20.0 SCHEDULE OF MITIGATION MEASURES

20.1 INTRODUCTION

This chapter of the EIAR provides a summary of the findings of this EIAR, based on the design and mitigation measures identified within the technical assessments of this report. The schedule below details the measures upon which the findings of this EIAR have been based and are an integral part of the proposed project.

During the construction, operational and decommissioning phases of the project, all personnel working on the project will be required to be responsible for the environmental control of their own work and to perform their duties in accordance with the requirements and procedures of the CEMP (See Appendix 3.1).

All works associated with the construction of the proposed project will be undertaken with due regard to the guidance contained within CIRIA Document C741 'Environmental Good Practice on Site' (CIRIA, 2015).

20.2 SCHEDULE OF MITIGATION MEASURES FROM EIAR

The following table provides a summary of the mitigation measures proposed within this EIAR. In addition, the monitoring proposals have been included

Ref.	EIAR Chapter	Topic	Mitigation	Monitoring
Pre-Construction Phase				
PC1	Chapter 3 Description of Proposed Development	CEMP	The CEMP will be updated prior to commencement of development to address the requirements of any relevant planning conditions, including any additional mitigation measures which are conditioned and will be submitted to the planning authority for written approval. The construction contractor will be responsible for implementing the mitigation measures specified in the EIAR and CEMP and for communicating the requirements with all staff on-site. Their implementation of the mitigation measures will be overseen by the supervising Ecological Clerk of Works (ECoW), ecologists, archaeologists and/or geotechnical engineers, as appropriate.	
PC2	Chapter 3 Description of Proposed Development	Health & Safety Plan	A Health and Safety Plan covering all aspects of the construction process will address the Health and Safety requirements in detail. This will be prepared prior to the construction stage. A Project Supervisor Design Process (PSDP) and Project Supervisor Construction Stage (PSCS) are required to be appointed in accordance with the provisions of the Safety, Health and Welfare at Work (Construction) Regulations.	
PC3	Chapter 3 Description of Proposed Development	Traffic Management Plan (TMP)	A Traffic Management Plan (TMP) has been prepared for the proposed project. This will be updated ahead of construction to address the requirements of any relevant planning conditions.	
PC4	Chapter 7 Biodiversity - Flora and Fauna	Otter survey	A pre-construction otter survey (as part of a general ecological pre-construction walkover survey) will be undertaken to identify the presence of any new holts or activity. Although no holts were identified, new holts may be established in the interim period between the initial surveys and the construction phase. Therefore, a pre-construction survey will be conducted within the proposed development site and will be undertaken no more than 10—12 months in advance of the construction works as per the NRA (2008) guidelines. In the event that a new holt (established within the interim period) is identified within the ZoI of the proposed works the developer will engage with NPWS in relation to the appropriate steps to be taken	Monitoring requirements are outlined in Chapter 7 of the EIAR.
PC5	Chapter 7 Biodiversity - Flora and Fauna	Badger survey	A pre-construction badger survey within 150m of the proposed development works will be carried out prior to the works commencing. Pre-construction surveys (as part of a general ecological pre-construction walkover survey) will be carried out in accordance with (NRA, 2006). Should any new setts (established within the interim period) be encountered within the ZoI of the proposed development, the developer will engage with NPWS in relation to the appropriate steps to be taken.	Monitoring requirements are outlined in Chapter 7 of the EIAR.
PC6	Chapter 7 Biodiversity - Flora and Fauna	Common Frog	Due to the presence of frogs in proximity to the proposed development site and the presence of suitable habitat to support frog within the works area, a pre-construction frog spawn survey (as part of a general ecological pre-construction walkover survey) will be undertaken within drainage ditch habitats which maybe be disturbed during the common frog's spawning season.	Monitoring requirements are outlined in Chapter 7 of the EIAR.
PC7	Chapter 7 Biodiversity - Flora and Fauna	Common Lizard	Due to the presence of common lizard in proximity to the proposed development site and the presence of suitable habitat to support lizard within the works area, a preconstruction lizard survey (as part of the general ecological pre-construction walkover survey) will be carried out on habitats that are likely to support the species which may be disturbed during construction	Monitoring requirements are outlined in Chapter 7 of the EIAR.
PC8	Chapter 7 Biodiversity - Flora and Fauna	Bats	The Bat Monitoring Programme included in Appendix 7.2 of the EIAR outlines details of pre-construction surveys. If more than three years pass between the pre-construction surveys and the construction of the wind turbines, it may be necessary to repeat the pre-construction surveys (EUROBATS, 2014).	Monitoring requirements are outlined in Appendix 7.2 of the EIAR.
PC9	Chapter 8 Biodiversity - Ornithology	Environmental Management	Pre-construction surveys will be required to identify the location of any breeding birds onsite, in particular breeding waders (e.g. Greenshank, Dunlin, Golden Plover, Redshank, Lapwing, Ringed Plover, Common Sandpiper, Curlew or Snipe) and breeding gulls (e.g Common Gull). Such surveys can only be conducted between the months of April to July. These surveys are required to inform site clearance activities given the legal protection of all breeding birds	These surveys will be carried out in the breeding season preceding the start of construction, and in every subsequent breeding season across the duration of the construction period.
PC10	Chapter 16 Material Assets: Aviation & Telecommunications	Underground Services	A confirmatory survey of all existing services will be carried out prior to construction to verify the assumptions in this report and identify the precise locations of any services. The applicant will liaise with the service provider where such services are identified. Digging around existing services, if present, will be carried out by hand to minimise the potential for accidental damage.	

