter of Archaeology separately in the following section, I would suggest to the Board that the policies of most relevance in respect of the proposed development are policies HL23 and HL25 which effectively establish the tests by which the current proposal must be assessed. Policy HL23 seeks to *“support the preservation, conservation and maintenance of archaeological sites, together with the integrity of the setting of these monuments and sites. Development, which would destroy, alter or damage monuments or archaeological sites, or cause inappropriate change to their settings and character will be prohibited”*.

Therefore, the proposal herein must, in my opinion, prove to the Board that development would support the preservation, conservation and maintenance of archaeological sites including ensuring the integrity of the setting of any such monuments and sites which the policy aims to protect. The development must therefore be tested as follows: (1) would it destroy, alter or damage monuments or archaeological sites and (2) would the proposal cause inappropriate change to their settings and character. The key tests here are detrimental damage on such sites (1) and (2) inappropriate change which I would suggest is not the same as any change. The test is that the change arising would be inappropriate.

Policy HL25 seeks to *“protect and preserve archaeological sites, which have been identified subsequent to the publication of the Record of Monuments and Places”*. This policy again seeks to protect and preserve archaeological sites but in this case those identified following the publication of the RMP. This is quite specific and relates to only a number of particular sites. These issues will be addressed in the following section which deals with archaeology.

In respect of the Galway Wind Energy Strategy, a number of appellants request in their grounds of appeal that the sites inclusion within the strategic area should be reconsidered in light of changes since the drafting of the strategy particularly in respect of archaeology. I would suggest to the Board that the Board have no role in the matter of the amending the strategy. This is a matter solely for Galway County Council. The Board has no policy making role and is charged with considering the merits of each application or appeal as it arises notwithstanding what circumstances may have altered.

In relation to compliance with the Strategy as a policy of the Planning Authority, as noted above in Section 6.1.2 proposals, the Galway Wind Energy Strategy states at Objective WE1 that wind energy projects within this area must: *Demonstrate conformity with existing and approved wind farms to avoid visual clutter; Be developed in line with the Planning Guidelines for Wind Energy Development (DoEHLG 2006) in*

terms of siting, layout and environmental assessment; Be accompanied by a HDA under Article 6 of the Habitat Directive where they may result in adverse effects on any Natura 2000 site and; Be developed in a comprehensive manner avoiding the piecemeal development of the land designated as Strategic Areas. It is also stated that is a requirement to “suitably manage land use and infrastructure development within this area”. Therefore policies related to landscape, the habitats directive and other policies related to residential amenity are also considered of relevance in the consideration of this proposal. These issues are considered separately in the following sections.

11.3 Archaeological Impacts

11.3.1 Context

In respect of archaeology and cultural heritage the key considerations, as I outline in the previous section are the tests which arise in respect of the previous reason for refusal. The previous reason for refusal expressly refers to policies HL23 and HL25 and states that *“the archaeological surveys submitted on file identify an archaeological landscape of post medieval settlements with intact associated fields systems and several prehistoric features newly-documented on the site, including fulachtaí fia, kilns and huts. It is considered that the number and layout of wind turbines and the locations of the associated access roads, do not take into account of the archaeological heritage of the site. The development, as proposed, would therefore be seriously detrimental to the archaeological and cultural heritage of the site. Furthermore, recorded national monument GA067-029 is located at the peak of Knockranny Hill, and the Board is not satisfied, on the basis of the submissions on file, that the turbine layout, which surrounds the hill, takes sufficient account of the visual impact on this monument or would not seriously injure the setting of the monument. The proposed development would therefore contravene the policies of the Development Plan and would be contrary to the proper planning and sustainable development of the area”*.

Therefore the tests which the current proposal must pass, in my opinion, are as follows:

- (1) would it destroy, alter or damage monuments or archaeological sites and
- (2) would the proposal cause inappropriate change to their settings and character.
- (3)The third test relates to policy HL25 which seeks to *“protect and preserve archaeological sites, which have been identified subsequent to the publication of the Record of Monuments and Places”*. This policy again seeks to protect and preserve archaeological sites but in this case those identified following the publication of the RMP. This is quite specific and relates to only a number of particular sites which will be addressed below.

The appellants have submitted submissions from a number of archaeological experts providing their opinion on a range of matters related to the application site and surrounds. A number of the issues raised are strategic policy issues which I would note

bear little relation to the Boards role including the scope of the National Monuments Act and the merits of post 1700 sites. Another expert Mageen considers that the fact that no archaeological testing was undertaken by the applicant and that there is no discussion of anomalous features identifiable on aerial photos indicates their obfuscation and wilful denial regarding pre-1700 features remains. I would note that archaeological testing is not a requirement for the preparation of an EIS. Furthermore, the Department have provided their comments and suggest pre-development testing which is commonplace. In addition, there is also some considerable discussion particularly from Audrey Horning (May 2012) on the merits of local knowledge which she states should not be denigrated but appreciated and treated seriously. I consider that this is an obvious conclusion but if there is no evidence to support the local contentions put forward then it must be appreciated that the knowledge rather than being denigrated is not supported.

I would note that Dr Eoin Grogan in his response to the appeals notes that that site has been the subject of intense scrutiny by a significant number of professional archaeologists and that it is improbable that any visible archaeological site or feature has been overlooked. He states that while there may be differing interpretation of some of the components the dataset is well recorded and I consider that this is a reasonable statement. He considers that the proposed development has been substantially re-organised to avoid any material impact on the identified physical elements of the cultural landscape. This assessment seeks to address whether this is the case. In the interest of clarity, I will firstly address each of the registered RMP sites in turn in respect of the tests above and then address non-registered sites set out in the EIS and those raised in the appeals by the appellants and finally address the issue of the complex of interrelated sites.

11.3.2 Potential Impact of the Proposal on Individual Sites

Knockranny CH24 (RMP GA067-029) Ring Cairn

Described in the EIS as a circular cairn located on the board level summit of Cnoc Raithni with extensive views over the surrounding area, the feature is stated to have an external diameter of 11.05m and internal diameter of 7.35m with an irregular interior and while its original composition has been altered it is possible that it is a bronze age monument. While Erin Gibbons suggests that all the hill top cairns in the area combine to suggest a significant upland presence in the area in remote times, Dr Grogan expresses caution at linking unclassified, undated and widely separated monuments to each other, rather, he states that hilltop cairns occur in inhospitable environments and are intended to provide pointers for local prehistoric communities visible from areas of settlement but not necessarily within areas of settlement. This is contrary to Gibbons who asserts that it is probable that the site was of political or religious significance in the regional landscape.

In respect of the potential impact of the proposal on the monument, the first two tests apply. The applicant's expert states that the Knockranny hilltop cairn is outside of the

development area. In this regard I consider that the proposal, given that the nearest turbine is T2 at 280 metres from the Ring Cairn, would not destroy, alter or damage this monument/archaeological site. In relation to the second test, whether the proposal would cause inappropriate change to its settings and character, the EIS states at section 14.3.1 that the important view shed for the cairn is to the east overlooking the landscape that would have been occupied by the cairns builders. The closest turbine has no impact either on the integrity of the location, as I acknowledge above, or its intended view-scape. Turbines T8 and T13 to the northwest will be visible from the cairn but it is considered would not have a significant impact. Viewpoint 11 of Volume 4 of the EIS (local road at Oghery) provides a view from the east looking towards Knockranny Hill and the ring Cairn. This view highlights that the setting of this monument would be changed by the presence of the turbines, particularly T2, T13 and T8. However the test is whether this change is inappropriate. The viewpoint is stated to be 1.43km from the nearest turbine and facilitates, in my opinion, a good vantage point to make a judgement on this question. While the turbines are indeed substantially different to what currently exists on the site, that being, very little by the way of structures, I do not consider that they are inappropriate in the context of the setting of this monument.

Knockranny CH72 (RMP GA067- 033) - Possible Children's burial ground (Cillin)

There is considerable discussion within the submissions on file on this site. This site was identified in April 2013 and therefore postdates the previous decision made by the Board. I would also note that some of the documentation including the EIS refers to the nearest turbine to this site as T7 when it is T6 therefore I will refer to T6 throughout my assessment. The EIS noted that this site was indicated, based on local information as being located within a cluster of fields to the east of Cloghvalley B and to the south of the current access road. It is stated that there is no visible trace of the feature, the area it is stated which is now occupied by five small fields was an outlying part of the original land enclosure of the area. In terms of potential impact it is stated that the closest part of the development consists of the platform for T6, immediately to the northwest which lies outside what the applicant's expert refers to as "*even the generalised location of the possible Cillin*". It is stated that while it will have no impact, given the inexact Cillin location, careful archaeological supervision of any associated topsoil removal should be included in the mitigation.

Galway County Council sought further information in respect of the possible Cillin on the basis of the report received from the Department of Arts Heritage and Gaeltacht which stated that there are concerns regarding the presence of a children's burial ground in the vicinity of turbine no. 7 (T6) and the applicant is required to address this issue by carrying out archaeological pre-development test excavations at the site of turbine 7 and submit its findings for consideration by the Department of Arts, Heritage and the Gaeltacht (Archaeology) and the Planning Authority. In this regard the applicant should be advised that the omission of turbine no. 7 (T6) may be necessary. In response the applicants noted that Figure 2 denoted the possible Cillin relative to the location of proposed T6 and notes that the impact of the proposal on the feature is fully considered

in Volume 2, Chapter 14 of the EIS with mitigation also proposed. Figure 2 also notes that the separation distance between T6 and the Cillin is 57 metres with the recommended set back 20 metres with the Cillin more than adequately protected. The applicant stated that they accept the recommendations of the Department for both pre-development testing and archaeological monitoring. It is noted that there is no visible trace of the feature which is based on local unconfirmed information with the separation distance ensuring that there is no impact and in this regard, it is considered that given the recommendations proposed that eliminating T6 not warranted.

Firstly, much of the expert views set out in the appeals consider the sensitivity of this site which I would acknowledge but they also appear to consider that the local knowledge existing within the area was not given enough consideration in the context of this sensitive site. Erin Gibbons considers that there are many ritual monuments within the uplands of Knockranny including a children's burial ground known as a cillin which appears to be located within a circular enclosure on the edge of Cloghvalley village. Mageen considers that much remains on the site to be understood with the situation further complicated by presence of a Cillin identified in April 2013 as GA067-033 and a highly sensitive area for any community which has not been accurately located. Mageen further contends that cillins were often unmarked and therefore that there is nothing remarkable about the absence of gravemarkers but that there is a well established connection between cillins and the reuse of consecrated ground or abandoned ecclesiastical sites. Horning concurs that the oral tradition for the existence of a cillin be taken far more seriously and that appropriate survey informed by local knowledge takes place. Ronayne in her criticism of the applicant's use of local knowledge states that the fact that there is local memory of a cillin, which research has shown are located close to 19th century settlements, is significant and unfortunate that EIS appears to take a negative attitude to the community's knowledge and memory. The applicant's expert responded to the appeals with a similar view noting that the precise location of the possible cillin is unknown but local tradition indicates that its located as per the RMP (GA067-033) with T6 reconfigured to address same. Reference is again made to the inexact locational information and to the consideration that appropriate mitigation or pre-testing is required (Condition 11 of Galway Co Co Notification). It is also stated that Gibbons reference to the feature appearing to be located within a circular enclosure is not supported with any evidence and reference to re-use of sites of Christian association unsubstantiated.

I have some issues with the experts who criticise the applicants approach to research in respect of these sites. While I agree with Mageen that a cillin is a highly sensitive area for any community, in order to determine where the site is, and thereby protect and preserve same, an element of investigation is required. This is, I would consider, an accepted part of archaeology. If the principle of not permitting a development because of what might be located under the surface without any recourse to investigating same were to be employed, arguably, there would be no development or removal of any material within any area. While I agree with Ronayne that local memory of such a

feature is significant it cannot be specific to a certain area of this site particularly given the open expansive landscape within which the site is situated. In my opinion, local knowledge is part of the research portfolio required. Therefore, while I acknowledge the sensitivity of this site and its identification after the previous application and decision, I consider that the principle of locating a proposed turbine within the vicinity of same, subject to appropriate set backs, is not inappropriate.

Notwithstanding, the key tests in respect of the impact of the proposed development on this sensitive site, are as above, whether it would (1) destroy, alter or damage monuments or archaeological sites and (2) would the proposal cause inappropriate change to their settings and character. I would suggest that with a proposed separation of 57 metres from where it is proposed the Cillin is located and the monitoring of topsoil removal by an archaeologist that this would mitigate against any potential impact on the integrity of this site. Having regard to the absence of any features above ground I do not consider that the proposal would cause inappropriate change to its setting or character.

Knockranny CH69/70 (RMP GA067- 032) - Hut Site

This feature is described in the EIS as an oval structure defined externally by a low boulder wall with the west northwest side unenclosed which it is stated may represent an entrance. It is located in wet terrain to the northwest of the Cloghvalley A settlement. The applicant states that it has been correctly designated by the DAHG as a hut site contrary to Gibbons suggestion it is a fulacht fiadh. It is noted what while it might possibly be of prehistoric date it is similar to another small clearly 19th century hut or shelter (CH39.1). It is stated that the feature is entirely outside the development area. In respect of the tests above, I do not consider that the proposal would either impact on the physical integrity of this feature nor would it inappropriately change its character or setting.

11.3.3 Former Settlements on the Site

Cloghvalley A & B

Cloghvalley is on the west and southwest edge of the proposed development area comprising an area of land enclosure with two distinct but integrated elements centred around separate settlement clusters. Section 14.2.1.2 of the EIS refers to architectural heritage and notes that a total of 27 buildings of apparent 19th or early 20th century date have been identified in Knockranny townland. 21 of these are within the proposed development area but outside of the development footprint. They include well preserved rectangular and sub-square houses and associated farm buildings. The buildings are described as being of dry stone construction and most are well preserved standing to full wall height. Features of interest in the buildings include rounded external corners of a rectangular house at Cloghvalley B. It is noted that an examination of the OS six inch 1842 and 1909 and modern maps as well as an examination of the remains on site demonstrate a cycle of construction, abandonment and reconstruction from the period before 1842 to present day. It is stated that many of the buildings were

abandoned by the time of the 1901 census with the only evidence of later use around Cloghvalley B which may have been established prior to 1828 with a cluster of three buildings shown on the 1842 map. Appendix 14 provides a detailed outline of the history of the settlement with details of the census and historical extracts dating families within these settlements. While Cloghvalley A was abandoned by the early 20th century, Cloghvalley B remained in use until the late 1950's. In relation to how the proposed development impacts it is stated that the access road to T7 cuts across the outermost southern field perimeter of Cloghvalley B. While the proposal would destroy part of the southern field perimeter I do not think that this impact on the integrity of the site is significant in the context of the overall settlement neither do I consider that there would be an inappropriate change to the character or setting of this site.

