

Proposed Derrygreenagh Power Project Environmental Impact Assessment Report

Chapter 20: Schedule of Environmental Commitments

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20.0 SCHEDULE OF ENVIRONMENTAL COMMITMENTS

20.1 Introduction

- 20.1.1 This Chapter of the Environmental Impact Assessment Report (EIAR) provides a summary of the Schedule of Environmental Commitments (mitigation measures) for the Proposed Development and Overall Project.
- 20.1.2 As described throughout each of the EIAR technical chapters (**Chapters 7 to 18**), there are instances where the environmental effects associated with the Proposed Development and Overall Project may be of such a magnitude as to warrant mitigation measures. These measures are deemed necessary to minimise environmental impacts during the construction, operation and / or maintenance phases of the Proposed Development and Overall Project.
- 20.1.3 Embedded mitigation measures have been incorporated into the design of the Proposed Development throughout the design process. The environmental impact assessment of the Proposed Development facilitated the identification of additional mitigation and monitoring measures. The mitigation measures identified within **Chapters 7 to 18** of this EIAR are summarised and presented in **Tables 20.1 to 20.3**. This chapter should be read in conjunction with the individual chapters of this EIAR as the information contained herein is a summary only.
- 20.1.4 The embedded environmental controls and all mitigation measures detailed herein are also included in the Construction Environmental Management Plan (CEMP), refer to **Appendix 5A, Volume II**.

20.2 Power Plant Area

Table 20.1: Schedule of Environmental Commitments for the Power Plant Area

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
POWER PLANT AREA – PRE-CONSTRUCTION PHASE				
PPA_PRE_1	Chapter 8 (Cultural Heritage and Archaeology)	Project Archaeologist	Section 8.6	<ul style="list-style-type: none"> • The Applicant will appoint a suitably qualified archaeologist as the Project Archaeologist to oversee the construction phase activities. • The appointed Project Archaeologist will undertake full-time monitoring of the excavation of the test trenches and where appropriate, carry out archaeological investigation.
PPA_PRE_2	Chapter 8 (Cultural Heritage and Archaeology)	Archaeology and Testing	Section 8.6	<ul style="list-style-type: none"> • Archaeological testing will be carried out at the pre-construction phase in areas, identified in the construction impacts section of Section 8.5 of Chapter 8 of the EIAR, where the Proposed Development has the potential to impact upon archaeological remains (peripheral areas around the current Bord na Móna complex) (Figure 8.4 of the EIAR). • This testing will take the form of mechanically excavated test trenches. • These will be excavated under the constant supervision of a suitably qualified and licensed archaeological contractor who will be appointed to carry out the archaeological fieldwork. Relevant licenses will be acquired from the Department for Housing, Local Government and Heritage (DHLGH) / NMS and the National Museum of Ireland (NMI) for all archaeological works. • These will be carried out in accordance with an Overarching Method Statement for Archaeological Works prepared by the Project Archaeologist and agreed with the NMS. • It is anticipated that all archaeological works will be completed prior to the commencement of construction activities. • The programme of pre-development archaeological testing will consist of the mechanical excavation of test trenches down to sterile glacial tills and bedrock, by means of a smooth toothless bucket. These will be undertaken at specified locations within the Proposed Development. • Should archaeological material/features be encountered during the archaeological testing, the use of machinery shall cease, and further archaeological investigation (by hand) shall be carried out to determine the nature and extent of the archaeological remains. • Archaeological deposits shall not be removed as part of the assessment process. • The testing will be undertaken in advance of construction to allow adequate time to evaluate, record and, where necessary, mitigate any archaeological features that may be revealed. In the event that any archaeological features are uncovered during construction, the appointed Archaeologist and the National Monuments Service will be consulted to determine the appropriate mitigation measures. • These may include preservation in situ, preservation by record through systematic archaeological excavation, and/or archaeological monitoring of specific construction activities during the construction phase. • Archaeological issues will be resolved where possible, at the pre-construction stage of the development, although areas within peat bog may require evaluation during the construction phase with groundworks carried out under archaeological supervision.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • If unexpected archaeological remains or artefacts are discovered during construction work, work in that area will cease and the area will be protected. • An unexpected finds procedure will be included in the Overarching Method Statement for Archaeological Works. The Project Archaeologist and NMS will be notified, and the unexpected finds procedure will be implemented.