Ref.	EIAR Chapter	Topic	Mitigation	Monitoring
PC11	Chapter 17 Traffic & Transportation	Pavement Surveys	The client will undertake pre-construction and post-construction visual pavement surveys on the N59. Where the surveys conclude that damage to the road surface is attributable to the construction phase of the proposed project, the developer will fund the appropriate reinstatement works to bring the road surface back to pre-construction condition as a minimum, details for which will be agreed with the Roads Authorities	
Construction Phase				
CN1	Chapter 3 Description of Proposed Development and Chapter 6 Population & Human Health	Health & Safety	The proposed Oweninny Wind Farm Phase 3 will be constructed in accordance with all relevant Health and Safety Legislation. The project will employ all of the latest and relevant guidelines and legislation terms of health and safety both for works within the wind farm site. The required levels of safety (e.g. during road works) will be maintained for all road users as well as pedestrians. The wind farm site itself will not be open to the public until after the construction phase of the project. Appropriate health and safety measures as described in the CEMP will be taken for all works areas during the construction phase in the interest of worker safety also. Should any public health advice be in place during the construction phase (such as the recent Covid-19 public restrictions) these will be implemented on site.	As required through the contractor's CEMP
CN2	Chapter 7 Biodiversity - Flora and Fauna	Ecological Clerk of Works (ECoW)	A suitably qualified ECoW will be appointed by the contractor for the duration of the construction period.	
CN3	Chapter 7 Biodiversity - Flora and Fauna	Invasive Species Management	Implementation of the Invasive Species Management Plan (Appendix 6-6) and development of an appropriate Invasive Species Risk Assessment Method Statement by the contractor prior to commencement of any works.	Ongoing monitoring in line with the Invasive Species Risk Assessment Method Statement
CN4	Chapter 7 Biodiversity - Flora and Fauna	Bats - buffer zones	A minimum buffer zone of >86.2m around the wind turbines should be cleared of tall vegetation (shrubs, trees, scrub etc.) to reduce favourability of this zone for foraging and commuting bats.	
CN5	Chapter 7 Biodiversity - Flora and Fauna	Bats - maintenance of vegetation	A low level of vegetation should be maintained for the entire operational phase. This could be achieved by landscape plan which is likely to suppress any new vegetation growth.	This will be monitored in year 1, 3 and 5 and every 5 years thereafter for the lifetime of the proposed development to ensure that new scrub vegetation does not develop within the zone around the turbines.
CN6	Chapter 7 Biodiversity - Flora and Fauna	Bats - clearance	Complete clearance work during the autumn and spring months. Complete clearance work at least 6 months prior to installation of wind turbines.	
CN7	Chapter 7 Biodiversity - Flora and Fauna	Bats - Natterer's roost	A Natterer's maternity roost was recorded in the toilet block adjacent to Turbine 4, as this roost is located directly adjacent to Borrow Pit A, the construction of an alternative roost is required. This alternative roost will be in the form of a bat house and will be located adjacent to the conifer plantation at 466458 E and 821818 N	
CN8	Chapter 7 Biodiversity - Flora and Fauna	Biodiversity Management Plan	A Biodiversity Management Plan will be implemented, and will include measures during construction such as : Remnant blanket bog restoration and enhancement Cutover bog revegetation Removal of self-seeding lodge pole pine Borrow pit reinstatement Peat deposition area reinstatement Management of invasive species	