Settlement 2

This settlement is located on the northwest edge of the proposed development area and is described as consisting of a discrete complex of fields with associated dwellings and farm buildings which may have been established prior to 1828 but the primary land enclosure was in place by 1842. It is noted that there is extensive and well preserved evidence of spade cultivation in the form of lazy beds. It is considered that the farmstead was abandoned before 1901. The access road to T11 cuts access the outermost eastern field perimeter of settlement 2. Similar to the impact on Cloghvalley B above, I do not think that this impact on the integrity of the site is significant in the context of the overall settlement neither do I consider that there would be an inappropriate change to the character or setting of this site.

Both Gibbons and Horning refer to these settlements in the context of their antiquity. It is noted that Horning states that descriptions of structures in locations CH16 and CH40 strongly suggest to be of late medieval date rather than of post-1700 vintage based on the subrectangular plan of the buildings and the use of the inward batter. However, Grogan for the applicant disputes this stating that Gibbons reference to Goslings reference to rounded corner houses cites that they have a broad range-date with the house of this type at Cloghvalley (CH16.01) built after the completion of the 1st edition of the OS map (post 1842). I do not consider that there is any evidence to refute Grogans assertions in respect of the origin of these settlements.

11.3.4 Other Sites not on the RMP

CH41 – hut circle or shelter & CH53 - Circle

This feature is described in the EIS as a hut circle or shelter with two annexes and it is stated that there is no clear dating evidence for this little cluster of features which it is stated is of crude construction and its exposed location indicates that it is a herdsman's shelter associated with early modern grazing. The appellants however suggest it is significant as an important aspect of upland prehistoric settlement. The EIS states that the proposal has no direct impact on this site with the nearest point of the development the access road to T11 which is 32m to the southwest. **CH53 – Circle** is described in the EIS as a crude circle formed by a single line of boulders and appears to be a casually

erected temporary modern animal shelter. In relation to impact it is noted that the proposal has no direct impact with the closest turbine T8, 55m to the south.

Mageen refers to **CH49 and CH51** which are both outside the subject site, noting that much remains on the site to be understood including CH49 - anomalous stone structure, CH51 – rectangular structure. Both are detailed in Appendix 14.1.

Possible Pre-bog or ancient field walls or alignments

The EIS refers to 4 features in particular within the site as follows: CH18.06 which is described as a short section of field wall in the southeast corner of the proposed development area which is of uncertain but possibly ancient date. CH29 located close to the summit of the low western summit in Knockranny and c. 16metres in length. CH60 – casual section of walling with no convincing evidence that it is pre-bog or ancient. CH18.20 remains of a curvilinear field wall that follows the contours of a low spur with no evidence that it is ancient. The EIS considers that none of these features will be impacted upon. I do not have any reason to refute any of the statements made in the EIS in respect of these features.

Field Walls within the Cloghvalley Settlement

CH17.10, CH17.11, CH17.13 are located within Cloghvalley settlement B with CH17.21 within Cloghvalley A. The EIS states that they appear to be poorly maintained or redundant features within a managed nineteenth century farming landscape. It is noted in the EIS that the proposal has no impact on these features. No evidence or testimony has been provided to contradict same.

Bog Butter or Sacred Bog Butter

This feature or the location of this find is highlighted on the appellant's aerial photography. Mageen refers to the discovery in 1998 of bog butter in a wooden container as another indication of the antiquity of the site given their Iron Age classifications. The applicant states that the discovery of bog butter in a wooden container to the west of Knockranny was not reported to the National Museum of Ireland and it is disingenuous to label this 'sacred bog butter' given the absence of any specific record. While there may or may not have been a find of such a feature I would note that the proposed site of same is outside of the development area and the proposed development would not impact on the physical integrity of this site nor inappropriately alter its character or setting.

Holy Well

There are a number of references to a Holy Well on the site and one is denoted on the aerial photograph prepared by the appellants outlining the features on and in the vicinity of the site. The applicant states that there is no testimony to support references to the Holy Well as a focus of local spiritual devotion as opposed to a source of water with the well outside the development area. I do not consider that the proposed

development would impact on the physical integrity of this site nor inappropriately alter its character or setting.

Possible Hillfort - Mulach a Leasa

The grounds of appeal pay considerable attention to a feature located to the east of the subject site which is suggested to comprise a possible hillfort and which is called Mullach a Leasa. Erin Gibbons suggests that a possible new feature known as Mulach a Leasa was recently identified within the study area but further study and investigation is required before making an assertion that it is a hill fort but the surrounding monuments and commanding views strengthen the possibility that it is the remains of a multi-vallate hillfort within an ancient archaeological landscape setting. Mageen, considers that of particular interest is a substantial hillfort at Mulach a Leasa and although outside the subject site is adjacent to it. He states that establishing an archaeological provenance for this feature would assist in interpreting the archaeological context for Knockranny and refers to a Unit of the University of Oxford which is preparing an Atlas of Hillforts which he states unambiguously recognise Mulach a Leasa as a hillfort with a full survey to be undertaken. He considers that the applicant's dismissal of this opinion is not justifiable and while the field walls at upper levels have been rebuilt in more recent times this does not preclude its designation as a hillfort.

Ros O'Maolduin suggests that the size and form of the site suggests it is a Late Bronze Age hillfort and as the only hillfort identified west of the Corrib in Co. Galway it is particularly significant. He asserts that granite parts of west Galway do not have much visible prehistoric archaeology with the granite areas less densely settled than the limestone areas to the east and north of the Corrib and south across Galway bay. It is suggested that if the Knockranny site is a Late Bronze Age hillfort it suggests that someone was concerned with movement into the catchment of the Owenboliska and that the area of the granite Connemara hinterland may have been a focus of prehistoric settlement

The applicant's expert disagrees with the assertions made about this feature. He states that it is wholly incorrect to state that the possible stone enclosure to the east of the development area is 'now considered to be substantial hillfort at Mulach a Leasa'. He states that the feature is outside the proposed development area and holding with no material impact on the scheme. He then continues by providing a rebuttal to some of the assertions made in respect of the feature. He states that no evidence has been advanced to indicate that it is an enclosure with the 1st edition map showing only the angular northern portion and the enclosure only shown on the second edition. The erratic nature of the perimeter clearly identified in the mapping but marked by vegetation in the aerial photos is not in keeping with the constructional design of a single event enclosure suggesting the feature is an oval 19th century field with such fields a feature of landscape clearance particularly in rocky upland areas.

It is of note to the applicants agent that there is no mention made of the size of the proposed feature (c. 0.36 hectares) with established expertise in Irish hillfort studies identifying 1 hectare as the minimum size for these monuments with the smallest identified 0.95 ha in area. The suggestion that it is a bivallate site is entirely speculative and not conceivable that there would be no surviving trace of such an enclosure in such well-preserved landscape. It is also stated that its location on a low knoll overshadowed by Cnoc Raithni immediately to the west is incompatible with the definition of hillfort construction in elevated locations. In relation to the reference to the Hillforts Atlas Project at The University of Oxford, it is noted that it is in the early stage of research adopting an open and inclusive approach with no potential site left out at this stage but should be treated with considerable caution. It is concluded by the applicant that the feature at Mulach a Leasa may not even constitute an archaeological site and meets none of the recognised criteria for Irish hillforts.

I would note that there are some changes in the appellant's experts use of language to describe this feature. It is stated in places that it is a late bronze age hillfort and in others that it may be or language such as 'if it is' is used. Clearly the provenance of the feature has not been established. There have been no site investigations on the site of this feature. I do find the applicant's agent's argument in respect of the size of this feature quite compelling and their rebuttal quite convincing, particularly as there has been no investigation to date. However, this appeal is not related to the provenance of this particular feature. The feature in question, whatever future investigations may reveal, is outside the proposed development area and holding and in this regard, I agree with the applicants that it has no material impact on the scheme nor would the scheme impact materially on it.

11.3.5 The Complex of Interrelated Sites

One of the central issues proposed by most of the experts submitting their advice on the appellant's behalf surrounds the matter of the area comprising a complex of interrelated sites. The Gibbons report plots the individual listed monuments within the overall archaeological landscape with the suggestion that a multi-layered, multi-period archaeological landscape extending over several millennia and covering a 1 kmsq area exists within this area. It is considered that previous studies focused on individual sites and contended that the statement in section 14.2.1.1 of the EIS that it is highly improbable that early settlement activity would be represented in such a poor environment is incorrect. It is suggested that there is no cumulative impact of the proposal on the overall archaeological heritage with the monuments, villages and enclosures as shown in the overlaid aerial photography demonstrating the complexity of the upland archaeology complex which it is considered is of national importance;

Mageen considers that the archaeological landscape has been consistently misrepresented by the applicants with its importance to the locality and wider public understated. He states that the aerial photographs commissioned by OKREDC are by far the most comprehensive and detailed images of the area in question but that the

developer refuses to engage with them. As noted above, Mageen refers to the discovery in 1998 of bog butter in a wooden container as another indication of the antiquity of the site given their Iron Age classifications. He states that a growing body of opinion is inclined to support an earlier provenance for many of the features that the applicants are not willing to concede. He refutes the Applicant's opinion of an 'essentially 19th century phenomenon' by stating that they have failed to consider the older ring cairn (GA067-029) with aerial photographs appearing to reveal field systems and enclosures that do not fit the 19th century pattern of field improvement. Ronayne differs slightly by stating that there are indications of some awareness in the EIS that the landscape as a whole in different periods should be considered. She expresses concern that the EIS artificially separates the development area on a number of occasions from the surrounding areas and separates sites into components to be assessed individually rather than collectively.

The applicant's expert responds by stating that the photographs are impressive and illustrate some important details but provide no additional information for either the individual features or the overall landscape interpretation. It is stated that speculative reference implying the existence of extensive prehistoric archaeology referred to by Gibbons within or outside the site is misleading as no evidence has been presented. He refers to the apparent acceptance in general that the majority of the extant cultural landscape dates to the 19th century but where caveats are voiced suggesting elements of medieval or late medieval within this or adjoining landscape he considers that no material evidence for this period has been identified or presented. It is stated that it is outside of the remit of the EIS to assess, as proposed by Gibbons, the villages themselves, relationship with the upland hinterland, impact of the famine on these villages or subsequent land clearances. He considers that none of the architectural details noted by Gibbons and Horning about the houses in Cloghvally alters the identification of the structures as 19th century origin and it is considered that the statements made about origin are not supported by any concrete evidence or specific testimony.

The applicant's expert states that while it is prudent to recognise the potential for new discoveries the present understanding of the identified archaeology does not include clear evidence for either medieval or late medieval components. It is considered that the proposal included a detailed archaeological and historical overview of this material both as individual components as well as an integrated manifestation of human endeavour and social and economic history. Current best practice applies to the EIS, he considers, with archaeological concerns communicated by the local community during the consultation process which is reflected in the layout of the proposal avoiding features and providing mitigation measures to reduce impacts and the development of a heritage resource project to include on-site interpretive resources. It is concluded that the proposal was developed in close co-operation with the DAHG incorporating current discussions and planning for future more extensive heritage protection and

management resulting in more attention to the care of the 19th century landscape than would normally be required under current legislation.

There are two elements to this matter, in my opinion. Firstly, the matter of the complex of sites which it is contended indicates a landscape of medieval or prehistoric provenance and also the area as a 19th century landscape complex. In relation to the first matter, while I note reference to the features, which I have considered above, such as the possible hillfort and the bog butter may suggest a landscape dating to prehistoric use of this landscape, I have to agree with the applicant's expert that there is no clear evidence to support this contention. While some suggestion is made about the possibility that the settlements and other features identified may predate the supposed 19th century origin, no definitive evidence has been provided to support such a claim. Reference by Horning to descriptions of structures in locations CH16 and CH40 strongly suggesting that they are of late medieval date rather than of post-1700 vintage based on the subrectangular plan of the buildings and the use of the inward batter are not supported by any investigation or any other evidence. I do not therefore, consider that the Board have enough information before it to support the suggestion made by Gibbons that this is a landscape of national importance of earlier antiquity and furthermore, I consider that the response of the applicants to a number of the issues raised particularly in respect of the possible hillfort to be compelling in this regard. In relation to the 19th century farming landscape many of the issues arising relate to concerns surrounding the scope of the legislation in respect of national monuments and places in respect of features post 1700. This is not a matter for the Board who do not have a role in this regard. The impact on these features in respect of their protection under the County Development Plan provisions are a matter to which the Board have regard, as shown in the previous decision. In this regard, as I note in respect of the features outlined separately above, I do not consider that the proposal would alter, damage or destroy any of the aforementioned features neither do I consider that their setting or character would be inappropriately changed either separately or collectively by the proposed development.

Finally, in conclusion on the matter of archaeology, while the appellants have provided an array of very useful information including an aerial photograph of great interest, I do not consider that the proposal would alter, damage or destroy any registered archaeological features or features of interest to the antiquity of the area. While the proposal would alter the setting and character of the area, I do not consider that this alteration is an inappropriate change in the context of the archaeological features of interest.

11.4 Peat Stability

The issue of peat stability has been raised by a number of the appellants with a number of experts providing a critique of the applicant's submission within the appeals. I would note that the issue of peat was one of the reasons that the previous application was refused. Following a request for further information from the Board in respect of

PL07.239053 (Galway County Council Ref. 11/375), it was decided by the Board that notwithstanding the detailed geotechnical surveys undertaken, the Board was not satisfied that all geotechnical/peat slippage risks had been fully resolved for all turbine locations, and it is considered that the resultant risk of environmental damage is unacceptable, that the proposed development would therefore pose an unacceptable risk of environmental pollution and would be contrary to the proper planning and sustainable development of the area. The Board also noted that notwithstanding the detailed geotechnical survey work undertaken, some concerns remained with regard to turbine locations, and particularly those of turbines 8 and 13. The appellants have raised a number of detailed technical issues which are raised by Dr Olivia Bragg and Dr Padraig O Cathain and which are refuted by the applicant in their response to the appeals. These are addressed in the following section. I would note at the outset that it is stated by the applicants that the experts put forward by the appellants have not visited the site with the ability to understand the landscape on site, the mechanics of road construction and turbine bases fundamental to understanding associated risk. It is further stated that Dr. O’Cathain’s report is a desktop study of the peat stability analysis from the narrow perspective of mathematical analysis. They continue by stating that a peat study is not just a mathematical analysis but a process with many iterative steps including reconnaissance and ground proofing by experienced professionals. While Dr O’Cathain is fully entitled to make his observations which are acknowledged, I do tend to agree with the applicant on this matter.