PPA_PRE_3	Chapter 9 (Biodiversity)	Surveys	Section 9.6	<ul style="list-style-type: none"> • Pre-construction surveys for protected species, where required/necessary, to determine if any breeding or resting sites have become established in the period between baseline survey and construction works commencing will be carried out, and for the presence of any non-native invasive species. • Any surveys which require licensing (e.g. inspection of bat roosts) will be supported by a specific mitigation plan. All pre-construction surveys will be completed immediately prior to vegetation clearance (i.e. weeks/days leading up to clearance to ensure recency/robustness of information). <ul style="list-style-type: none"> ○ Safeguarding of retained habitats. ○ Safeguarding of protected or notable species known or likely to occur within the Proposed Development Site. ○ Commission/appointment of an appropriately experienced ecologist to undertake an Ecological Clerk of Works (eCoW) role, which will be to oversee and advise both contractors and site operators during times of major works within particularly sensitive ecological windows (e.g., breeding bird season) during both the construction phase, and as part of monitoring during the operational phases. • Approach to the Identification of Ecological Constraints.
PPA_PRE_4	Chapter 9 (Biodiversity)	Bats	Section 9.6	<ul style="list-style-type: none"> • The provision of bat boxes across the Proposed Development site will also provide additional roosting opportunities throughout the wider site. • These must be erected prior to commencement of construction and therefore the demolition of existing roost sites in the Power Plant Area.
PPA_PRE_5	Chapter 16 (Material Assets)	Utilities	Section 16.6	<ul style="list-style-type: none"> • An up-to-date utilities plan will be produced and submitted to the local authority prior to construction showing all utilities present on the existing Power Plant Area Site before construction begins.
POWER PLANT AREA – DEMOLITION PHASE				
PPA_DEM_1	Chapter 5 (The Proposed Development)	Demolition waste	Section 5.4	<p>A Resource Waste Management Plan (RWMP) will be prepared by the appointed contractor prior to work commencing to help manage site waste more effectively.</p>
PPA_DEM_2	Chapter 15 (Population and Human Health)	Asbestos	Section 15.6	<ul style="list-style-type: none"> • Asbestos will be progressively removed throughout the works in full compliance with current regulations. The removal of all hazardous materials is to be carried out prior to demolition work commencing. The coating on the external sheeting is known to contain some asbestos bearing material

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
POWER PLANT AREA – CONSTRUCTION PHASE				
PPA_CON_1	Chapter 5 (Proposed Development)	Refuelling – land, soils and water	Section 5.7	<p>Refuelling</p> <ul style="list-style-type: none"> • Wherever possible, vehicles will be refuelled off-site. • On-site refuelling of machinery will be carried out at dedicated refuelling locations using a mobile double skinned fuel bowser or fuel truck. The fuel bowser/truck will be re-filled off-site and will be transported to where machinery is located. • A spill kit will be carried on vehicles in the event of any accidental spillages. • The fuel bowser will be parked on a level area in the construction compound when not in use. • Only designated trained and competent operatives will be authorised to refuel plant on-site. • Mobile measures such as drip trays, spill kits and fuel absorbent mats will be available and will be used when required during all refuelling operations.
PPA_CON_2	Chapter 5 (Proposed Development)	Concrete – land, soils and water	Section 5.7	<p>Concrete Deliveries and Pours</p> <ul style="list-style-type: none"> • Ready-mixed concrete will be used during the construction phase, with all concrete being delivered from local batching plants in sealed concrete delivery trucks. • Before leaving site, washing of the delivery truck chute will be minimised and restricted to designated wash out areas. • Concrete trucks will be washed out fully at the off-site batching plant, where facilities are already in place. • The small volume of water that will be generated from washing of the concrete lorry’s chute will be directed into a temporary lined impermeable containment area, or a Siltbuster-type concrete wash unit or equivalent. The residual liquids and solids will be removed off-site by an appropriately authorised waste collector for disposal at an authorised waste facility. • The areas will be covered when not in use to prevent rainwater collecting. At the end of the concrete pours, any of the remaining liquid contents will be tankered off-site and transported to an appropriately authorised facility. • Concrete deliveries are to be carried out outside peak periods to minimise impact on school and work commuter traffic. • The risks of pollution arising from concrete deliveries will be further reduced by the following: <ul style="list-style-type: none"> ○ Concrete truck hoppers will not be washed out on the site but will be directed back to their batching plant for washout. ○ Site roads will be constructed/upgraded to the required standard to allow transport of the components required for the project. Concrete delivery trucks will be able to access all areas where the concrete will be needed. No concrete will be transported around the site in open trailers or dumpers to avoid spillage while in transport. ○ The arrangements for concrete deliveries to the site will be agreed with suppliers before work starts, agreeing routes, prohibiting on-site washout and to agree emergency procedures. ○ Clearly visible signage will be placed in prominent locations close to concrete pour areas specifically stating washout of concrete lorries is not permitted on the site. • Special procedures will be adopted in advance of and during all concrete pours to minimise the risk of pollution. These are defined in the CEMP and include: <ul style="list-style-type: none"> ○ Using weather forecasting to assist in planning large concrete pours and avoiding large pours where prolonged periods of heavy rain is forecast.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> ○ Restricting concrete pumps and machine buckets from slewing over watercourses (including drains and ditches) while placing concrete. ○ Ensuring that excavations are sufficiently dewatered before concreting begins and that dewatering continues while concrete sets. ○ Ensuring that covers are available, and used, when necessary, for freshly placed concrete to avoid the surface washing away in heavy rain. ● Surplus concrete after completion of a pour will be taken off-site and disposed of at an appropriately authorised facility.