Ref.	EIAR Chapter	Topic	Mitigation	Monitoring
CN9	Chapter 8 Biodiversity - Ornithology	Breeding Bird Surveys	Construction breeding bird surveys will be carried out. These will be carried out in line with the criteria outlined for pre-construction breeding bird surveys.	A bird monitoring programme will be undertaken at the proposed development site and results of the monitoring will be submitted to the competent authority and NPWS. More details on the components of the programme can be seen in Appendix 8.5. Monitoring objectives will include the following: •To ensure any required pre-commencement/ pre-construction phase monitoring is scheduled to ensure any impacts on birds are avoided. •To record usage of the site by birds and interaction with operating turbines during the post-construction phase of the development. •To monitor short-term and long-term effects on bird populations with a particular emphasis on wintering and breeding birds deemed to be of high conservation concern (Annex I; EU Birds Directive and BoCCI red list species) such as hen harrier. •To undertake collision monitoring and corpse searches for potential bird fatalities as a result of collision with turbine blades. •To record usage of the enhancement area by key ornithological receptors and in particular breeding ground nesting waders. •Report on findings of post construction monitoring at the end of each monitoring year (Year 1, 2, 3, 5, 10 and 15 of the lifetime of the wind farm).
CN10	Chapter 8 Biodiversity - Ornithology	Scrub Clearance	Any removal of scrub vegetation will be undertaken outside the bird breeding season, where feasible, which begins on the 1st day of March and ends on the 31st day of August. Where this is not possible, these works/activities will not take place before a confirmatory survey of the affected area (i.e. ground-based nests) is undertaken by the EcoW	As required through the contractor's CEMP
CN11	Chapter 9 Soils and Geology	Permits and Licences	It will be a requirement that all permits, and licences are obtained from the regulatory authorities as required by environmental law or regulation and will discharge the relevant conditions of the planning permission to commence site works, or as otherwise appropriate in advance of specific site activities.	As required through the relevant Permits and Licences
CN12	Chapter 9 Soils and Geology	Management of Excavated Materials	Excavated peat will only be moved short distances from the point of extraction and will be used locally for landscaping or reused in the peat deposition areas. Landscaping areas will be sealed and levelled using the back of an excavator bucket to prevent erosion. Where possible, the upper vegetative layer will be stored with the vegetation part of the sod facing the right way up to encourage growth of plants and vegetation at the surface of the landscaped peat. Peat, overburden, and rock will be reused where possible on site to reinstate borrow pits and other excavations where appropriate. Peat soils will be either side cast on to the existing cutover bog or placed in the Peat Deposition Areas. Where side casting occurs, it is expected that the existing vegetation extensive area and existing drainage system will remove any risk from generation of silt to surface water bodies. At the large excavation locations, such as turbine bases and substations, silt control measures will be incorporated into work area drainage with the discharge onto cutover bog rather than directly to surface water, which will provide additional silt control.	As required through the contractor's CEMP
CN13	Chapter 9 Soils and Geology	Geohazard / Peat & Soil Stability	Mitigation measures include stepping or battering back of excavations to a safe angle (as determined through a detailed slope stability assessment by a competent temporary works designer) or construction of a temporary sheet pile wall to support the peat and soft clays during construction.	As required through the contractor's CEMP
CN14	Chapter 10 Hydrogeology and Chapter 11 Hydrology and Water Quality	Surface Water Drainage	The surface water drainage system will require regular inspection during construction works and during operations to ensure that it is working optimally.	Regular visual inspections of all watercourses (flow conditions, discolouration, collection of debris, fish in distress or floating), presented in a monthly report on water quality, is advised by an independent, suitably qualified Ecological Clerk of Works (ECoW) with particular emphasis placed on: •Streams downstream of site activities; •At times when heavy traffic is frequenting the site; •During and after periods of heavy or prolonged rainfall and during winter months; •During fish migration and spawning periods; and Stream crossings to ensure that the existing mitigation measures are effective in preventing any sediment reaching streams.
CN15	Chapter 10 Hydrogeology and Chapter 11 Hydrology and Water Quality	Pollution Prevention	Best practice construction methods will be implemented in order to prevent water (surface water and groundwater) pollution.	
CN16	Chapter 10 Hydrogeology and Chapter 11 Hydrology and Water Quality	Environmental Management	All personnel working on the project will be responsible for the environmental control of their work and will perform their duties in accordance with the requirements and procedures of the CEMP.	