Approach

There is much debate between the appellants and the applicant about the approach undertaken by the applicant in the Peat Stability Assessment. The appellant’s criticisms include a number of matters. Bragg states that laboratory measurements carried out at UCD on peat collected from the site informed the choice of value for the latest analysis. It is noted that of only 4 peat cores collected for the analysis one of which yielded no data and only the upper part of the peat profile was sampled in all cases with the possibility of failure in deeper parts of the peat profile not investigated. O’Cathain considers that the FoS analysis is of questionable value in the analysis of peat stability and that the analysis carried out by MWP is fatally flawed by their failure to establish the actual shear strength values of the peat at critical locations on the site. The applicant considers that the criticism of the previous three reports is based on the simplicity of the approach or the mathematical employment of FoS analysis which contrary to Dr. O’Cathain’s opinion is specifically recommended by the Scottish Executive Publication (2006) entitled Peat Landslide Hazard and Risk Assessments - Best Practice Guide for Proposed Electricity Generation Developments. The applicants explain that a conservative factor of safety (FOS) analysis was carried out for the full site using Infinite Slope Stability analysis. From this analysis it is stated that the infrastructure was proposed in areas with a FoS >4 based on an undrained S_u of 5kpa with the formula for FoS in undrained condition having 3 input values – shear strength, depth and ground slope with the 593 peat probes providing accurate data on two of these (depth and slope).

It is further noted that uncertainty about measuring the shear value in peat can be dealt with by adopting a conservative constant value with 5kpa known to be a conservative value for laboratory tested peat samples and particularly low for peat depths of less than 1 metre. Extensive site reconnaissance was stated to have been completed in gathering the peat dataset which confirmed that none of the infrastructure is located in the type of peat that could result in extremely low shear values. It is noted that the selection of constant value of 5kpa for shear and its application in FoS analysis entirely consistent with best practice when used in a manner informed by the actual site conditions. It is considered that the uncertainty associated with measuring in-situ peat strength has been removed using a conservative constant value thereby ensuring reliability of the outputted assessment with the assessment methodology implemented on many sites around the country.

Reference is made by Bragg and O’Cathain to the previous analysis undertaken on the sites. It is stated that a comparison of the resulting maps from the EIS underlines the variability of potential outcomes from different specialist analyses and while the new design avoids all risk zones identified by the MWP (2011) analysis, the QMEC treatment indicates elevated risk in vicinities of T9 and the Peat Deposition Area. Bragg states that the new Construction Feasibility Assessment places T9 in a low-risk zone but identifies elevated risk at T8 and at least four locations on the road network. O’Cathain states that the Construction feasibility assessment model developed inhouse by MWP is indistinguishable from the FoS and suffers from the weaknesses of the FoS. The applicants respond by stating that contrary to Dr. O’Cathains opinion the Construction Feasibility Assessment uses a graduated allocation for each of the risk criteria so that once peat depth of slope individually exceed a certain level they move up a band with the risk combination matrix arrived at through site experience based on the constructability output of the assessment. There is clearly a difference of opinion on the most appropriate approach to the assessment of peat stability. Bragg considers that the previous QMEC report appears to be the most rigorous of the treatments in that it considers additional risk factors derived from expert inspection of the site but it has not been applied in the specific context of the latest proposed layout for the wind farm.

I would note that there are four main approaches to determining stability. These are Geomorphological; Qualitative; Index/Probabilistic and Deterministic (factor of safety). It is considered that there is no preferred or ‘best’ method. A combination of methods is often used and there are advantages/disadvantages associated with all approaches. In this regard, the approach used by the applicants in the Peat Stability Assessment, if clearly developed and outlined, is as reasonable an approach as any other which the appellants may favour. I would also note that the Peat Stability Assessment undertaken as part of the current application was Peer Reviewed by Dr. Mike Long, Senior Lecturer in UCD. I do not intend to summarise the report as much of its contents are included by the applicant in response to the planning authority’s further information or the response to the appeals. However, I consider that the assessment undertaken is

acceptable and follows the Scottish Executive Guidance which is considered best practice.

For the Board's ease of reference I set out the following table which includes information taken from Table 2 in the Peat Stability Assessment. I note that a similar table (Table 3.2) is included at pg. 13, Chapter 3, Vol 2 EIS which provides some of the same information on the peat depths, slope and approximate ground elevation at each of the 11 turbine sites. I would note that there are a number of differences between the tables in respect of peat depth at a number of the turbines sites so I have included the depth given in Chapter 3 of the EIS in brackets where it differs. I would note that the peat Stability assessment provides at section 4.4 a final layout design which provides details on each of the turbine sites with the peat depth provided in these sections that which is included in Chapter 3 of the EIS. While most have only a small difference in the depth I would note that T1 has 0.4m, T6 0.25m and T8 0.3m. While I consider that even the higher depth is acceptable in respect of the proposed development the Board may wish to clarify the matter with the applicants.

Peat Depths, Slope and Approximate Ground Elevation at the Turbine Sites

Turbine	Peat Depth at Turbine Site	Slope	Approximate Ground Elevation
T1	1.20m (0.80m)	2.69°	137m OD
T2	0.70m	5.49°	158m OD
T3	0.75m (0.80m)	4.29°	123m OD
T5	1.40m	3.43°	132m OD
T6	0.35m (0.10m)	9.04°	120m OD
T7	0.70m (0.60m)	7.77°	101m OD
T8	0.80m (0.50m)	11.82°	112m OD
T9	0.50m	6.71°	105m OD
T11	0.40m (0.30m)	7.45°	114m OD
T13	0.40m	10.62°	127m OD
T14	1.00m	5.71°	96m OD

Peat Deposition Area

The Planning Authority sought further information from the applicant in respect of the matter of the peat deposition area as follows: The peat stability for the site is deemed to be of "medium risk" with depths of peat to 3.5 metres. Some 70Km3 of peat is to be deposited in situ up to a metre in depth. Although it will be banded it has not been properly assessed as to how the site will react to this deposition of material. It may lead to slippage and if so then it is possible for it to flow either north or south based on the contour map. If northwards then the river Sruthan Chnocan Raithni is liable to contamination leading to the Corrib SAC. Similarly the Sruthan Bui to the south could be affected. It is recommended that the deposit site be located away from any rivers/streams/drains or the material to be taken off site. In this regard the applicant is

required to address these concerns and submit supporting documentation to alleviate these concerns for consideration by the Planning Authority.

The Applicant responded to the request by stating that the site is the subject of two previous assessments both of which confirm the suitability of large areas of the site for windfarm development. The statement in the RFI that the site is deemed to be of medium risk is incorrect with the study stating that the layout avoids all areas of risk identified in the previous reports and the site does not present any significant risk of a propagating peat slide. The construction feasibility assessment indicates that the infrastructure presents an overall low construction risk. It is stated that the rationale behind the report in the EIS is outlined noting that the areas of deep peat combined with steep slopes and water features are avoided developing a design layout based on low risk peat stability with other environmental constraints included. The layout, it is stated, makes use of the existing road network on site placing roads and infrastructure on shallow soils/peat or in areas of exposed rock where peat is not an issue. The statement by the Planning Authority that the peat depths are 3.5m is contradicted by the statement in report which states that peat depths vary from zero to 5m with 90% of peat depths taken less than 2m in depth. Out of the 11 turbines 9 are located in areas where peat depth are less than or equal to 1m with peat at turbines T1 and T5 1.2m and 1.4m deep respectively.

The statement in the Planning Authority's Request for Further Information that some 70,000m³ of peat is to be deposited is not correct, with the total volume of peat/soil/overburden to be excavated on site maximum of 41,000m³ with a total of 30,000m³ to be deposited within the peat deposition area. The statement that it has not been assessed as to how the site will react to this deposition of material as location for peat deposition area is not correct as this has been assessed in detail with peat probing carried out with locations of probes and depths set out in appendix 3 of the response. The location chosen is stated to be mainly flat and surrounded by areas of higher ground/peat bank faces providing a defense to any potential peat movement with the design including stone berms and cells means any residual risk removed.

Peat berms have been designed to withstand any load or pressure of the proposed deposited peat in a safe manner and with an adequate factor of safety. The use of berms for containment is common practice designed as ground bearing mass retaining structures with the design approach conservative in nature with load pressures calculated taking account of peat depths with base of the berm a minimum of 6.4m wide and the top 2.5m wide with the width at base varying. The base of the berm is excavated to a solid ground level within overburden or to bedrock level with the berm having sufficient height, width and depth to act as a solid ground bearing uniform retaining structure (Drawing 15047-5041 – plan and sections of peat deposition area). The peat deposition area has an external containment berm and intermediate berms forming three distinct cells with the cells allowing for filling of excavated peat and soils to be deposited in stages (Drawing 15047-5042 – photographs). The construction plan

for the peat deposition area set out with the approach taken well proven for upland peat sites in the south and west of Ireland.

Bragg states that there is no consideration of peat stability issues associated with the peat deposition area included with the issues raised in previous application remaining. O’Cathain also considers that the proposed Peat Deposition Area has not sufficiently considered in the MWP report. However, I consider that the response to the further information which is outlined above provides a comprehensive assessment of the proposed peat deposition area. The applicants note in their response to the appeals that the output of the assessment was that the selected area for the peat deposition area represented an insignificant risk of peat slide as it is located predominantly in an area of low slope 3° with over 80% of the area having a FOS in excess of 8 with the remaining 20% between 4 & 8. I consider that this matter has been adequately addressed.

Other Matters

Bragg states that the new Peat Stability Report states that no indication for ground (in)stability were identified during extensive site reconnaissance. While ‘sausage’ (Herbst-Difco) peat extraction was addressed, traditional turf cutting and the ploughing that precedes forestry planting are ignored. The applicant states that rill drainage perpendicular to the ground slope is not considered to present the same potential risk of propagation of a peatslide as cutting the peat fabric across the slope. It is also stated that it accepted that the report did not mention rill drainage specifically but it did note that any identified areas of forestry with poor growth (indication of deeper, weaker peat) were being avoided. Bragg notes that the proposed mitigation for the possibility that ‘unforeseen geotechnical characteristics’ may arise at construction phase is to microsite but it is noted that Condition 16 of the Planners report excludes micro-siting. This conclusion is correct however the Board, should they be minded to grant permission for the proposal may consider micrositing to be appropriate. If they do not, the applicant may be required to resubmit an application to amend the layout to facilitate any necessary changes. O’Cathain notes that the site is forested which is considered to be one of the key factors leading to the Derrybrien failure and an acknowledged risk factor which was omitted from the analysis. In response the applicant states that the Derrybrien bogslide occurred on a site with significant peat depth, slope and where sausage cutting practices had taken place with none of these characteristics applying here. It is also stated that reference and comparison to Derrybrien does not take account of advances through experience in understanding and the approach to assessment and construction in the peat environment since 2003.

Conclusion

Having reviewed the documentation relating to peat stability including the opinions of the appellant’s experts, I consider that the approach undertaken by the applicant is acceptable. I consider that the turbine locations chosen have been appropriately assessed in respect of stability and that the peat depth and slope at the locations chosen is acceptable. The peat deposition area has been satisfactorily addressed and

appears in my opinion to be an appropriate means of storing the excess material. The road construction and clear span bridge have been adequately addressed and therefore I consider that the matter of peat stability has been satisfactorily considered.

11.5 Landscape and Visual Impact

I would firstly note that the area within which the subject site is located has a class 3 (high) landscape sensitivity rating. The area is also located within an area designated as a strategic area for wind farm development within the Galway Wind Strategy. Therefore, the principle of a proposal of this nature is accepted within this particular landscape subject to a number of caveats outlined in Objective WE1 which requires a consideration of visual clutter. Notwithstanding, it is proposed to address the impact of the proposal on the landscape both within both the local and wider environment. The landscape assessment carried out in the EIS using photomontages is used within this report for reference. The visual assessment also provides a cumulative viewpoint of the views which is considered as part of the assessment on each of the views discussed below.

I would note that the EIS states at section 12.3.1 that the proposed development would see a substantial change to the character of this area but taken in a cumulative context with the other extant permissions the change would not be as unfamiliar and would be in keeping with emerging trends with the proposal an additional spread of wind farm development across the eastern part of the East Connemara Mountains. While it is acknowledged that the change likely to arise is considered to be negative it is not considered a significant one that would constitute unacceptable detrimental effects on the character or values of the area. The significance of the impact is considered to be a moderate to minor adverse impact. The assessment below centres on the 20 viewpoints chosen in the EIS and examines same in the context of the claims made in the EIS. It is noted that the assessment undertaken in the EIS assesses both visual impact and landscape impact. Visual impact is stated to consider how the introduction of the wind farm into the landscape will affect views within the study area with the landscape impact an assessment of whether the development will encroach significantly on the character, values and sensitivities of the local or wider area.

Impact on the Local Environment

Visual impact as it arises in respect of sites of archaeological interest is addressed separately in the section above relating to archaeological heritage. The appellants state that the site is within an area of high scenic value (Landscape category 3 area) with the application pre-emptively determined by the PA on the basis of its designation as a 'strategic area' in the Wind Energy Strategy with the impact not properly addressed. The EIS submitted provides a comprehensive visual assessment of the proposed development. I would note that viewpoints VP6-VP14 and VP16-VP17 are within what I consider to be the local environment with the cumulative impact also addressed. The remainder are considered below under the wider environment. Viewpoint 6 is taken from the N59 south of Roscahill with the nearest turbine stated to be approximately

3.7km. From this particular viewpoint the proposed turbines are the only turbines visible. It is stated that the significance of the visual impact is moderate to substantial with the landscape effect minor adverse. The EIS acknowledges that the proposal forms a significant and immediately recognisable new element within the view becoming a focal point of the view. This is reasonable in my opinion however, I would note that the hill screens the lower part of the turbines meaning that the entire structures are not visible which lessens the impact, in my opinion. There is no cumulative impact from this viewpoint.

Viewpoint 7 is taken from Ross Demesne northwest of the site and c. 3.5km from the nearest turbine. (I would note that the OS map accompanying the photomontages includes an incorrect viewpoint for this view with the viewpoint provided actually VP17). Notwithstanding, the visual impact of the proposal is stated to be moderate to substantial with a minor-moderate adverse landscape effect with no cumulative impact. The EIS notes that the turbines will become a focal point of the view and I would agree but as in VP6 above, I would consider that the impact is lessened as most of the structures on view are screened by the hill mass with only the tops of those turbines visible on view. Viewpoint 8 is taken from the Crossroads north of Cloonabinna to the northeast of the site approximately 5km from the site. The impact of the proposal is stated to be moderate-substantial from a visual impact perspective and that there would be a moderate adverse landscape effect. I would agree with same with the extent of the structures visible quite prominent. The turbines become a dominant part of the view however I would not consider the view to be sensitive. The cumulative impact is not applicable given most of the structures within the extant permissions are screened from view.