PPA_CON_3	Chapter 5 (Proposed Development)	Vehicle Washing - land, soils and water	Section 5.7	<p>Vehicle Washing</p> <ul style="list-style-type: none"> ● Site roads will already be constructed before other road-going trucks begin to make regular or frequent deliveries to the site (e.g., with steel or concrete). The site roads will comprise granular fill. ● A wheel wash facility will be provided. A wheel wash will be located at each of the construction entrances. ● The contractor will be responsible for ensuring that all vehicles egressing the site have used the wheel wash facilities. A road sweeper will be made available by the contractor for the cleaning of public roads in the event that they are dirtied by trucks associated with the Proposed Development.
PPA_CON_4	Chapter 5 (Proposed Development)	Dust – air quality	Section 5.7	<p>Dust Suppression</p> <ul style="list-style-type: none"> ● In periods of extended dry weather, a bowser or water spreader will be used to dampen down haul roads and site compounds to prevent the generation of dust. Silty or oily water will not be used for dust suppression.
PPA_CON_5	Chapter 5 (Proposed Development)	General	Section 5.7	<ul style="list-style-type: none"> ● All materials will be stored within temporary compounds, see CEMP temporary construction compound details, and transported to the works zone immediately prior to construction. ● Weather conditions will be taken into consideration when planning construction activities to minimise risk of run off from site. ● Provision of 50m exclusion zones and barriers (silt fences) between any excavated material and any surface water features to prevent sediment washing into the receiving water environment. ● If dewatering is required as part of the proposed works e.g. in wet areas, water must be treated prior to discharge. ● The contractor shall ensure that silt fences are regularly inspected and maintained during the construction phase. ● If very wet ground must be accessed during the construction process bog mats/aluminium panel tracks will be used to enable access to these areas by machinery. However, works will be scheduled to minimise access requirements during winter months. ● The contractor shall ensure that all personnel working on site are trained in pollution incident control response. A regular review of weather forecasts of heavy rainfall is required, and the Contractor is required to prepare a contingency plan for before and after such events. ● The contractor will carry out regular visual examinations of local watercourses that may be impacted by the proposed works during the construction phase to ensure that sediment is not above baseline conditions. In the unlikely event of water quality concerns, the Environmental Manager and ECoW will be consulted. ● Excavations will be left open for minimal periods to avoid acting as a conduit for surface water flows. ● Only emergency breakdown maintenance will be carried out on site. Emergency procedures and spillage kits will be available and construction staff will be familiar with emergency procedures.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • Appropriate containment facilities will be provided to ensure that any spills from vehicles are contained and removed off site. Adequate stocks of absorbent materials, such as sand or commercially available spill kits shall be available. • Entry by plant equipment, machinery, vehicles and construction personnel into watercourses or wet drainage ditches shall not be permitted. All routes used for construction traffic shall be protected against migration of soil or wastewater into watercourses. • Cabins, containers, workshops, plant, materials storage and storage tanks shall not be located near any surface water channels and will be located beyond the 50m hydrological buffer at all times.
PPA_CON_6	Chapter 5 (Proposed Development)	Consultation	Section 5.7	<ul style="list-style-type: none"> • Maintain community consultation and liaison throughout the construction phase. • Signage will be provided at Site entrances which shall have a Project contact telephone number where the public will be able to leave messages in relation to the Proposed Development construction. • A liaison officer will be appointed to manage the calls/messages and any subsequent actions pertaining to these.