Ref.	EIAR Chapter	Topic	Mitigation	Monitoring
CN17	Chapter 10 Hydrogeology and Chapter 11 Hydrology and Water Quality	Sediment Control	To maximise the erosion and sediment control benefits of natural vegetation soil cover, stripping of soil is to be kept to a minimum and confined to construction areas only. Where practical, construction works will be staged to minimise the extent and duration of disturbance, e.g., plan for progressive site clearance, only disturbing areas when they are scheduled for current construction work.	
CN18	Chapter 10 Hydrogeology and Chapter 11 Hydrology and Water Quality	Groundwater Management	•Any groundwater encountered will be managed and treated in accordance with CIRIA C750, 'Groundwater control: design and practice' (CIRIA, 2016). •Groundwater from the borrow pits will be treated in the settlement lagoons. •Subject to landowner permission, selected private water supply wells at representative locations closest to turbine and borrow pit locations around the site will be monitored for water level and quality pre-construction and during the construction phase. •To minimise any effect on the underlying subsurface strata from material spillages, all oils and solvents used during construction will be stored within specially constructed dedicated bunded areas.	
CN19	Chapter 10 Hydrogeology and Chapter 11 Hydrology and Water Quality	Surface Water Management	•The implementation of the Surface Water Management Plan will be overseen by a suitably qualified ecologist/engineer and will be regularly audited throughout the construction phase. •The assigned ecologist/engineer will be required to stop works on site if he/she is of the opinion that a mitigation measure or corrective action is not being appropriately or effectively implemented.	
CN20	Chapter 10 Hydrogeology and Chapter 11 Hydrology and Water Quality	Land Use	There is an extensive network of existing access roads across the site will be used to facilitate the proposed development. Soils excavated will be reused within the site for landscaping purposes and borrow pit reinstatement.	
CN21	Chapter 10 Hydrogeology and Chapter 11 Hydrology and Water Quality	Contamination - Concrete & Cement Management	The following measures are proposed in terms of concrete/cement management: •Contractors will be required to provide a designated bin for washing down the chutes of concrete lorries on site; •Wash down and washout of concrete transporting vehicles will take place at a the source site to prevent cementitious material and water entering the surface water network; •Waste material will be removed from site to an appropriate waste permit facility; and •Disposal of excess concrete on any part of the construction site will be prohibited.	
CN22	Chapter 10 Hydrogeology and Chapter 11 Hydrology and Water Quality	Contamination - Fuel Management	The following measures are proposed in terms of fuel management: •Fuel storage and fuelling facilities will be required at several fixed locations and at mobile locations around the site, given the size of the project site it is impractical to track large plant to a single fixed facility. •Fuel storage and any oil storage will be carried out in accordance with the Enterprise Ireland Best Practice Guide BPGCS005 Oil Storage Guidelines. •Fuel and oil storage at fixed locations will be in a fixed tank, undercover and within a steel or concrete bund. •A dedicated impermeable bunded refuelling area will be constructed adjacent to the fixed fuel storage areas. •Double skinned plastic tanks will not be acceptable at the site for any purpose unless they are placed within fixed concrete or steel external bunds. •Each fixed fuel and oil storage bunds shall be sized to hold 110 % of the oil volume of the largest tank therein. The fixed fuel and oil storage bunds shall be blind sumped. The rainwater pumped from each bund shall be discharged to the surface water drainage system via an oil interceptor. •In the event of a spill, the liquid contained in the bund shall be removed by a liquid waste tanker, as will be the contents of the surface water drainage system and oil interceptor. Where refuelling is required on site away from fixed storage locations this will only be carried out utilising steel intrinsically bunded mobile fuel bowsers. At site refuelling locations, refuelling will take place within mobile bunds, but at a minimum fuel line from the bowser to the plant being fuelled will be contained by drip trays. •Generators and associated fuel tanks to be used at the site shall either be placed within bunds as per fuel storage tanks or shall be integrated units (i.e., fuel tank and generator in one unit) that are intrinsically bunded. No external tanks and associated fuel lines shall be permitted on site unless these are housed within a fixed bund with the generator.	