Moving closer to the site, Viewpoint 9 is taken from Letter Road approximately 1.3km to the nearest turbine. The visual impact is substantial with the EIS noting that the features will reduce the feeling of remoteness with the close proximity creating the perception of very high structures. The landscape effect is moderate adverse in a landscape of medium-high sensitivity. The cumulative impact has the same proposed impacts with the extant permissions in the background. I note the correction made to the other wind farms in the cumulative view with the reference to Cloosh actually Knockalough and Seecon actually Letterpeck. The visual impact is substantial as described with no mitigation likely to reduce the impact. Viewpoint 10 is taken from the local Cnocan Raithni Road with the nearest turbine c.1.8km. The impact likely to arise is stated to be substantial-severe with a moderate adverse landscape effect. I concur with this consideration. The cumulative impact is considered to have a substantial visual impact and moderate adverse landscape effect with the proposed development most dominant in the view. This is considered an accurate description of the impacts. Viewpoint 11 is taken from the local road at Oghery on the current access road to the site approximately 1.4km from the nearest turbine. The impact of the proposed development is considered to be a substantial visual impact with a moderate adverse landscape effect. The cumulative view is dominated by the proposed development. While one of the most

proximate viewpoints to the site, I would consider that given that only partial elements of the turbines are visible that the impact is greatly lessened with the hill mass screening most of the structures although turbines T1 and T8 are dominant.

Another local view, Viewpoint 12 is taken from the local road east of Knockranny Hill c.2.3km to the nearest turbine and closer to the N59 than VP 11 but along the same local road. The visual impact is considered to be substantial with a moderate adverse landscape effect. There are no cumulative effects from this VP. I consider that while clearly visible within this visual envelope and prominent in the context of the rural scene, the impact of the turbines is not significant or adverse. Viewpoint 13, taken from the N59 south of the Knockranny junction and c. 2.9km from the nearest turbine, is stated to have a slight visual impact and a neutral landscape effect with no cumulative impact. The nacelles and blades of 6 of the turbines are partially visible but I do not consider that they dominate the view and I would concur with the significance attributed in the EIS. Viewpoint 14 is slightly to the south of VP13 again on the N59 and this time at Newtown schoolyard. It is stated that there is a negligible visual impact and neutral landscape impact with which I concur. Viewpoint 16 taken south of the site, c.2km from the nearest turbine at Tullaghannoon is stated to have a substantial visual impact and moderate adverse landscape effect both from the proposed development and the cumulative impact. This wide open expanse of landscape will be dominated by largely full views of many of the structures with the proposed development dominating the panoramic view of the cumulative view as the site is most proximate. Similarly the impact on Viewpoint 17, taken from the crossroad at Finisklin with the nearest turbine c.4.7km is stated to have a substantial visual impact and moderate adverse landscape effect. I concur with this assertion with the proposed turbines, largely partial views of the nacelles and blades, dominating this view with the hill mass and forestry planting screening much of the lower parts of the structures.

Impact on the Wider Environment

Viewpoints VP1-VP5, VP15 and viewpoints VP18-VP20 are within what I consider to be the wider environment. I would note the viewpoints examined also address the cumulative visual impact. Viewpoint 1 is from the R345 along Lough Corrib approximately 20km from the site. The impact, both of the proposed development and the cumulative development is stated to have a moderate visual impact and neutral landscape effect. I would concur with these conclusions. In respect of the cumulative development, the proposed development is the least intrusive part of the overall impact. Viewpoint 2 is from Inchiquinn Island on Lough Corrib, approximately 12km from the site. The significance of the impact of the proposed development is stated to be a substantial-moderate visual impact with a minor adverse landscape effect. The EIS states that the turbines will become a dominant focal point of the view but they will not have a significantly negative effect on the overall quality of the scene. I would tend to agree with this summation. Unlike the previous view where this site would be the least dominant cluster of turbines within the cumulative view they are the most dominant cluster in this view but I consider that it is not significantly adverse. Viewpoint 3 is taken

from Luiminagh NE of Lough Corrib approximately 15km from the nearest turbine. The impact of the proposal is considered to have a moderate-slight visual impact with a minor adverse landscape with the turbines becoming a notable focal point but would not dominate the scene. I would concur with this consideration. The cumulative effect is stated to be a substantial visual impact and a moderate adverse landscape effect which I consider to be a reasonable consideration with the proposal quite dominant in the cumulative view.

Viewpoint 4 is taken from the N84 at Carrowbrowne looking over Lough Corrib with the nearest turbine 16km. The impact significance of the proposal is considered to be a moderate-slight visual impact and a neutral landscape impact. This is reasonable in my opinion. In relation to the cumulative impact it is stated that it is a moderate visual impact and a minor adverse landscape effect. While I agree that the introduction of the subject proposal only has a slight effect on the cumulative impact I would consider that the cumulative visual impact would be more reasonably described as moderate to significant. Viewpoint 5 is taken from a section of the Western Way Walking Trail north of Oughterard looking in a south east direction with the nearest turbine approximately 11km. Both the significance of the impact of the proposal and the cumulative impact are considered to be negligible in terms of visual impact and have a neutral landscape effect. I concur with same with the proposal only slightly changing the cumulative view where the extant turbines are more dominant. Viewpoint 15 is from a point at Tumnasrah east of Moycullen and c.8km to the nearest turbine. The visual impact is considered to be slight-negligible with a neutral landscape effect and no cumulative effect. I consider that this is reasonable. Corrections to the references to the other windfarms shown in the cumulative view are noted with reference to Cloosh actually referring to the Knockalough development.

Viewpoint 18 is taken from Leitirpeak to the south of the site c.6.1km to the nearest turbine. The visual impact is considered to be negligible-slight with a neutral landscape effect. I consider this is reasonable as only parts of the blades appear over the ridgeline. There is no cumulative impact arising from the proposed development but the view will be dominated by the extant permissions. Viewpoint 19 is taken from Shannapheisteen Road c.9.2km from the nearest turbine to the west of the site. It is stated that a moderate visual impact will arise from the proposal with a minor adverse landscape effect. I would agree with this assertion as almost the entirety of each of the turbines proposed will be visible. I would agree that distance dilutes the impact but the turbines do remain a prominent feature. However when viewed in the context of the cumulative impact, the proposal has a slight impact on the view which is dominated by the turbines permitted to the west of the site which the EIS states comprises a substantial visual impact but I would consider it may be more reasonably described as severe given the amount of turbines in the view. Viewpoint 20 is taken from Inis Mor island with the nearest turbine c.37km. It is stated that the visual impact of the proposal is slight with a neutral effect on the landscape. I would concur that the visual impact of the proposal is slight given the distance involved however when the cumulative impact is considered I

would suggest that the visual impact is more likely to be moderate as the horizon is dominated by turbine structures. However the proposal has only a slight impact on this overall moderate impact I consider arises.

Impact on the N59

The County Development Plan has designated Views 78, 79 & 80 as protected views comprising views over the east Connemara Mountains south of the N59 route. The appellants consider that the proposed development would have a significantly negative impact on this protected view, contravening policies in the County and Gaeltacht Plans. It is stated that the subject proposal impacts the N59 negatively unlike other proposed/permitted developments in the area whose visual impact is less as they are bounded by the east Connemara Mountains. I consider that these views are addressed in the VIA by way of viewpoints 6 & 7 which give a representation of the impact from the N59 with my opinion set out above in respect of the viewpoints. What is apparent to me is that while there is a moderate to significant impact in some cases on a number of these views from the proposed development, in much broader views from other vantage points all over the study area, the development comprises only a slight impact on the overall cumulative effect.

Other Matters

I note the appellant's statement in respect of section 3.28 of Galway County Council's Landscape Character Assessment which notes that development should not protrude above the existing ridgelines in order to maintain long distance views of the Connemara Mountains I do not consider that the development as proposed would negatively impact long distance views particularly those over ridgelines. It is also stated that the motion of the turbines present an additional visual intrusion to the turbines themselves. While I do agree that the motion of the turbines create a different impact to that of a stationary object placed within the landscape, I do not consider that this motion creates any additional intrusion to that caused by the structures themselves.

It is stated by the appellants that the decision is inconsistent with the aims of Galway County Plan to facilitate wind farm development (Policy IS18) in suitable locations having regard to any designations of areas of the County for this purpose, government guidelines and the need to protect designated heritage sites, designated sensitive rural landscape, visually vulnerable area, scenic routes and scenic views. While I note the content of this policy I would also note that the Galway Wind Strategy replaces this policy and therefore it is the policies in the Wind Strategy that are relevant. The appellants also consider that the location of T1 & T3 will intrude over the Knockranny Road which is popular with walkers, cyclists and tourists and would contravene policy CS26 which prohibits the intrusion of development along public walking routes with part of the road proposed as the turbine track. While I acknowledge that the proposed structures given their height would alter the views enjoyed by the passing public I do not consider that it would be inappropriate or detrimental to the enjoyment of the area.

Conclusion

I consider that the EIS provides a good representation of viewpoints within the local and wider environment likely to be impacted. I concur with most of the conclusions reached in respect of the impact arising. Many of the closer viewpoints highlight a substantial impact on the local environment. Many of the wider views demonstrate that the proposal will have a slight visual impact. What is apparent in many of the views, particularly within the wider environment is that the proposed development will only have a slight additional impact to the impact already arising from extant permissions granted particularly to the west of the site. The extent of the impact differs. While many of the viewpoints highlight how the hill masses or vegetation fully or partially screen elements of the proposed and/or permitted development there are many instances particularly views from the north and south of the site where the structures will dominate the views. However, given the extent of the permissions already granted and to the changes already permitted to the landscape I do not consider that the proposal, notwithstanding some of the substantial impacts merits a refusal on the grounds of landscape and visual impact

11.6 Residential Amenity

11.6.1 Noise

The Wind Energy Guidelines, 2006, with regard to the setting of limits for noise emissions provides that:

“in general, a lower fixed limit of 45dB(A) or a maximum increase of 5dB(A) above background noise at nearby noise sensitive locations is considered appropriate to provide protection to wind energy development neighbours.....Instead, in low noise environments where background noise is less than 30dB(A), it is recommended that the daytime level of the LA90 10 min of the wind energy noise be limited to an absolute level with the range of 35 to 40dB(A). It is stated in the EIS that the Irish Guidelines appear to be a synopsis of the industry standard adopted by the UK Government i.e. the ETSU-R-97 ‘The Assessment and Rating of Wind Turbine Noise’. It is stated that the assessment methodology used in the EIS was adapted from the Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise published in May 2013 with. Noise monitoring was undertaken at two locations (N1 & N2). It is noted that a minimum distance of 1000m between turbines and dwellings was incorporated into the design. The operational phase impacts include a table (Table 10-5) outlining the predicted wind farm noise results. The cumulative impact of the development with other wind farms in the area is also outlined. The lower fixed limit applied to the nearest dwellings is L₉₀ 43dB(A) with noise levels not exceeding the noise limits as set out in the Wind Guidance. The location and height of the 10m mast proximate to T2 is considered appropriate with no evidence provided by the appellants to refute same. I consider that the distance of the existing residential dwellings from the proposed turbines is sufficient to ensure that there would not be any negative impact on their residential amenity by reason of noise.

11.6.2 Shadow Flicker

The appellants state that flicker is a particular issue on this site as the turbines are located between the setting sun in the western skyline in the local houses. However, this is not supported by any evidence. The EIS outlines the factors influencing shadow flicker occurrence which are (i) spatial relationships, (ii) wind direction and (iii) sunshine hours. The Windfarm guidelines recommend 30 hours of flicker hours of shadow flicker per year of 30 minutes per day to evaluate potential shadow flicker impacts to residences within 500m of a turbine with no dwellings within 500m of the proposed turbines however with the increase in turbine size since the guidelines were published this distance should also be increased. It is stated that there are 3 properties within 1.2km of a proposed turbine which is considered the shadow flicker likely zone of influence each of which is assessed. In addition to distance at 1100m, the absence of turbines due north, south or east, absence of west facing windows, existing screening are all attributes considered to reduce the likelihood of flicker. Applying a worst case scenario a shadow flicker simulation was calculated and shows that shadow flicker will not occur at any location for any duration or intensity that would cause nuisance. I do not consider that the proposal would have any flicker impact on the nearest dwellings.

11.7 Ecology

The matter of ecology is one which is dealt with in this section but also it is a matter which is addressed in the Appropriate Assessment undertaken at section 13 below and in addition the Environmental Impact Assessment set out at section 12. I would note that the EIS included a separate chapter on ornithology. Therefore this section should be read in conjunction with these sections. The appellant's main concerns in respect of ecology relate to the marsh fritillary butterfly, the Kerry Slug and particularly the conditional request for additional surveys which it is claimed is contrary to the AA Guidelines. The impact of the proposal on salmon and salmon spawning ground is also brought to the attention of the Board. The IFI were consulted and the applicant notes that they have visited the site and are satisfied that the proposal can be constructed without detrimental adverse effect on river systems. I would refer to their comments above at section 3.2. I consider that subject to the suite of mitigation measures proposed in the EIS in respect of surface water flow and quality that there should not be a significant impact on salmon. Reference is also made to the presence of Red grouse on the site. It is also considered that the Bat Survey was inadequate. I would note that the appellants do not provide any expert evidence to support any of the concerns they outline. Notwithstanding, I will address the matters arising.

As I note above, the EIS describes the impact on habitats, flora, fauna and water quality with ornithological impacts considered separately in the following chapter. It is noted that the assessment of the proposal development was undertaken as part of the original

application with additional surveys conducted in a number of instances. In relation to the marsh fritillary butterfly, the applicants note that the timing of the RFI was not conducive to the carrying out of such a survey. Alternatively a survey of the species host plant Devil's-bit scabious was recorded as occasional and not abundant on the site. It was stated that the species itself was not observed on site over the two year survey period.

The applicant notes that the Kerry Slug is not a qualifying interest in the cSAC with no slugs recorded on site. The impact of the proposal on salmon and salmon spawning ground is also brought to the attention of the Board. Reference is also made to the presence of Red grouse on the site with the ornithological assessment addressing this matter with a Red Grouse management plan required by the NPWS which the applicants consider appropriate. It is also considered that the Bat Survey was inadequate but the applicants refute same stating that the Lesser horseshoe bat a qualifying interest in the Ross Lake and Woods cSAC approximately 2km from the site with none of this species recorded on site. I consider that the matters raised by the appellants in respect of ecology/flora/fauna have been adequately addressed by the applicant. However, these conclusions do not include the Appropriate Assessment which raises additional matters which are set out in Section 13 below.