PPA_CON_7	Chapter 5 (Proposed Development)	Construction hours	Section 5.10	<ul style="list-style-type: none"> • Construction activities will be carried out during normal daytime working hours (i.e., weekdays 0700 – 1900hrs and Saturdays 0700 – 1300hrs). • Specific internal erection activities may require to be undertaken on a 24 hr 7 day per week basis. It could be necessary, on occasion, to work outside of these hours; any such out of hours working will be agreed in advance with the Local Authorities.
PPA_CON_8	Chapter 7 (Air Quality)	Dust / Emissions	Section 7.6	<p>Emissions of dust and particulates from the construction phase of the Power Plant Area will be controlled in accordance with standard good working practices regularly employed in the construction industry on sites of this type.</p> <p>The management of dust and particulates and application of adequate mitigation measures will be enforced through embedded mitigation measures in the CEMP, refer to Appendix 5A.</p> <p>Based on the assessment of the area of sensitivity to dust impacts and the likely risk of impacts arising from each of the key construction activities (demolition, earthworks, construction and trackout of material onto roads) (Appendix 7A), and as described in section 7.5 of Chapter 7, appropriate standard mitigation measures to be implemented during construction (good site techniques drawn from the 'low risk' site schedule in IAQM guidance) that have been identified are:</p> <ul style="list-style-type: none"> • Storage of sand and aggregates in bunded areas and storage of cement powder and fine materials in silos. • Use of water suppression and regular cleaning, as necessary, to minimise mud on roads. • Covering of vehicles leaving the construction site that are carrying construction waste materials (note: the transfer of any excavated material off site will be minimised). • Employment of a wheel wash system at exits from the Site during the construction phase. • Minimising storage duration of spoil during construction as far as is practical; and • Prohibiting open fires on Site.
PPA_CON_9	Chapter 7 (Air Quality)	Emissions / NRMM	Section 7.6	<p>Good working practice measures will also be employed for the siting and operation of non-Road mobile machinery (NRMM) to control associated emissions, including:</p> <ul style="list-style-type: none"> • Minimising vehicle and plant idling as far as is practical (i.e., when not in use); and • Locating static plant in a central area of the Site away from sensitive boundaries or receptors

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
PPA_CON_10	Chapter 8 (Cultural Heritage and Archaeology)	Archaeology and Testing	Section 8.6	<ul style="list-style-type: none"> • During the construction phase procedures will be adopted, as described in the CEMP (Appendix 5A), to reduce the impact of noise, dust, and vibration during construction. • Testing will be undertaken in advance of construction to allow adequate time to evaluate, record and, where necessary, mitigate any archaeological features that may be revealed. • In the event that any archaeological features are uncovered during construction, the appointed Archaeologist and the National Monuments Service will be consulted to determine the appropriate mitigation measures. • Archaeological issues will be resolved where possible, at the pre-construction stage of the development, although areas within peat bog may require evaluation during the construction phase with groundworks carried out under archaeological supervision. • If unexpected archaeological remains or artefacts are discovered during construction work, work in that area will cease and the area will be protected. • An unexpected finds procedure will be included in the Overarching Method Statement for Archaeological Works. The Project Archaeologist and NMS will be notified, and the unexpected finds procedure will be implemented.
PPA_CON_11	Chapter 9 (Biodiversity)	Mitigation Hierarchy	Section 9.6	<ul style="list-style-type: none"> • The Proposed Development has regard for and has engaged the following mitigation hierarchy (CIEEM, 2022), where there is potential for impacts on relevant ecological receptors: <ol style="list-style-type: none"> 1. Avoidance: seek options that avoid harm to ecological features (e.g., locating to an alternative site); 2. Mitigation: negative effects should be avoided or minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed (e.g., through a condition or planning obligation); 3. Compensation: where there are significant residual negative ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures e.g., by providing suitable habitats elsewhere on the client-owned parts of the wider site (e.g. inclusion of replanting lands to compensate for forestry felling requirements for the Proposed Development); and 4. Enhancement: seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation, or compensation. • This hierarchy requires the highest level to be applied where possible. Only where this cannot reasonably be adopted should lower levels be considered. The rationale for the proposed mitigation and/or compensation has been clearly outlined within the Section, including sufficient detail to show that these measures are feasible and how they will be implemented.