Ref.	EIAR Chapter	Topic	Mitigation	Monitoring
CN23	Chapter 12 Air Quality and Climate	Dust Supression and Exhaust Management	•Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic; •Any road that has the potential to give rise to fugitive dust must be regularly watered, as appropriate, during dry and/or windy conditions; •Vehicles exiting the site shall make use of a wheel wash facility where appropriate, prior to entering onto public roads; •Vehicles using site access tracks will have their speed restricted, and this speed restriction must be enforced rigidly. On any un-surfaced site access track, this will be 20 kph, and on hard surfaced access tracks as site management dictates; •Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary; •No crushing will take place on-site; •Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods; and •During movement of materials both on and off-site, trucks will be stringently covered with tarpaulin at all times. Before entrance onto public roads, trucks will be adequately inspected to ensure no potential for dust emissions.	Water bowser movements will be carefully monitored, to avoid increased runoff.
CN24	Chapter 13 Noise and Vibration	Construction Noise Management	•The best means practicable , including proper maintenance of plant, will be employed to minimise the noise produced by on site operations. •All vehicles and mechanical plant will be fitted with effective exhaust silencers and maintained in good working order for the duration of the contract. •Compressors will be attenuated models, fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic tools shall be fitted with suitable silencers. •Machinery that is used intermittently will be shut down or throttled back to a minimum during periods when not in use. •Any plant, such as generators or pumps, which is required to operate before 07:00hrs or after 19:00hrs will be surrounded by an acoustic enclosure or portable screen. •During the construction programme, supervision of the works will include ensuring compliance with the limits detailed in Table 13. 13 using methods outlined in BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise. •The hours of construction activity will be limited to avoid unsociable hours where possible. Construction operations shall generally be restricted to between :00hrs and 18:00hrs Mondays to Saturdays. However, to ensure that optimal use is made of good weather period or at critical periods within the programme (i.e., concrete pours) or to accommodate delivery of large turbine component along public routes it could be necessary on occasion to work outside of these hours. Where rock breaking is employed, the following are examples of measures that will be implemented, to mitigate noise emissions from these activities: •Fit suitably designed muffler or sound reduction equipment to the rock breaking tool to reduce noise without impairing machine efficiency. •Ensure all leaks in air lines are sealed. •Erect acoustic screen between compressor or generator and noise sensitive area. When possible, line of sight between top of machine and reception point needs to be obscured. •Enclose breaker or rock drill in portable or fixed acoustic enclosure with suitable ventilation.	During the construction programme, supervision of the works will include ensuring compliance with the limits detailed in Chapter 13 using methods outlined in BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Noise. Independent monitoring will be carried out by external bodies for verification of results.
CN25	Chapter 13 Noise and Vibration	Construction Vibration Management	Vibration from construction activities will be limited to the values set out Chapter 13	
CN26	Chapter 17 Traffic & Transportation	Haul Routes - stone	Excavation of stone material from the borrow pits within the Wind Farm site to provide construction material will reduce the HGV volumes	
CN27	Chapter 17 Traffic & Transportation	Haul Routes - concrete	Liaison with local authorities and the community in advance of the foundation pours as well as minimising other works/deliveries as noted.	