11.8 Water Quality and Surface Water Drainage

I would note that the EIS provides a useful outline of the surface and groundwater regimes on the subject site as well as looking at the potential significant impact from the proposal. It is stated that the site drains into two catchments with 161ha (52%) draining into the Lough Corrib catchment and 148.9ha (48%) draining into the Owenaboliska-Cashla-Screeb catchment with 4 sub catchments. Five streams drain the site, one traversing the site with the remainder along the site boundary. In respect of hydrogeology, the site lies within two groundwater bodies, the Maam Clonbur GWB and the Spiddal GWB. With the exception of the river crossing at the proposed site entrance, hydrological buffers of 50m on streams and rivers within and adjacent to the site were avoided during design. The potential risk to surface and ground water during the construction phase arises from runoff and erosion from site surfaces, drainage channels and earth works areas with the potential for suspended solids entering surface waters. Excavation of peat could also lead to an increase in suspended solids. The risk to water quality from felling comes from the brash and needles that remain from the felling process. Water contamination from accidental spillages of contaminants, particularly hydrocarbons is also a potential risk. The construction of new infrastructure also has the potential to alter or interrupt existing site drainage.

The proposed river crossing of the Abhainn na nArd-doiriu is a clear span bridge and would not alter the dimension or flow of the river. A range of well-established mitigation measures are proposed to protect surface water quality with a detailed Sediment and Erosion Plan proposed with the measures proposed ensuring water quality impact from construction related run-off will be minor and localised. The impact

is considered to be a negative slight short term impact which is considered reasonable. In relation to surface water flow a number of ephemeral streams/drains identified crossing the proposed wind farm infrastructure and will be diverted into the upper clean water drain along with surface water runoff to access track cross drains located at 75m intervals. The impact is considered to be a negative moderate long term impact. I consider this to be a credible conclusion. The operational phase would not involve any point source discharges with potential impacts from drainage runoff and attenuation of suspended solids with the impacts considered to be slight. Mitigation by design and management is proposed including an Environmental Manager, concrete control and waste water sanitation during construction. The proposed development is considered to be acceptable in terms of the potential impact on water.

A number of the issues raised in respect of water quality relate to the matter of the impact on salmon and their spawning ground. It is stated that the Owenboliska River system hosts some of the more important salmon spawning sites in Co. Galway with any impact on water quality likely to negatively impact on the salmon population already under considerable stress. This issue relates as much to ecology and is addressed above and in the Appropriate Assessment below. The other issues raised include the serious risk of silt and mineral run-off from such an extensive site into all of the local streams having a detrimental effect on the fish populations and the pollution risk to the Sruthan Chnocan Raithni water course on the eastern boundary of the site from T1 with T11, T14 and T9 posing a risk of contamination of the Owenboliska River System which is adjacent to the western boundary of the site. I would also note that there are concerns raised as to the impact of the proposed clear span bridge on the Abhainn na nArd-doiriú with an observer unable to find reference in the EIS to the construction of the bridge over the Arderoo River. It is stated that the probability of an event occurring to impact negatively on the River is between 5-50% which is deemed to constitute unlikely but this is considered unacceptable given the stress on the River and the absence of any detail on the River construction. In addition it is stated that on the basis of a 200 year flood design for the water crossing there is a 14% chance that a storm exceeding the design parameters will occur which is a significant concern.

The applicant also notes, in response to the appeals that in relation to the impact of the proposal on watercourses, Inland Fisheries Ireland were consulted and the applicant notes have visited the site and are satisfied that the proposal can be constructed without detrimental adverse effect on river systems. I would note the proposed conditions that the IFI recommend should the Board be minded to permit the proposal. In relation to the proposed river crossing, the applicant states that the design of the water crossing is more conservative at 0.5% AEP and a design flow rate of 9.6% which is more conservative than the OPW's requirement that there should be a freeboard of 300mm between bridge soffit and the water surface level with a storm event with 1% annual exceedence probability (AEP). It is stated that the distance between nearest stream and turbine (T1) is 60m which is in accordance with the 50m buffer proposed in the EIS to watercourses, excepting the proposed clear span bridge. It is my opinion that

subject to strict compliance with the mitigation measures outlines in Chapter 7 of the EIS.

11.9 Other Issues

11.9.1 Property Devaluation

There is considerable discussion within the grounds of appeal about the impact of the proposal on property values within the area. Reference is made in a number of appeals to the Inspectors report in respect of PL05B.240166 which relates to a wind farm development of 25 wind turbines, 4 borrow pits, substation, peat disposal units, clearcutting of conifer plantation near Glenties in Co. Donegal. While it is not appropriate to seek to compare two different sites within completely differing contexts I do note that the Inspector in that report did deal with the issue of property devaluation and stated as follows: *“It is my opinion that it is reasonable to conclude that the siting of the proposed wind farm, whereby there are large structures and a substantial road network superimposed on an expansive site in this relatively unspoilt rural location, would be likely not to enhance property values in the vicinity and rather would undermine the value of properties by the nature of the changes to the environment resulting, the proximity to such houses and the high visibility of such structures, and potential nuisance arising, such as noise and shadow flicker”*. While I acknowledge the concerns raised by the appellants, I would however note that the development, while refused, was not refused on grounds relating to residential amenity or property devaluation. Furthermore, while there would be significant local landscape changes by reason of the proposed development, as I address above, I do not consider that the proposal will create any negative residential amenity issues by way of noise or shadow flicker. The matter of peat stability is one which I address separately above, but the Donegal site cannot be compared to the proposed site as both have differing peat issues.

11.9.2 Community Engagement

There is considerable discussion within the appeals about what was considered to be an unwillingness on the applicant’s part to engage with the local population. The applicant refutes this contention and outlines in the EIS (appendix 1) the details of the public engagement and consultation undertaken. This I would note is not a matter to which the Board is privy and therefore cannot address same. The appellants have been involved both at local authority and appeal stage in the application process. I would note that no Community Impact Statement was undertaken as is a requirement of the Wind Energy Strategy and while I note that much of what would be contained in same is indeed included within the EIS it was remiss of the applicants not to prepare a specific statement. However I do not consider it is sufficient grounds to seek either further information or to refuse permission for the proposal.

11.9.3 Irish Language Issues

There are a number of issues raised in respect of the Irish language. One such issue is that the proposal will impact on the Gaeltacht by discouraging people from living in the

area which is within the Gaeltacht area. I would note that the area within which the site is situated is extremely remote and particularly when one leaves the vicinity of the junctions with the N59 the area is very sparsely populated. In this regard I do not consider that the population levels in the Gaeltacht area would be affected. Whether documentation provided at the public participation events were available in Irish is not a matter for the Board, however I note the reference to the EIS not being available in Irish and this is an administrative matter which the Board may wish to address.

11.9.4 Public Contribution

There is some concern expressed that the area will not receive any benefit from the proposed development. However I would note that the applicant proposed a community benefit scheme which would provide that 1% of the annual wind farm revenue would be paid into a dedicated community benefit fund which will be available for projects within 20km of the site. A heritage resource project is also proposed which would provide on-site interpretive resources. However I would note that details of this particular project are sketchy.

12.0 ENVIRONMENTAL IMPACT ASSESSMENT

2.2.1 General

In accordance with the requirements of Article 3 of the European Directive, Directive 85/337/EEC, as amended by Council Directive 97/11/EC of 3rd March 1997, by Directive 2003/35/EC of the European Parliament and of the Council of 26th May 2003, and Section 171A of the Planning & Development Act 2000-2010, the environmental impact statement submitted by the applicant is required to be assessed by An Bord Pleanála, as the competent authority. It is a requirement that the direct and indirect effects of the proposed project are identified, described and assessed in an appropriate manner, in accordance with Articles 4 to 11 of the Environmental Impact Assessment Directive. The following is an assessment of the main impacts identified, and which I consider to be most relevant to the subject site and development. Category 3(i) of schedule 5 of Part 2 of The Planning and Development Regulations 2001, provides that an Environmental Impact Statement shall be prepared in respect of a planning application for the following development:

“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 the application involves a wind farm of 11 turbines with a maximum output of approximately 33MW, the proposed development is subject to mandatory EIA.

An Environmental Impact Statement was submitted with the planning application, and is presented in 4 volumes.

The submitted EIS is laid out as follows:

Volume 1 – Non-Technical Summary

Volume 2 – Main EIS

Volume 3 – Appendices

The EIS

The EIS assesses the effects of the proposal on the environment in a grouped format and under the following headings: human beings; roads and traffic; air quality; climate; noise and vibration; landscape and visual; terrestrial flora fauna; marine flora and fauna; soils and geology; hydrogeology and hydrology; cultural heritage; material assets. The cumulative impacts and interactions between the factors is also examined. In terms of each of the aforementioned environmental impacts, the EIS provides a description of: the existing environment; likely significant impacts; proposed mitigation measures; and residual impacts. There is an adequate summary of the EIS in non-technical language. The EIS takes into account the permitted wind farm developments in the vicinity of the site as part of the cumulative impact assessment. I am of the view that the information contained in the EIS submitted accords with the provisions of Article 94 and Schedule 6 of the Planning and Development Regulations 2001.

Description of Development and Project Design Civil Engineering

The EIS describes the proposed development, including the site and the proposal's design and size, the project need and consideration of alternatives. It is noted at section 2.2.6 that following monitoring of the local wind regime that the wind data confirmed the site as a high class 2 wind site with a very good wind resource and suitable for wind energy generation. Table 2.1 identifies 8 other wind farms, existing, extant or in the planning system within c.10km of the application site. The policy context is outlined in list format at section 2.3. It is stated that that the final layout addresses the concerns raised by An Bord Pleanála in their previous decision relating to peat and archaeological constraints. The Habitat restoration measures and Ecological enhancement measures proposed are outlined at section 2.6.9 with the application in agreement with the landowner proposing to create an education and heritage resource as part of the proposed wind farm. Section 2.7 describes the construction process proposed.

Section 3.3.1 outlines the design constraints which include- houses, streams and rivers, designated areas, site topography and high risk peat stability zones, archaeological constraints amongst others. Other considerations such as site access and turbine delivery route are considered as well as the internal road layout. Table 3.2 sets out the ground parameters at each of the turbine sites designed the slope, approximate ground elevation and the peat depth. It is stated that approximately 41,000m³ of peat will be excavated to facilitate the proposal with 30,000m³ to be stored in the peat deposition area with the remainder used for drainage bunds, backfilling and landscaping. The chapter also describes site drainage in respect of the infrastructure proposed, treatment of water from the work areas, water quality management (sediment and erosion plan), the treatment process, water quality control measures and settlement pond design.

Likely Significant Direct and Indirect Effects

There is a large degree of commonality between the significant issues identified and assessed under the planning and appropriate assessments and the likely significant direct and indirect effects of the proposed development on the environment. The Environmental Impact Assessment as set out below should, therefore, be read in conjunction with the general planning assessment at section 11 above and the appropriate assessment at section 13 below.

Human Beings

It is noted that the nearest house or sensitive receptor is 1.1km from the nearest turbine. The public information provided is outlined. Table 4.4 sets out the existing, extant and proposed wind farms within 15km's of the site. Reference is made to the 2008 Failte Ireland study on "Visitor attitudes on the Environment" with nearly three quarters of respondents, it is stated, saying that potentially greater numbers of wind farms would either have no impact on the likelihood of their visiting or have a strong or fairly strong positive impact on future visits with wind farms bringing a positive response compared to other forms of development. Health and safety is outlined in section 4.2.8 noting no hazardous substances or not emissions are likely. It is concluded that with the mitigation measures in place, which are stated to be standard measures for the construction and operational phase, it is stated that potential *negative* impacts on the local human environment are expected to be slight with the contribution to the local economy a beneficial positive impact. On balance, the proposed development is considered to be acceptable in terms of the potential impact on human beings.

Ecology

This chapter describes the impact on habitats, flora, fauna and water quality with ornithological impacts considered separately in the following chapter. It is noted that the assessment of the proposal development was undertaken as part of the original application with additional surveys conducted in a number of instances. Section 5.2 outlines the designated sites within 10km of the study area with Table 5.8 outlining the designated NHA's and undesignated pNHA's. Table 5-12 outlines the key ecological receptors in order of ecological value starting with the most valuable – Wet Heath (HH3) which is stated to be of national importance. Mammals, bats, vertebrates and invertebrates are also outlined. Water quality is considered at section 5.2.12. Section 5.3 of the chapter is entitled 'likely significant impacts' with Table 5-30 summarising habitat loss with 6.83ha of wet heath proposed to be lost out of a total of 106.9ha within the study area. This is considered to be a *significant negative permanent impact* but the residual impact is stated to be *slight as it is offset by blanket bog restoration* (Table 5-40). None of the impacts on key fauna outlined in Table 5.38 are considered to be significant. Mitigation and compensation/enhancement measures are considered at section 5.4 with the main mitigation measure the design and layout which it is stated was guided by ecological constraint analysis and mapping. Environmental management by way of a plan and manager is also a proposed means of mitigation. Compensation and enhancement measures include habitat restoration (ceasing turf cutting, restoration of bogland and wet heath), replanting and reinstatement and river

remediation as part of the clear span bridge proposal. No residual impacts are considered to be significant. I consider that this is a satisfactory consideration of the impacts on ecology.

Ornithology

The chapter on ornithology notes that the report assesses the potential impacts on birds and their habitats with particular reference to Red-listed species recorded at the site and notes that bird surveys were carried out April-July 2010 inclusive (summer bird survey), October 2009 and February and March and early April 2010 (winter bird survey), and a Merlin Survey carried out in March and May 2013 with the methodology for the surveys set out. This particular assessment should be considered in relation to the Appropriate Assessment in the following section. Table 6.1 presents the birds recorded in the development site during the breeding season from transect counts, upland bird surveys, vantage points and non-avian ecology surveys with Table 6.2 recording birds recorded during the winter bird survey and Table 6.3 records birds within 2km of the development site. In respect of likely significant impacts it is stated that one species of high sensitivity was recorded within the site, Golden Plover (Annex 1 species) with the Red Grouse (red-listed) also recorded and stated to be a species of medium sensitivity. *Predicted negative impacts* possible on birds are stated as:-possible loss or deterioration of habitats; disturbance or displacement of birds; (construction phase) and collision with turbines and rotor blades (operational phase). The EIS states that the potential for collision is low for the species considered. It is noted in relation to cumulative impacts that there are 98 turbines permitted within 10km of the proposed site. Mitigation by means of careful planning and design is stated to reduce predicted impacts on bird populations. A Red Grouse Management Plan for the site is also proposed. Construction outside of the breeding season, controlled burning, reseeding and monitoring are all proposed. The residual impacts are not expected to be significant with monitoring by means of surveys to include winter and summer vantage point surveys, merlin surveys, breeding transect surveys and red grouse surveys. I would consider that the stated impact on birds particularly from collision during the operational phase is not satisfactory particularly in light of the concerns raised about the Golden Plover in the appropriate assessment below. I am of the opinion, therefore, that a significant residual impact is likely to arise.