PPA_CON_12	Chapter 9 (Biodiversity)	General Biodiversity: CEMP	Section 9.6	<p>There are several pieces of high-level or generic mitigation measures that have been developed as part of this EIA, and which are not specifically or necessarily related to biodiversity, but that provide measures or controls that will benefit or safeguard a variety of ecological features/receptors. These comprise the CEMP (Appendix 5B), the Habitat Management Plan (Appendix 9K) and Project Peat and Spoil Management Plan (Appendix 5B).</p> <ul style="list-style-type: none"> • The appointed contractor will protect the Site, the works, and the general environment including the watercourses and waterbodies, against pollution and sedimentation during the construction phase of the Proposed Development. • The Contractor will comply with all relevant legislation in relation to the control of hazardous substances and pollutants during the works. • The appointed contractor will, at all times, work within and comply with all relevant environmental regulations and pollution prevention guidelines. The use of oils, chemicals and other potential pollutants onsite requires significant care and attention.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • The contractor’s CEMP will include a Pollution Prevention Plan (PPP) (or similar document) which will set out procedures and diagrams for: <ul style="list-style-type: none"> ○ Dewatering of excavations to sustainable drainage system (SuDS) treatment area. ○ Temporary soil storage. ○ Fuel storage / refuelling. ○ Concrete wash-out area. ○ Preventing existing drainage features becoming pathways for construction run-off. ○ Reducing soil exposure and reinstating as rapidly as possible. ○ Temporary construction SuDS such as ditches with check dams, clean water ditches, settlement ponds, silt fencing and straw bales. ○ Contingency measures. • Prior to the commencement of construction, a suitably qualified and experienced ECoW will be appointed and will provide input into the contractor’s site-specific Method Statements and construction programme as and when required, as well as overseeing the implementation of the CEMP (and any mitigation measures identified therein). • The CEMP, which will continue to be a ‘live’ (i.e. working) document after obtaining planning consent, prescribes that best practice guidance on pollution prevention will be followed at all times during the construction of the Proposed Development. • These best practice measures include: <ul style="list-style-type: none"> ○ Controls and contingency measures to manage run-off from construction areas and fine sediment. ○ All oils, fuels, lubricants, or other chemicals will be stored in appropriate bunded containers in suitable storage areas, with spill kits provided at the storage location and relevant places across the Proposed Development. There will be no storage of any oils, fuels, lubricants or other chemicals within 30m of watercourses. ○ All refuelling and servicing of vehicles and plant will be carried out in designated bunded areas with impermeable bases, which will be situated at least 30m from watercourses. ○ The use of concrete will only occur outside the set-back zone of 30m from watercourses and will be carefully controlled to avoid the release of dust and contaminated run-off. No on-site batching should occur. Washout from concrete chutes will be only carried out in designated impermeable areas. ○ Temporary storage of excavated materials will be located at least 30m from watercourses; and, ○ Soil exposure during the construction works will be minimized and exposed soil will be reinstated as rapidly as possible.
PPA_CON_13	Chapter 9 (Biodiversity)	General Biodiversity: Ecological features	Section 9.6	<ul style="list-style-type: none"> • The appointed contractor will be required to implement appropriate communications including reporting of environmental practice on-site, toolbox talks, daily briefings, an environmental noticeboard (with ecological information, spill/emergency response and refuelling area/procedure) and signage (including ecological exclusion areas). • All site personnel involved in the construction of the Proposed Development will be made aware of the ecological features present and the mitigation measures and working procedures which must be adopted. This will be achieved as part of the site induction process through the delivery of a Toolbox Talk. In addition, briefings will be provided to all site personnel in advance of those works which are considered to present an increased risk of impacting upon ecological features.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> The contractor will not be permitted to use materials that could cause heavy metal, sulphide, or strong acid pollution of run-off, and must use aggregates free of excessive fines clays. Prior to the commencement of construction, a suitably qualified and experienced ECoW will be appointed and will provide input into the contractor's site-specific Method Statements and construction programme as and when required.
PPA_CON_14	Chapter 9 (Biodiversity)	European sites	Section 9.6	<ul style="list-style-type: none"> Watercourses, ditches surrounding the Power Plant Area are hydrologically connected to the River Boyne and River Blackwater SAC and SPA. Measures for pollution prevention and safeguarding of local watercourses detailed within the CEMP, and outlined above, will ensure safeguarding of watercourses and waterbodies from impacts of pollution and sedimentation. No further specific mitigation in relation to pollution is proposed. Measures to prevent the spread of invasives species during construction are outlined in the CEMP.