Ref.	EIAR Chapter	Topic	Mitigation	Monitoring
CN28	Chapter 17 Traffic & Transportation	Traffic Management Plan (TMP)	•Haul route selection to avoid sensitive receptors and preference for national road infrastructure over regional and local road. •Existing site access has been designed to accommodate the AILs, with minor modifications at the access to temporarily removed the bollards during delivery of the AIL and re-installation after delivery. •The existing and widened internal access roads facilitate queuing of construction vehicles off the public road. •Traffic Management Operatives (TMOs) will be provided by the principal contractor in accordance with their Traffic Management Plan at the site access during peak construction traffic activities, refer to the TMP. •A wheel wash will be provided within the site. •Passing bays on the internal access track and a loop layout within the Wind Farm site to facilitate safe passing of vehicles within the site, vehicles travelling in a forward direction (reducing higher risk reversing manoeuvres).	
CN29	Chapter 17 Traffic & Transportation	Post-Construction Pavement Surveys	Where the surveys conclude that damage on the roadway is attributable to the Construction Phase of the proposed project, the applicant will fund the appropriate reinstatement works to bring the road back to pre-construction condition as a minimum, details for which will be agreed with the Roads Authorities.	
CN30	Chapter 18 Archaeological, Architectural & Cultural Heritage	Topsoil/Peat Stripping	All stripping of topsoil/peat across the proposed development area will be monitored by a suitably qualified archaeologist. Should any features of archaeological potential be discovered during the course of the works the DoHLGH will be informed immediately and archaeological excavation (preservation by record) or in-situ will be required. Any further mitigation, such as preservation by record, will require a licence and approval from the DoHLGH.	
Operational Phase				
OP1	Chapter 7 Biodiversity - Flora and Fauna	Maintenance works	Mitigation for the operational maintenance works include regular scheduled maintenance works, regular inspections of all project elements with any unscheduled repairs or maintenance arising to be undertaken.	
OP2	Chapter 7 Biodiversity - Flora and Fauna	Hydrocarbons	Mitigation measures for the potential release of hydrocarbons or oil spills include: •The plant and vehicles to attend site should be regularly inspected or at least prior to the scheduled site visit to be free from leaks and is fit for purpose; •Fuels stored on site will be minimised, any storage areas will be bunded appropriately for the fuel storage volume for the time period of the operation; •Operational team to be competent and trained in an emergency plan for the operation phase to deal with accidental spillages; and •Spill kits will be available to deal with accidental spillages.	
OP3	Chapter 7 Biodiversity - Flora and Fauna	Bats - surveillance	A strict surveillance programme will be implemented for the first three years of operation of the wind farm in order to identify if there exists a substantial risk at a particular turbine location or during a particular time-period (3 yrs - as per recommendation of SNH, 201920 guidelines). This surveillance should then be repeated at Year 10 and Year 20 of the operation of the wind farm to ensure that sufficient mitigation is being implemented	
OP4	Chapter 7 Biodiversity - Flora and Fauna	Bats - idling or freewheeling	The operation of the turbines will be in a manner that will restrict the rotation of turbine blades as much as possible below the manufacturer's cut-in speed (e.g., by feathering the blades during low wind levels - changes in blade feathering by altering the angle of the blade and therefore preventing the blades from rotating during low wind situations). This will prevent freewheeling or idling of the blades	
OP5	Chapter 7 Biodiversity - Flora and Fauna	Bats - Vegetation Maintenance	the immediate habitat surrounding individual turbines will be managed and maintained in such a manner that they do not attract insects (i.e. the concentration of insects in the wind turbine vicinity should be reduced as much as possible, but not such that insect abundancies affected elsewhere on the site). Therefore, it is important to ensure that limited scrub development is permitted within the buffer zones for the turbines and these buffer zones are dependent on the bat activity and bat species recorded within specified buffer zones of the current turbine locations	
OP6	Chapter 7 Biodiversity - Flora and Fauna	Bats - Cut-in speeds	Increasing the cut-in speed to 5.5 m/s from 30 minutes prior to sunset and to 30 minutes after sunrise to reduce bat collisions with turbines should be employed where required (i.e. at turbine locations where surveillance recorded high bat activity levels for High Risk and Medium Risk bat species and/or bat carcasses were recorded).	