Hydrology and Hydrogeology

With the exception of the river crossing at the proposed site entrance, hydrological buffers of 50m on streams and rivers within and adjacent to the site were avoided during design. The potential risk to surface and ground water during the construction phase arises from runoff and erosion from site surfaces, drainage channels and earth works areas with the potential for suspended solids entering surface waters. Excavation of peat could also lead to an increase in suspended solids. The risk to water quality from felling comes from the brash and needles that remain from the felling process. Water contamination from accidental spillages of contaminants, particularly hydrocarbons is also a potential risk. The construction of new infrastructure also has the potential to

alter or interrupt existing site drainage. The proposed river crossing of the Abhainn na nArd-doiriu is a clear span bridge and would not alter the dimension or flow of the river. A range of well-established mitigation measures are proposed to protect surface water quality with a detailed Sediment and Erosion Plan proposed with the measures proposed ensuring water quality impact from construction related run-off will be minor and localised. The impact is considered to be a negative slight short term impact which is considered reasonable. In relation to surface water flow a number of ephemeral streams/drains identified crossing the proposed wind farm infrastructure and will be diverted into the upper clean water drain along with surface water runoff to access track cross drains located at 75m intervals. The impact is considered to be a negative moderate long term impact. I consider this to be a credible conclusion. The operational phase would not involve any point source discharges with potential impacts from drainage runoff and attenuation of suspended solids with the impacts considered to be slight. Mitigation by design and management is proposed including an Environmental Manager, concrete control and waste water sanitation during construction. The proposed development is considered to be acceptable in terms of the potential impact on water.

Soils & Geology

The EIS assesses the potential significant impacts of the proposal resulting from the removal of soil, subsoil, peat and bedrock in parts to the site. While the removal of peat, soil and bedrock is stated to be a negative impact it is not considered to be significant. The material excavated is proposed to be reused with rock and subsoil reused as backfill material and peat used to construct site drains, block historic peat drains with the remaining peat deposited in a peat deposition area to be construction on site. It is stated that data from peat depth probes and gouge cores, ground surface slopes, peat shear strength and density was used to calculate the peat risk profile across the site and to determine the most suitable area within the area for development. Peat depths were noted to vary across the site from 0m to 5m with 9 of the 11 turbines located on peat depths of less or equal to 1m with the other two on depths of 1.2m and 1.4m. A peat stability assessment included at Appendix 9 determines that the proposal does not pose a significant risk of peat stability. I consider that the potential impacts have been addressed and that the design and layout has been determined by a comprehensive assessment of peat depths and stability on the site. In respect of impacts on water quality likely to arise from peat and soil removal the mitigation measures proposed in Chapter 7 are relevant.

Air & Climate

The likely significant impacts on local air quality arise during the construction phase as there will be no emissions at operational stage. Impacts include dust and combustion pollutants from on-site construction equipment and construction traffic. The potential CO₂ emissions have been calculated using a Scottish guideline methodology with the calculated CO₂ payback period estimated at 1.7 years with the implementation of habitat restoration measures and replanting of broadleaf trees allowing for a CO₂ gain

and offsetting losses during construction. It is stated that the wind farm itself will have a positive impact on achieving targets for renewable energy and reduction of CO2 emissions with the proposal having the potential to displace 45,000 tonnes of CO2 annually. This potential impact on climate has been identified, described and assessed at section 6 above. Best practice is proposed during construction to minimise dust emissions particularly which are short term and temporary. On balance, the proposed development is considered to be acceptable in terms of the potential impact on air quality and climate.

Noise & Vibration

It is stated that the assessment methodology used was adapted from the Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise published in May 2013 with ETSU-R-97 forming the basis for what guidance there is on noise assessment in the Irish Wind Farm Planning Guidelines. Noise monitoring was undertaken at two locations (N1 & N2). A minimum distance of 1000m between turbines and dwellings was incorporated into the design. The operational phase impacts include a table (Table 10-5) outlining the predicted wind farm noise results. The cumulative impact of the development with other wind farms in the area is also outlined. The lower fixed limit applied to the nearest dwellings is L₉₀ 43dB(A) with noise levels not exceeding the noise limited as set out in the Wind Guidance. Vibration is not anticipated to be a likely impact.

Shadow Flicker

The EIS outlines the factors influencing shadow flicker occurrence which are (i) spatial relationships, (ii) wind direction and (iii) sunshine hours. The Windfarm guidelines recommend 30 hours of flicker hours of shadow flicker per year of 30 minutes per day to evaluate potential shadow flicker impacts to residences within 500m of a turbine with no dwellings within 500m of the proposed turbines however with the increase in turbine size since the guidelines were published this distance should also be increased. It is stated that there are 3 properties within 1.2km of a proposed turbine which is considered the shadow flicker likely zone of influence each of which is assessed. In addition to distance at 1100m, the absence of turbines due north, south or east, absence of west facing windows, existing screening are all attributes considered to reduce the likelihood of flicker. Applying a worst case scenario a shadow flicker simulation was calculated and shows that shadow flicker will not occur at any location for any duration or intensity that would cause nuisance. No mitigation is considered necessary. The analysis undertaken and resulting conclusions are considered to be reasonable.

Landscape & Visual Impact

The subject site is located within a landscape category 3 area as designated in the County Plan. The site is located within a remote undulating landscape interspersed with forestry and the substantial scale of the proposed development will result in a significant intervention in the landscape. Of key importance in the assessment of the

landscape impact is the location of the site within the strategic area as designated in the Galway Wind Strategy. The development of this strategic area, a large proportion of which is already covered by extant permissions for wind turbines, will alter the character of the landscape in this area dramatically. While it is acknowledged in the EIS that the change likely to arise is considered to be negative it is not considered a significant one that would constitute unacceptable detrimental effects on the character or values of the area. I would concur to a large degree with this assertion. I consider that the significance of the impact is substantial in many of the proximate views and moderate to minor adverse impact in views taken from the wider environment. I would consider that some of the cumulative impacts arising within the views from particularly the wider environment are in my opinion significant. However, the proposed development will only have a slight effect on the impact arising with the significant visual impact arising as a result of the extant permissions. In this context, I do not consider that the additional visual or landscape impact of the proposal is of a magnitude that would warrant a refusal of permission.

Traffic & Transportation

It is noted that the junction of the N59 and local road L-54534 requires some upgrading including road widening to accommodate the swept path for abnormal loads which has been permitted by Galway County Council. Access to the site is proposed via the L-54534 local road via the existing improved Arderroo Co-operative and Forestry cul0de-sac road and then via the construction of a new section of excavated ground bearing road through an area of cutaway bog with this the only access proposed to the site. Peak traffic at the site is estimated from mid-2015 with peak traffic occurring during the first 6 months. It is estimated that the proposal would generate a maximum of 126 two-way daily HGV trips during this peak period. It is estimated that 50 two way construction staff car movements would occur per day. The cumulative construction phase impact with the nearby Galway Wind Park is addressed in addition to the West Galway substation development with peak construction of these two developments proposed to be completed by mid-2015 and therefore they would not coincide. Notwithstanding, the increase in traffic volumes on the L-54534 during the construction period would be considered a significant impact. While this is acknowledged I would note that such an impact is temporary with the maximum HGV volumes occurring over an 11 day period. Operational traffic would be limited to two staff attending the site on a regular basis with occasional maintenance visits with the impact of same considered to be negligible. Construction stage mitigation measures are outlined all of which seem reasonable with any commencement of this proposal, if the Board were minded to granted permission, contingent on the upgrading works to the N59 junction being carried out prior to commencement. I consider that the EIS identifies, assesses and addresses the likely traffic impacts appropriately.

Material Assets

In addition to the material assets addressed in the chapters on traffic and transportation, soils and archaeology, other assets addressed include public utilities

such as TV, aviation, telecommunications. In addition, the grid capacity and electrical infrastructure is addressed. No significant risks are identified with the proposal *positively* complementing the national grid development strategy. Mitigation includes aviation warning lights with no residual impacts likely which is considered to be an acceptable conclusion and I am of the view that the proposed development would not result in a significant impact on material assets.

Archaeology & Cultural Heritage

It is stated that the area was subjected to extensive field survey as well as the re-examination of all map and aerial photographic sources which assisted in identifying the general extent and accuracy of the assessment contained in the previous EIS. It is noted that it is highly improbable that any early settlement activity would be represented in such a poor environment nor are there other settlement indicators in the area. There are no protected structures, or buildings of architectural merit located on the site or in the visual envelope of the proposed development. However, the main potential impact in this regard is in relation to existing and potential archaeological sites. I consider that the proposal would not have a significant impact on any of the RMP's on site subject to mitigation and on site monitoring particularly in respect of the possible Children's burial site. The visual impact on the Cairn is not considered significant. The impact of the proposal on other features of interest on and in the vicinity of the proposed site are set out in the EIS and while a number of the fields and their walls in the Cloghvalley settlement and settlement 2 will be impacted to facilitate the access road these works are not significant in the context of the archaeological heritage of the area. Mitigation proposed including excavation by suitably qualified and experienced archaeologists is considered appropriate.

Interactions

Figure 16.1 provides a matrix of impacts. It is stated that the most dynamic interaction and interdependencies relate to the connection between ecology, soils and hydrology. Changes in site run-off from removal of soil cover can result in effects or changes on hydrology both in terms of water quality and hydraulic regime. Other, less significant interactions include human beings and landscape (in terms of tourism potential), and human beings and noise and shadow flicker. All of the aforementioned have been assessed above and I am of the view that the interactions identified are unlikely to cause or exacerbate any potentially significant environmental impacts.

Alternatives

The matter of alternatives is considered at section 2.4 and Appendix 3. In respect of alternative locations a list of reasons why no alternative locations were considered are set out. The reasons include: on-site wind resource, within strategic area, strategic cluster with Galway wind farm within the area, proximity to 110kV line to Galway, no statutory designations, landholding available. Alternative scale and design of development is outlined with the design evolving to avoid sensitivities as they arose. The four main phases of iteration or alternative design resulted in the scale of the

development being reduced from a wind farm of 14 to 11 turbines with the merits and benefits of the current proposal compared to the previous proposal outlined. I consider that the presentation of the alternatives is well considered and satisfactory.

Conclusion

I have considered the EIS and all submissions/observations received which are relevant to impacts on the environment, inspected the site, and have assessed the direct, indirect, and cumulative effects of the development on the environment. Having regard to the above, I am of the opinion that the direct and indirect effects on the environment of the proposed development have been identified and described. It is my view that, excepting my concerns in respect of the impact on an Annex 1 bird species which I outline in greater detail in the AA below, the potential impact of the proposed development can be adequately mitigated and is not likely to result in a significant impact on the environment.

13.0 APPROPRIATE ASSESSMENT

13.1 Introduction

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 sites and their 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. The report entitled Natura Impact Statement was prepared by Malachy Walsh and Partners. This section of the report seeks to provide an assessment of the likely significant effects of the proposal on the designated sites with each of the potential significant impacts considered in respect of each of the Natura 2000 sites considered to be at risk and the significance of same.

At the outset I would note that section 3.9 of the NIS deals with the assessment of significance. I would draw particular attention to Table 13 and to the reference to confidence levels of predictions of likely impacts which it is stated are outlined in the NRA 2009 Guidelines and the IEEM (not defined) 2006 Guidelines. Table 13 sets out the confidence level categories are follows:

- Near certain - >95% chance of occurring as predicted;
- Probably – 50-95% chance of occurring as predicted;
- Unlikely – 5-50% chance of occurring as predicted;
- Extremely unlikely - <5% chance of occurring as predicted.

The authors then state that an additional confidence category has been used in this report – **probably/unlikely** which they state has been used to indicate that the level of probability is within the higher percentages of the 5-50% category i.e. approximately 30-50%. I would note that there is no reference to this category being proposed or recommended in any of the Guidelines prepared on assessment of significance either in respect of the preparation of EIS or NIS or assessment of same. In my opinion the use of this category confuses the report with the combination of two effectively opposing meanings. Furthermore, the probably category as per the EPA guidance starts at 50% and goes higher whereas this new probably/unlikely category is stated to be approximately 30-50%. It is not clear why there is any need to include probably within the category in this regard.

13.2 The Project and its Characteristics

Section 2 of the report provides a description of the project proposed. The following provides an outlined of same for ease of reference:

- Excavation and construction of 11 turbine foundation bases of 15.5m x 15.5m with a base of 4.5m in thickness and hardstands of approximately 878m²
- Erection of 11 no. wind turbines with a maximum base to blade-tip height of 140.5m;
- Expected total installed capacity of a maximum of 33MW;
- Erection of a permanent meteorological mast up to 90m in height with a base of 4x4x1.5m in the southwest of the site to the southwest of T7;
- Upgrading of 0.9km of existing track to 5 metres width;
- Construction of 4.1km of new track to 5 metres in width;
- Construction of a clear span bridge over the Abhainn na nArd Doiriu in the west of the site;
- A surface water drainage system and associated water quality management measures requiring the installation of settlement ponds along road sides;
- Installation of an underground electrical cable to link the wind turbines to the substations with fibre optic cables using the same trench;
- Construction of a 110kV substation located between T14 and T9 to cover an area of 2,771m² including parking area and switchyard with the compound contained within a 2.6m galvanised steel high palisade fence;
- Permanent felling of c. 15.7ha of forestry to accommodate wind farm infrastructure and immediate surrounds. 7.7 ha is being removed to accommodate the proposal, 7ha of this is proposed to be felled in the northwest of the site as well as along southern edge adjacent to the SAC as part of bog and heath habitat restoration measures and 1ha is to be felled for riparian ecological purposes;
- Creation of a peat deposition area for excavated peat in the centre of the site contained by supportive stone berms to accommodate 30,000 m³ of peat to a height of 1m removed from the site with other peat removed to be used on site for drainage bunds and backfilling;

- Temporary site compound adjacent to the proposed substation for secure storage during construction and welfare facilities;
- Toilet facility and holding tank;

13.3 The European Sites likely to be affected.

The Stage 1 appropriate assessment (screening) is set out in detail in the NIS. The screening assessment undertaken identified 8 sites within 15km of the appeal site which it is considered were at risk of being significantly impacted from the proposed wind farm as follows. The following table outlines the 8 sites in questions, notes their distance to the appeal site and their qualifying interests.