PPA_CON_15	Chapter 9 (Biodiversity)	Habitats replacement	Section 9.6	<ul style="list-style-type: none"> Within the Power Plant Area, there will be unavoidable loss of habitats to facilitate the construction phase, including losses to amenity grassland, dry meadows and grassy verges, scrub and immature woodland, and bog woodland. Habitat loss will be kept to a minimum where possible, by only removing habitat required to facilitate the construction footprint, including working, storage areas and laydown areas etc. Where habitats are disturbed, removed, or damaged for temporary construction compounds, these will be reinstated naturally through succession and left unmanaged following construction. An area of approximately 8 hectares will be planted with trees, located to the west of the line-cable interface compound. within Ballybeg Bog. This is to replace for the loss of trees, in particular bog woodland, as a result of the construction of the Proposed Development, including the Power Plant Area and Electricity Grid Connection. Refer to Figure 9.10 for the location and extent of the replanting lands to compensate for tree felling requirement. Replanting will aim to create an area of bog woodland, dominated by downy birch, but include to a lesser extent include holly Ilex aquifolium, rowan, Scots pine, oaks Quercus spp. and willows, which aligns with the Ballybeg Cutaway Bog Decommissioning and Rehabilitation Plan (Appendix 9J). Full details are presented in the Habitat Management Plan (Appendix 9K).
PPA_CON_16	Chapter 9 (Biodiversity)	Habitats pollution and water quality	Section 9.6	<ul style="list-style-type: none"> Watercourses, ditches, and waterbodies are present within and surrounding the Power Plant area. Measures for pollution prevention and safeguarding during construction are detailed within the CEMP and will include a Pollution Prevention Plan (PPP) (or similar document), and will ensure they are safeguarded from impacts of pollution and sedimentation, including the use of SuDs during construction will mitigate the risk of surface run-off to watercourses. The planned foul wastewater discharge, consisting of sewage and domestic type wastewater, is be treated in a proprietary secondary treatment system, for discharge to the Yellow River. It is anticipated that treatment of foul water will be settlement, biological treatment, settlement and then discharge. Refer Chapter 5 of the EIAR. The planned rain/ surface water discharge, consisting of stormwater runoff from the site surfaces, is be treated in a stormwater system incorporating oil interceptors to enable the legislative limits to be achieved, prior to controlled discharge to the Mongagh River at approximately 700m north of the Power Plant Area.
PPA_CON_17	Chapter 9 (Biodiversity)	Invasive Species	Section 9.6	<p>Measures to prevent the spread of invasives species during construction are outlined in the CEMP. As a minimum:</p> <ul style="list-style-type: none"> The Contractor will prepare an Invasive Species Action Plan to be implemented during construction, and all personnel will be made aware of the requirements.

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				<ul style="list-style-type: none"> Plant and machinery will be inspected upon arrival and departure from site and cleaned / washed as necessary to prevent the spread of invasive aquatic / riparian species such as Japanese knotweed Fallopija japonica and Himalayan Balsam Impatiens glandulifera. A sign off sheet will be maintained by the contractor to confirm the implementation of measures. Site hygiene signage will be erected in relation to the management of non-native invasive material.
PPA_CON_18	Chapter 9 (Biodiversity)	Bats	Section 9.6	<ul style="list-style-type: none"> Eight bat roosts of four different bat species (soprano pipistrelle, common pipistrelle, Natterer's bat and brown long-eared bat), were confirmed within six buildings and one structure within or directly south of the Power Plant Area. Roosts present within B4, B4a, B5 and S1 will require derogation licences prior to exclusion of bats from these roosts to proceed with demolition works required. All works to demolish buildings with known bat roosts must be carried out under the supervision of a suitably experienced and licensed ecologist or the project ECoW. The loss of these bat roosts will be compensated with the provision of alternative roosting sites. To mitigate for the loss of these known bat roosts, Building B2 (which will be retained) located approximately 85m to the south of the Power Plant Area and outside the Proposed Development boundary, will be further enhanced. This building is already known to contain a maternity colony of Natterer's bats, but through the safeguarding of this structure and provision of suitable enhancement measures as presented below, it is envisaged that this structure can support additional roosting bat populations. Various bespoke artificial bat roosts will be included within and on the exterior of this building to provide roosting opportunities for both soprano and common pipistrelle, as well as for brown long-eared bats. In addition, it is also proposed to erect ten artificial bat roost boxes, to be mounted on poles across the wider Proposed Development Site (e.g five Sku pole mounted roost maternity double bat box or similar), either within the Site or within BNM's ownership/control in appropriate locations to compensate for the loss of the roosts (see Figure 9.10). The provision of bat boxes across the Proposed Development Site will also provide additional roosting opportunities throughout the wider site. These must be erected prior to commencement of construction and therefore the demolition of existing roost sites in the Power Plant Area. Buildings B1 and B3 are considered to be used as either night roosts or feeding perches, in particular by brown long-eared bats. These are located outside of the Proposed Development boundary and will be retained. <p>Bats are particularly sensitive to lighting, and whilst B1, B2 and B3 are outside the Proposed Development footprint, the following mitigation (following BCT/ILP: GN08/2023) regarding lighting must be adhered to in relation to these retained roosts and the surrounding habitat on this southern boundary with the Proposed Development during the construction:</p> <ul style="list-style-type: none"> Lighting will be minimised in terms of number of lights and the power of the lights (lux level) along this southern boundary of the Proposed Development, with light reaching these buildings not greater than 1 lux to avoid roost disturbance; similarly using powerful lighting on wildlife corridors can, for some species, effectively sever connectivity. Directional lighting, facing and located away from these roosts and surrounding vegetation along this southern boundary is proposed; and Lighting will be turned off when not in use except to meet the minimum requirements for Health and Safety and Security.