Ref.	EIAR Chapter	Topic	Mitigation	Monitoring
OP7	Chapter 7 Biodiversity - Flora and Fauna	Bats - lighting	To avoid lighting impacts to bats, directional lighting will be used to prevent overspill on to woodland edges or treelines/hedgerows which may be used by foraging/commuting bats. This will be achieved through the use of lighting accessories, such as hoods, cowls, louvers and shields, to direct the light to the intended area only which is in line with the Bat Conservation Ireland guidelines	
OP8	Chapter 13 Noise and Vibration	Amplitude Modulation	In the event that a complaint which indicates potential amplitude modulation (AM) associated with turbine operation, the operator will employ a qualified acoustic consultant to assess the level of AM in accordance with the methods outlined in the Institute of Acoustics (IOA) Noise working Group (Wind Turbine Noise) Amplitude Modulation Working Group (AMWG) namely, Institute of Acoustics IOA Noise Working Group (Wind Turbine Noise) Amplitude Modulation Working Group Final Report: A Method for Rating Amplitude Modulation in Wind Turbine Noise (9 August 2016) or subsequent revisions	Commissioning noise surveys will be undertaken to ensure compliance with any noise conditions applied to the development. In the unlikely instance that an exceedance of these noise criteria is identified, the assessment guidance outlined in the IOA GPG and Supplementary Guidance Note 5: Post Completion Measurements (July 2014) should be followed, and relevant corrective actions will be taken
OP9	Chapter 14 Shadow Flicker	Screening	The developer will engage with any affected residents to investigate options for new or additional screening measures (such as planting), where appropriate and agreeable to the affected residents. A system for logging complaints related to shadow flicker will be put in place in advance of the commissioning of the proposed wind farm, and details of the process will be made available to local residents.	Where agreed screening measures are implemented, the effectiveness of the measures will be monitored and if the measures are not functioning to the satisfaction of the property owner/occupant, they will be included in the Turbine Shutdown Scheme as set out in Section 14.5.2.
OP10	Chapter 14 Shadow Flicker	Turbine Shutdown Scheme	Where screening methods are unsuccessful a Turbine Shutdown Scheme will be developed. Wind turbine technology will be installed as standard practice to automatically shut-down individual turbines during periods of confirmed shadow flicker to prevent its occurrence at receptors adjacent to the wind farm	
OP11	Chapter 16 Material Assets: Aviation & Telecommunications	Aviation - Lighting	The proposed development will require certain lighting requirements for tall structures as prescribed by the relevant aviation authorities. The details for this lighting will be agreed with the Irish Aviation Authority and will be applied to the appropriate turbines and met mast. This will ensure the required visibility of the proposed development to any local aircraft	
OP12	Chapter 16 Material Assets: Aviation & Telecommunications	Telecoms	The developer will sign an agreement with 2RN prior to construction to commit to restoring service to any end users that may have their service disrupted as a result of the proposed development. If required the developer could utilise general mitigation measures such as upgraded receiver antennae, signal relay antennae and/or signal amplifiers where appropriate in conjunction with the service providers to address any unforeseen issues that might arise. This is standard industry practice and will eliminate any potential impacts in this regard.	
Decommissioning Phase				
DC1	Chapter 3 Description of Proposed Development	Decommissioning Plan - turbines	On decommissioning of the Wind Farm, a Decommissioning Plan will be prepared and implemented to minimise the effects during this stage. Upon decommissioning of the proposed wind farm, the wind turbines would be disassembled in reverse order to how they were erected. All above ground turbine components would be separated and removed off-site for recycling. Turbine foundations would remain in place underground and would be covered with earth and allowed to revegetate or reseed as appropriate.	
DC2	Chapter 10 Hydrogeology and Chapter 11 Hydrology and Water Quality	Fuel Management Plan	A fuel management plan to avoid contamination by fuel leakage during decommissioning works will be implemented as per the construction phase mitigation measures.	
DC3	Chapter 17 Traffic & Transportation	Decommissioning Plan - TMP	As the decommissioning phase is envisaged to be over 30 years from now, a new TMP will be undertaken to take account of any road improvements and changes to the network in the future	