Name of Site	Site Code	Distance to Appeal Site	Qualifying Interests/Features of Interest
Connemara Bog Complex cSAC	002034	100/250 m S	<ul style="list-style-type: none"> • Marsh fritillary (<i>Euphydryas aurinia</i>) [1065] • Salmon (<i>Salmo salar</i>) [1106] • Coastal lagoons [1150] • Reefs [1170] • Otter (<i>Lutra lutra</i>) [1355] • Slender naiad (<i>Najas flexilis</i>) [1833] • Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] • Natural dystrophic lakes and ponds [3160] • Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] • Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] • European dry heaths [4030] • <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410] • Blanket bog (*active only) [7130] • Transition mires and quaking bogs [7140] • Depressions on peat substrates of the <i>Rhynchosporion</i> [7150] • Alkaline fens [7230] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles [91A0]
Ross Lake and Woods cSAC	001312	2.1/2.7k m NW	<ul style="list-style-type: none"> • Lesser horseshoe bat (<i>Rhinolophus hipposideros</i>) [1303] • Otter (<i>Lutra lutra</i>) [1355] • Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140] • <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-

			<ul style="list-style-type: none"> laden soils (<i>Molinion caeruleae</i>) [6410] Alkaline fens [7230] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]
Connemara Bog Complex SPA	004181	4.5/5.1km SW	<ul style="list-style-type: none"> Cormorant (<i>Phalacrocorax carbo</i>) [A017] Merlin (<i>Falco columbarius</i>) [A098] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Common Gull (<i>Larus canus</i>) [A182]
Lough Corrib cSAC	000297	4.7/5km E	<ul style="list-style-type: none"> Freshwater pearl mussel (<i>Margaritifera margaritifera</i>) [1029] White-clawed crayfish (<i>Austropotamobius pallipes</i>) [1092] Sea lamprey (<i>Petromyzon marinus</i>) [1095] Brook lamprey (<i>Lampetra planeri</i>) [1096] Salmon (<i>Salmo salar</i>) [1106] Lesser horseshoe bat (<i>Rhinolophus hipposideros</i>) [1303] Otter (<i>Lutra lutra</i>) [1355] Shining sickle moss (<i>Drepanocladus vernicosus</i>) [1393] Slender naiad (<i>Najas flexilis</i>) [1833] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>)(*important orchid sites) [6210] <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the <i>Rhynchosporion</i> [7150] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210] Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] Alkaline fens [7230] Limestone pavements [8240] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in

			<ul style="list-style-type: none"> British Isles [91A0] Bog woodland [91D0]
Lough Corrib SPA	004042	6.4/6.9km N/NW	<ul style="list-style-type: none"> Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Gadwall (<i>Anas strepera</i>) [A051] Shoveler (<i>Anas clypeata</i>) [A056] Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Common Scoter (<i>Melanitta nigra</i>) [A065] Hen Harrier (<i>Circus cyaneus</i>) [A082] Coot (<i>Fulica atra</i>) [A125] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Common Gull (<i>Larus canus</i>) [A182] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Wetlands
Lough Corrib Ramsar Site	Ramsar No. 846	6.8km E	The second largest lake in Ireland supports one of the largest areas of wetland vegetation consisting of reed, sedge and rush communities in the country. Other habitats include Sessile Oak (<i>Quercus petraea</i>) woodland, calcareous fen, callows grassland, marsh and raised bog with a soak system. The site provides important feeding grounds for waterbirds and supports internationally important numbers of several breeding and wintering waterbirds and nationally important numbers of numerous other waterbird species. The site supports the otter and numerous rare and threatened plant and fish species. Human activities include fishing and hunting.
Inner Galway Bay SPA	004031	13.1km SE	<ul style="list-style-type: none"> Great Northern Diver (<i>Gavia immer</i>) [A003] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Grey Heron (<i>Ardea cinerea</i>) [A028] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Wigeon (<i>Anas penelope</i>) [A050] Teal (<i>Anas crecca</i>) [A052] Shoveler (<i>Anas clypeata</i>) [A056] Red-breasted Merganser (<i>Mergus serrator</i>) [A069] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Lapwing (<i>Vanellus vanellus</i>) [A142] Dunlin (<i>Calidris alpina</i>) [A149] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160]

			<ul style="list-style-type: none"> • Redshank (<i>Tringa totanus</i>) [A162] • Turnstone (<i>Arenaria interpres</i>) [A169] • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] • Common Gull (<i>Larus canus</i>) [A182] • Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] • Common Tern (<i>Sterna hirundo</i>) [A193] • Wetlands & Waterbirds [A999]
Inner Galway Bay Ramsar Site	Ramsar No. 838	13.1km SE	The shallow sheltered part of a large sea bay with numerous intertidal inlets and small low islands composed of glacial deposits. The area provides important habitat for marine life along Ireland's west coast. The site supports the richest seaweed flora on the Irish Coast (500+ species) and 65% of the Irish marine algal flora occur in the area. The site supports internationally and nationally important numbers of numerous species of waterbirds. There is a large cormorant colony on Teer Island. Human activities include aquaculture.

13.4 Identification of the conservation objectives of the European sites

The following table identifies the conservation objectives for the sites in question noting whether the sites have general objectives or whether specific objectives have been developed for the site.

Name of Site	Site Code	Conservation Objectives
Connemara Bog Complex cSAC – (General Objectives)	002034	<p>Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:</p> <ul style="list-style-type: none"> • [1065] <i>Euphydryas (Eurodryas, Hypodryas) aurinia</i> • [1106] <i>Salmo salar</i> (only in fresh water) • [1150] * Coastal lagoons • [1170] Reefs • [1355] <i>Lutra lutra</i> • [1833] <i>Najas flexilis</i> • [3110] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) • [3160] Natural dystrophic lakes and ponds • Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation • [3260] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation • [4010] Northern Atlantic wet heaths with <i>Erica tetralix</i> • [4030] European dry heaths • [6410] <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden

		soils (<i>Molinion caeruleae</i>) <ul style="list-style-type: none"> • [7130] Blanket bogs (* if active only) • [7140] Transition mires and quaking bogs
Ross Lake and Woods cSAC (General Objectives – the NPWS prepared a Conservation Statement for this site in 2009)	001312	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected: <ul style="list-style-type: none"> • [1303] <i>Rhinolophus hipposideros</i> • [3140] Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.
Connemara Bog Complex SPA (General Objectives)	004181	Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: <ul style="list-style-type: none"> • <i>Phalacrocorax carbo</i> [breeding] • <i>Falco columbarius</i> [breeding] • <i>Pluvialis apricaria</i> [breeding] • <i>Larus canus</i> [breeding]
Lough Corrib cSAC (General Objectives)	000297	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected: <ul style="list-style-type: none"> • [1029] <i>Margaritifera margaritifera</i> • [1092] <i>Austropotamobius pallipes</i> • [1095] <i>Petromyzon marinus</i> • [1096] <i>Lampetra planeri</i> • [1106] <i>Salmo salar</i> (only in fresh water) • [1303] <i>Rhinolophus hipposideros</i> • [1355] <i>Lutra lutra</i> • [1393] <i>Drepanocladus (Hamatocaulis) vernicosus</i> • [1833] <i>Najas flexilis</i> • [3110] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) • [3140] Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. • [3260] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation • (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>)(*important orchid sites) • [6410] <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) • [7110] * Active raised bogs • [7120] Degraded raised bogs still capable of natural regeneration • [7150] Depressions on peat substrates of the <i>Rhynchosporion</i> • [7210] * Calcareous fens with <i>Cladium mariscus</i> and species of the

		<p><i>Caricion davallianae</i></p> <ul style="list-style-type: none"> • [7220] * Petrifying springs with tufa formation (<i>Cratoneurion</i>) • [7230] Alkaline fens • [8240] * Limestone pavements • [91A0] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles • [91D0] * Bog woodland
Lough Corrib SPA (General Objectives)	004042	<p>Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> • <i>Anas strepera</i> [wintering] • <i>Anas clypeata</i> [wintering] • <i>Aythya ferina</i> [wintering] • <i>Aythya fuligula</i> [wintering] • <i>Melanitta nigra</i> [breeding] • <i>Circus cyaneus</i> [post-breeding/roost] • <i>Fulica atra</i> [wintering] • <i>Pluvialis apricaria</i> [wintering] • <i>Chroicocephalus ridibundus</i> [breeding] • <i>Larus canus</i> [breeding] • <i>Sterna hirundo</i> [breeding] • <i>Sterna paradisaea</i> [breeding] • <i>Anser albifrons flavirostris</i> [wintering] • Wetlands
Lough Corrib Ramsar Site	Ramsar No. 846	Referred to NPWS site synopsis
Inner Galway Bay SPA	004031	<p>Specific Objectives for this Site. (Attached in Pouch) – There are specific objectives for each of the qualifying interests. It is stated that a site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site. The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. The favourable conservation status of a species is achieved when:</p> <ul style="list-style-type: none"> • population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and • the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and • there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.
Inner Galway Bay Ramsar Site	Ramsar Site No. 838	Referred to NPWS site synopsis

13.5 Other plans or projects (in combination effects)

As noted in the section on Planning History above, there are a large number of extant permissions for wind turbines within 15km of the site. A synopsis of same is provided in the following table.

Wind Farm	No. of Turbines	Distance to site boundary	Status
Uggool Wind Farm	16	2.6km NW	Permitted
<i>Knockalough</i>	<i>12</i>	<i>3km S</i>	<i>In Planning</i>
Cloosh	22	4.3km W	Permitted
Seecon	23	5.2km NW	Permitted
Letterpeck	7	5.3km S	Permitted
Leitir Gungaid	10	6.9km S/SW	Permitted
Lettercraffroe	8	7.3km NW	Permitted
Inverin	5	10.4km SW	Existing
<i>Killaguile, Letter, Uggool, Ardderroo, and Finnaun</i>	<i>29</i>	<i>Directly to W/NW</i>	<i>PA0036 (SID) – In Planning</i>

13.6 Likely Significant Effects on Designated Sites

13.6.1 Habitat loss

The NIS states that there is no expected habitat loss within any designated site which appears reasonable given that the subject site is not within a designated site. However, some of the habitat loss expected to occur within the subject site includes loss of habitat that may be of importance to species within a number of the designated sites including the Connemara Bog Complex SAC, Connemara Bog Complex SPA, Lough Corrib SAC, Lough Corrib SPA/Ramsar site and Inner Galway Bay SPA/Ramsar site. This loss of onsite habitat is likely to have a particular impact on the Golden Plover (wet heath/blanket bog), Greenland White-fronted Goose (wet heath/blanket bog), and Marsh Fritillary Butterfly (wet heath). The onsite habitats of relevance to the species are blanket bog, wet heath, cutover bog, and the river/streams and habitats adjacent to streams and rivers.

The NIS quantifies the loss of habitat as follows: c.7 hectares of blanket bog and heath habitats. This comprises 6.83ha of wet heath out of 107ha within the study area, 0.33ha of blanket bog out of 66ha within study area and 0.15ha of blanket bog/wet heath mosaic out of <21ha of this habitat within study site. It is stated that any impact is expected to be short term due to the restoration and enhancement measures proposed with a similar area of conifer planting to be clearfelled and restored to bog and heath habitat which while will require time to establish will in time replace the habitat lost on site. This mitigation measure would appear to be a reasonable response to the loss of habitat on site notwithstanding it will not be an immediate replacement. Furthermore, while there is a loss of habitat on site which is of importance to species within the designated sites the loss comprises a relatively small proportion of the overall habitat

within the site and would not provide that the habitat in question would no longer exist within the site.

In relation to the Connemara Bog Complex cSAC (site code 002034), the NIS notes that the Marsh Fritillary butterfly, occur in wet heath and could occur within suitable breeding habitat within the development site in the future as it is known to occur at different locations in different years. It is noted that some of this habitat will be lost on site – 6.83ha but there is ample wet heath remaining on site. The NIS considers that it is probable that an imperceptible temporary negative impact could occur to this species from the proposal. Given the amount of wet heath remaining on site and the proposal to restore an area of plantation to bog and heath habitat this species will have alternative areas to use within the site and therefore I do not consider the impact to be significant.

One of the qualifying interests in the Ross Lake and Woods cSAC (001312) is the Lesser Horseshoe Bat. It is stated in the NIS that the nearest turbine to the broadleaf woodland in the east of the study site lies 0.34km to the southwest and therefore there is a low risk of collision. In addition to the restoration proposed in relation to the bogland habitat it is proposed to create broad-leafed woodland in the east of the study site which the NIS claims would increase the habitat for the species and additional length of woodland edge creating a neutral to positive impact. I consider that the findings in this regard appear reasonable and notwithstanding whether the impact is neutral or positive the effect of the proposal would not be significant.

It is stated that sufficient suitable equivalent habitat for the Golden Plover and Greenland White-Fronted Goose present within the Connemara Bog Complex SPA (004181), Lough Corrib SPA (004042)/Ramsar Site and Inner Galway Bay SPA (004031)/Ramsar Site remains both within the study area of the proposed development and in the wider area. While the proposal will result in the removal of some feeding habitat there is ample remaining north and south of the site with the Golden Plover known to range widely. The impact is considered in the NIS to be a slight, short-term negative impact. This appears a reasonable conclusion in this regard and I do not consider that it could be construed as being significant. Due to the small population of Greenland White-Fronted Goose and lack of records within and near the site the impact on same is considered imperceptible. The same applies to the Cormorant, Merlin and Common Gull. This is considered reasonable as the absence of records to support the occurrence of these birds within and around the site would suggest they have adequate habitat within the designated sites within which they are qualifying interests or they go elsewhere.

13.6.2 Habitat Alteration

It is stated that the main habitats at risk of alteration are the freshwater habitats which are considered in the next section (water quality). Otherwise habitat alteration is considered to be restricted to some localised alteration to the hydrological regime and

any impact that may occur would be contained on site as the blanket bog habitats are bounded by streams. The streams therefore create a barrier between the blanket bog on the development site and that within the designated site. The NIS states that it is unlikely that the composition of blanket bog within the Connemara Bog complex cSAC (site code 002034) would be altered. I do not consider that there is any evidence to suggest that this is not a reasonable assertion to make and therefore there is no significant risk to the designated sites.

13.6.3 Potential effects on Peat Stability and Water Quality

In relation to peat stability, the NIS states that the infrastructure was designed within nominal and low risk areas with the risk of peat stability not an issue within any of the identified designated sites and therefore probably a neutral impact. I would tend to agree with this statement and note that the matter of peat stability is considered in the assessment carried out in section 12 above.

While the operational phase of the proposal would not present a significant risk to water quality the NIS does acknowledge potential impacts such as increased surface water run-off due to hardstands and new roads, accidental spillages, blocked drains impeding flow, water quality management measures are proposed to be maintained. These risks are not specific to this development and concern any new development which may be close to a designated site. Proper management of the operational development is therefore essential with an Environmental Management Plan and Environmental Manager for the site proposed by way of mitigation. This is considered prudent and reasonable.

The construction phase has the potential to pose significant risk to freshwater habitats. It is stated that the infrastructure has been designed to avoid risk areas with comprehensive water quality management measures incorporated into the design to prevent sediment and pollutant runoff. A 50m buffer zone is proposed around all watercourses within the site (exception is the proposed bridge). I would refer to my considerations set out in section 13.1 above in respect of the probably/unlikely category. Notwithstanding what I consider is a somewhat confused statement, if the Board wishes to accept this category there is a 30-50% chance of the impact occurring. It is noted that the impact would be slight rather than significant and therefore I do not consider that it would pose a significant effect to the designated site. The same is inferred in respect of the potential impact on the Ross Lake and Woods SAC (001312). Impacts in respect of the aquatic species in the Lough Corrib SAC (000297)/Lough Corrib SPA (004042)/Lough Corrib Ramsar Site (Ramsar No. 846) are considered extremely unlikely which is pretty definitive.