PPA_CON_19	Chapter 9 (Biodiversity)	Badger	Section 9.6	<ul style="list-style-type: none"> No badger setts were identified within the Derrygreenagh works; however, badger activity and two outlier setts were found outside the southern boundary of the site. As mobile species, it is possible that badger may establish new setts prior to construction. Therefore, preconstruction badger surveys will be carried out within the Zol of the Power Plant Area within no sooner than one month prior to works commencing, to determine if any setts have become newly established since baseline

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<p>surveys. The ECoW will provide advice in the event that additional sets are identified, including potential requirements under licence on a temporary or permanent basis.</p> <ul style="list-style-type: none"> • If piling is required within 150m of BA01 or BA02, south of the Proposed Development, then these setts will require temporary closure, until works are complete. Otherwise, these setts will be retained. • The use of artificial lighting during construction has likelihood to deter badger from retained setts and habitats. Lighting design will ensure no light spill in excess of one lux on semi-natural habitats, and particularly in proximity to badger setts. • To alleviate a range of general likely significant effects to badger during the construction phase of the Power Plant Area, the following mitigation will be adhered to: <ul style="list-style-type: none"> ○ A Badger Management Plan will be devised and implemented by the appointed contractor (with input from the ECoW). The Badger Management Plan will include the mitigation presented within this Section. This Plan will ensure all sett locations, immediately prior to the commencement of the construction phase are known to the relevant personnel (with cognisance to the preferred confidentiality) and drawings of sett locations and protection zones will be prepared. ○ All works will be largely restricted to daylight hours, where working schedules permit, to reduce as far as possible disturbance to badger. ○ The use of artificial lighting during the construction period will be limited and lighting will be kept to essential locations only, with the position and direction of lighting being designed to minimise light spill and intrusion and disturbance to semi-natural habitats and their conservation value. Use of full cut-off lanterns are proposed to minimise light spillage onto adjacent areas. ○ Drainage and attenuation ducts will restrict badger entry, and any excavation/trench which is liable to entrap wildlife will be covered, fenced off at the end of the day or have a means of escape for any animal which may fall in (e.g., mammal ladder or ramps). ○ Water sources which may be used by badger will be safeguarded by the pollution prevention measures outlined in the CEMP and is outlined above.
PPA_CON_20	Chapter 9 (Biodiversity)	Otter	Section 9.6	<ul style="list-style-type: none"> • Construction phase impacts to otter associated with the Power Plant Area comprise pollution of watercourses and waterbodies, disturbance and displacement caused by increased human presence, noise, artificial lighting, and vibrations; injury or entrapment due to any unsecured open trenching / excavation pits; and exposure to oils and other toxic materials. • The implementation of the CEMP will ensure these habitats are safeguarded from pollution and therefore will safeguard otter from negative effects of pollution. • Construction safeguards outlined above in respect of badger will also alleviate risk of mortality or injury to otter, should they be present within the site during the construction.
PPA_CON_21	Chapter 9 (Biodiversity)	Other protected mammals	Section 9.6	<ul style="list-style-type: none"> • Mitigation during the construction phase for safeguarding badger (above) is also relevant to pine marten, Irish hare, stoat, and red squirrel and will safeguard these species from negative impacts during the construction phase should they be present. No specific mitigation is proposed for red squirrel or pine marten, as the habitats to be impacted within the Power Plant Area are not considered suitable to support dreys or dens. • Potential impacts to hedgehog and stoat will be mitigated by avoidance. Prior to construction works commencing that have the potential to disturb these species (i.e., within woodland and scrub), the footprint of the works area will be subject to a robust walkover by the ECoW to ensure that there are no hedgehogs or stoats are present and at risk from machinery.