13.2.2 Disturbance/displacement of protected species during construction

The NIS notes that there is a possible risk of disturbance to a number of species from the construction phase of the proposed development. The main species of concern are the Greenland White-Fronted Goose, Golden Plover, Marsh Fritillary and Lesser

Horseshoe bat. The Marsh Fritillary butterfly, an Annex II species, is known to occur in the Connemara Bog complex cSAC and has the potential to breed within suitable habitat within the proposed site. While no butterflies or nests were observed within the site, construction work on site could destroy breeding colonies. While this is noted to be a significant short-term impact the probability is stated to be unlikely. I would note that there is some discussion within the documentation on file about this species. In the further information request the planning authority noted that there should be another survey undertaken preferably in September as the first one undertaken in June had negative results. This emanated from the comments made from the NPWS in relation to Nature Conservation with the follow up letter stating that if construction work has not commenced by August 2014 that a further study should be carried out for each turbine site in September. In their response to the appeals the applicant notes that in over two years of site visits by ecologists that no observations were made of marsh fritillary adults. It is my opinion that it would be prudent, if the Board are minded to permit the proposal herein, prior to construction to undertake a survey of the habitat to be removed for this species and that works should be carried out outside of their breeding season.

The Golden Plover are known to breed within the Connemara Bog Complex SPA, Lough Corrib SPA and the Inner Galway Bay SPA. I would note the reference at section 3.5.3.5 of the NIS to the birds of most significance in terms of the conservation objectives of the designated sites which include the Golden Plover. This is described as *“a Red listed species that is a rare breeder in Ireland in upland peatland habitats. Wintering populations are not red listed but amber listed and are widespread. Could be of significance to the adjacent Connemara Bog Complex SAC. Wintering populations of national importance occur within Lough Corrib SPA and the Inner Galway Bay SPA/Ramsar site”*. While there was no evidence on site of any breeding Golden Plover they were recorded flying over the site in varying numbers on a number of occasions with the potential that suitable breeding and foraging habitat could occur on site. If this species were breeding on site during the construction phase there would be a significant impact. The avoidance of some of the construction activity during the breeding season would reduce the possibility of a negative impact. The impact is described in the NIS as a short-term moderate impact with the likelihood considered probable-unlikely. My concerns regarding the use of this category of significance apply here also in respect of this species. However it is considered that abundant suitable habitat within the surrounding area would mean that any possible moderate short-term impact is unlikely and I do not consider that the impact on the Golden Plover during the construction phase could be described as significant.

It was stated that while no Greenland white-fronted geese were observed over the site that it is possible that they could fly over or use the habitat for foraging. A short-term slight negative impact could occur but the likelihood is considered unlikely. This appears a reasonable conclusion to make. Disturbance and displacement of merlin and the common gull could cause a slight, short term impact but this is unlikely given absence of

records within and near the site for these species. I would accept this conclusion. A risk to the Lesser horseshoe bat known to occur in the Ross Lake and Woods SAC considered extremely unlikely given that bats forage between dusk and dawn. I consider that this is reasonable.

No black-headed gulls or lawping were observed or recorded within the site with any impact unlikely. I would note that while this is reasonable that the same mitigation measures proposed in terms of breeding season as outlined above in respect of the Golden Plover would be considered to equally apply here. The same applies to the Golden Plover known to occur within the Inner Galway Bay SPA and Inner Galway Bay Ramsar Site. Impacts on Cormorant, Teal could be impacted by disturbance if they fly over the site but it is stated that given the small numbers observed at Seecon Lough (6km to the west) the impact is considered unlikely. Impacts to the Curlew or Redshank are considered unlikely given there was no observations of this species. I consider that these conclusions are reasonable.

13.2.4 Disturbance/displacement of protected species during Operation of the Windfarm

The main risk for protected species during operation of the proposed windfarm is the risk to birds and bats of collision with the turbine blades. The NIS states that evidence on this matter shows that effects are site and species specific with not all species equally sensitive to collision with larger birds at greater risk due to flight behaviour and mobility. Reference is made to research in Scotland which found a close to 40% reduction in breeding Golden Plover densities within 500 metres of wind turbines. In relation to Golden Plover, known to occur within the Connemara Bog Complex SPA, Lough Corrib SAC and Inner Galway Bay SPA, reference is made to the observations made of flocks flying over the site. It was noted that the birds fly over the rotor height. However, I would note that reference is made to the risk of collision being heightened by the fact that they fly in large flocks with the risk higher in foggy and misty conditions. It is stated that the layout and space between the proposed turbines reduces the risk with the impact considered to moderate-significant long term and negative. This is therefore of particular note to this assessment given that there is a possible significant risk to this species. The likelihood of the impact occurring is stated to be unlikely. This likelihood appears to be justified by the reference to the density reduction of breeding Golden Plover within 500 metres of turbines as it is stated, as noted above, that Golden Plover are not known to breed within 500m of any of the proposed turbines. While the displacement risk to breeding Plover would be a significant long-term negative impact the probability of same is considered to be unlikely.

However, while the birds may not be known to breed within 500 m of the turbines in question, they have been recorded flying over the site in question in large numbers with the NIS stating that the risk of collision is heightened by their flying in large flocks. It is stated at section 3.9.6.2 that *“this risk would be particularly relevant in foggy and misty conditions”* and that while *“the layout of the turbines reduces the risk somewhat*

(emphasis added) *as closely spaced turbines in a linear formation could increase the risk*". The proposed turbines are stated to be "*relatively widely spaced*". However it is not clear by how much the risk is decreased. In addition, Appendix 6c outlines the observations of the Golden Plover flying over the site on three separate occasions. The flights paths are adjacent to T13, directly over T14 and to the south of T11. Therefore in very close proximity of 3 of the proposed turbines. I am not clear as to how an unlikely likelihood can be derived from this impact assessment particularly given the recording of the species flying over the site and to the concerns expressed in respect of their flight behaviour. The spacing of the turbines is stated to reduce the risk somewhat but I cannot say that the NIS has satisfactorily demonstrated that such a risk is unlikely. While it may be a clumsy use of language or an inadequate explanation of the mitigation considered to derive from the siting and design, I consider that the applicants have not proven beyond all reasonable scientific doubt that the proposed works would not have an adverse effect on this species.

While the Greenland White-Fronted Geese were not observed flying over the site there is a risk of collision to this species if they were to use the site as part of their flight path. This would be a significant long-term negative impact but it is considered unlikely. I would consider that given that there were no observations of this species flying over the site that this conclusion is reasonable.

The Lesser Horseshoe Bat while present within the Ross Lake and Woods SAC is considered to be an extremely unlikely risk given their flight behaviour flying 1-2 metres above ground and generally in dense woodland. This appears reasonable. While the Black-headed gull and lawping both occur within the Lough Corrib SPA and Inner Galway Bay SPA and are at risk of collision neither of the species were recorded during survey work making any impact unlikely. Similarly the cormorant and teal observed at Secon Lough and known to occur within the Inner Galway Bay SPA were not recorded with the impact considered to be unlikely. Again this appears reasonable.

13.6.6 Mitigation Measures and Residual Impacts

The NIS states that much of the mitigation is designed into the scheme and layout. I would consider that this statement is reasonable particularly as this is a repeat application where the applicant has had the opportunity to revise the scheme to address concerns raised by the authorities and observers in respect, most especially of peat stability and archaeology both of which are discussed separately in the assessment above. I would consider that the list of mitigation measures proposed appears to be a reasonable attempt to address all of the matters arising. What is essential is that the monitoring proposed is completed as proposed and submitted to the planning authority so that a record is maintained on file. These measures as outlined in the NIS are as follows:

- Full-time Environmental Management and Environmental Management Plan;
- Project ecologist for construction and operational phases;
- Wheel-wash, dewatering and concrete control measures;

- Fuel Management measures;
- Felling to be undertaken outside of bird breeding season (April to July) and outside of the bat activity season (May to September/October);
- Excess felled brush to be removed off site to avoid release and runoff of phosphorous into sensitive watercourses;
- Exclusion of machinery movement within valuable habitat;
- Ecological restoration and enhancement management plan;
- Pre-construction bird survey monitoring, particularly focusing on bird species of special interest such as Golden Plover and Greenland White Fronted Goose;
- Monitoring bird surveys during operation;
- Monitoring bat surveys during operation including fatality searches;
- Monitoring of water quality during and post construction;
- Pre-construction survey for Marsh Fritillary butterfly.

13.7 Residual Impacts and NIS Finding

The NIS concludes that after mitigation the overall impacts on designated sites is not considered to be significant.

13.8 Appropriate Assessment Conclusion

Having considered the submitted report, I have a number of concerns. Firstly, in respect of methodology, I have concerns as to the use of the probable/unlikely category for likelihood of the impacts occurring. I consider that it confuses the terminology and there is no reference source to justify its use. However, more critically, I consider that a serious weakness arises in respect of the consideration of operational impacts on the Golden Plover. The judgment of Kelly J. in *Kelly v An Bord Pleanála* 2013 No. 802 J.R. states that an assessment cannot be regarded as appropriate if it contains gaps or lacunae, lacks complete, precise, definitive conclusions capable of removing all reasonable scientific doubt as to the effects of the proposal on EU sites. I consider that the authors have not proven that there would not be an adverse effect on a qualifying interest, the Golden Plover, known to occur in 3 designated sites within 15km of the site in question. They have stated that turbine spacing somewhat reduces the risk. However this risk is determined to be a significant impact. Therefore, having regard to the assessment of the significance of the impacts likely to occur I do not consider that the applicant has provided adequate information to prove beyond reasonable scientific doubt that the wind farm will not impact on the natural flight lines of the Golden Plover and would not have an adverse impact on the integrity of the Connemara Bog Complex SPA, Lough Corrib SPA and Inner Galway Bay SPA, having regard to their conservation objectives.

14.0 CONCLUSION & RECOMMENDATION

14.1 Conclusion

The proposal before the Board seeks to develop 11 wind turbines and associated infrastructure is the second application before the Board for a development of this

nature on this site. The previous application as set out in this report was refused on grounds related to the archaeological impacts and concerns about peat stability. I consider that these two matters have been addressed satisfactorily by the applicant in respect of the current application as outlined in detail above. However, contrary to some of the statements made by the applicant in respect of the consideration of this application and appeal, the proposal herein must be considered de novo by the Board and it is not simply a matter of addressing the previous concerns. In this regard, the assessment outlined above seeks to provide the Board with a comprehensive assessment of all the pertinent matters considered to arise in respect of the development proposed.

As outlined throughout the application documentation, the subject site is located within the Strategic Wind Area designated for wind farm development as part of the current Galway County Development Plan. Therefore the principle of the proposal on the site is supported by the policies included in that Wind Energy Strategy. It is however noted that while wind farm development is appropriate in principle in such areas this is expressed with the caveat that such developments address and appropriately meet tests set out in the Energy Strategy for such areas including avoiding visual clutter, comply with the Windfarm Guidelines in terms of siting, layout and environmental assessment; be accompanied by a HDA under Article 6 of the Habitat Directive where they may result in adverse effects on any Natura 2000 site; and avoid piecemeal development of the land designated as Strategic Areas. While the proposal will have a negative visual impact on the landscape particularly when viewed from the north and south, having regard to the screening afforded by the natural undulations of the site and to the existence of so many permitted turbines within the area the proposal herein would not be detrimental to an already fundamentally changed landscape. The requirements of the Guidelines, have I would consider been addressed in the proposed development.

The HDA (Habitats Directive Assessment) now referred to as an NIS (Natural Impact Statement) was submitted as part of the proposal in order to assist the Board in carrying out its Appropriate Assessment. As I note in the conclusion above at Section 13.8, having regard to the assessment of the significance of the impacts likely to occur I do not consider that the applicant has provided adequate information to prove beyond reasonable scientific doubt that the wind farm will not impact on the natural flight lines of the Golden Plover and would not have an adverse impact on these protected species and on the integrity of the Connemara Bog Complex SPA, Lough Corrib SPA and Inner Galway Bay SPA. In this regard, I consider that the Board cannot accept the findings set out in the NIS and I consider that permission must be refused in that regard.

14.2 Recommendation

Having considered the contents of the application including the Environmental Impact Assessment and Natura Impact Statement, the decision of the planning authority, the planning history on the site, the provisions of the Galway County Development Plan

2009 – 2015 including the Wind Energy Strategy (2011), the provisions of the Guidelines for Planning Authorities on Wind Farm Development and Wind Energy Development (2006) the grounds of appeal and the responses thereto and the observations made to the Board I recommend that permission be refused for the reasons and considerations, set out hereunder:

REASONS AND CONSIDERATIONS

The appeal site lies within 15km of 10 statutorily designated European sites (Special Areas of Conservation, Special Protection Areas and Ramsar sites) and the site itself hosts bird species which are listed of Special Conservation Interest in the Special Protection Areas in the vicinity of the site (Connemara Bog Complex SPA, site code 004181; Lough Corrib SPA, site code 004042; and Inner Galway Bay SPA site code 004031). It is the policy of the planning authority as set out in Policy HL31 to implement Article 6(3) of the EU Habitats Directive, and to subject any plan (including County Development Plan, Local Area Plans) or projects likely to impact Natura 2000 or European Sites (SACs, SPAs), whether directly (in situ), indirectly (exsitu) or in combination with other plans or projects, to an Appropriate Assessment in order to inform decision making. A plan or project may only be authorised after the competent authority has made certain, based on scientific knowledge, that it will not adversely affect the integrity of the site; in the case of derogations, authorisation must be pursued under Article 6(4).

The Board is not satisfied on the basis of the information contained in the Natura Impact Statement and other documentation supporting the planning application, that an appropriate or adequate assessment of the effects of the development on the environment has been carried out in accordance with Article 6(3) of the EU Habitats Directive or that the integrity of Special Areas of Conservation and Special Protection Areas would not be adversely affected by the proposed development, in particular, by virtue of the disturbance, barrier effects to movement and collision risk arising from the construction and operation of the wind farm on birds of Special Conservation Interest known to traverse the site and the network of SPA's in the vicinity of the site, notably the Golden Plover. In these circumstances, the proposed development would be contrary to Article 6(3) of the EU Habitats Directive, would contravene policy HL31 of the Galway County Development Plan 2009-2015, and would, therefore, be contrary to the proper planning and sustainable development of the area.

Una Crosse
Senior Planning Inspector
November 2014