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				<ul style="list-style-type: none"> • Hedgehogs hibernate over winter typically under log piles or tree roots, or within dense vegetation and scrub. Should construction works be undertaken during winter months, such vegetation or potential hibernacula at risk of disturbance or removal will be inspected by the ECoW for the presence of hibernating hedgehog prior to any removal.
PPA_CON_22	Chapter 9 (Biodiversity)	Marsh fritillary	Section 9.6	<ul style="list-style-type: none"> • Habitats within the Power Plant Area are suitable for marsh fritillary, although no larval webs were identified in this area. Removal of this habitat will only take place following checks for larvae of marsh fritillary between August and September when larval webs on devil's-bit scabious are conspicuous and before larvae begin to hibernate. • Should marsh fritillary larval webs be recorded within the Power Plant Area, these will be translocated if avoidance is not feasible during construction. This will be advised and carried out by the ECoW, and a licence will be required. The method will normally include the following provisions: <ul style="list-style-type: none"> ○ The proposed donor and recipient areas will be surveyed by a suitably experienced ecologist / ECoW to identify suitable areas with devil's-bit scabious and habitat structure. ○ The ECoW will monitor the translocation operations and deliver toolbox talks to relevant site personnel. ○ Translocation will take place in autumn or winter (October-December), when plants are dormant and outside of the bird breeding season. It is best to avoid such work when soil conditions are very wet, to avoid damage and disruption to the habitat. ○ Low ground-pressure tracked vehicles such as bog masters must be used to avoid compacting and smearing peat or soil during translocation. ○ A specialist machine operator will be appointed for the translocation operations (removal, translocation, and placement of turves), who will be suitably experienced with the required machinery and equipment. ○ The recipient area (the area where the translocated turves are to be re-established) should be similar to the donor site in terms of soil conditions and hydrology. The recipient area will be prepared before the turves are removed from the donor site, so that the turves can be translocated and put in place as quickly as possible, minimise drying out or other disruption. ○ A flat-bottomed digger bucket will be used for removal of the turves from the donor site. The turves should be 20-25 cm in thickness, and as large in area as can be accommodated by the digger bucket. Turves will be neatly and vertically cut along their edges as much as possible, to ensure turves are as large as possible with clean edges for best reinstatement. ○ Operations will be planned so that turves are moved from the donor area to the recipient area in a single movement, so that temporary storage is not needed. ○ Translocated turves will be placed in the prepared recipient area at the same depth as they were previously situated, so that their upper surface is flush with the surrounding ground surface. ○ A monitoring plan will be put in place to assess the degree of success of the translocation. • Any areas of marsh fritillary habitat lost will be replaced, ideally within the Site boundary.
PPA_CON_23	Chapter 9 (Biodiversity)	Amphibians	Section 9.6	<ul style="list-style-type: none"> • Mitigation for smooth newt and common frog will focus on safeguarding their breeding habitat from damage and / or disturbance, avoiding impacts to breeding smooth newt and common frog, and minimising disturbance impacts to terrestrial smooth newt and common frog during construction. • Robust mitigation is required to protect smooth newt and common frogs from impacts arising from construction works within the Power Plant Area. The ponds to be retained supporting smooth newt populations (i.e. Pond 2), and potentially common

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				<p>frog populations must remain intact and unimpacted by potential pollution. This will require a full suite of pollution prevention measures during the construction phase, as outlined in the CEMP.</p> <ul style="list-style-type: none"> • Pond 3 will be removed to facilitate the construction of the Power Plant Area. To reduce the risk of injury or mortality of amphibians during the construction phase, it will be necessary to ensure that individuals are absent from the construction footprint of the Power Plant Area and retained within a safe 'refuge area' prior to construction commencing. This will be achieved using capture and exclusion methods. Standard techniques for these methods are described for great crested newt <i>Triturus cristatus</i> in the <i>Great Crested Newt Mitigation Guidelines</i> (English Nature, 2001) and <i>Great Crested Newts: Survey and Mitigation for Development Project</i> (Natural England, 2015). Published literature on smooth newt mitigation is not currently available. • The precise method by which the capture and exclusion will be achieved has not been devised (and is not necessary) as part of this assessment and will instead be detailed in a Species Protection Plan which will be required as part of the licensing process with NPWS. The method will normally include the following provisions: <ul style="list-style-type: none"> ○ The recipient pond(s) will be surveyed by a suitably experienced ecologist / ECoW during the breeding season (March to June inclusive) to determine suitability and presence of resident breeding newts or frogs. ○ Amphibian fencing will be installed around the recipient waterbodies within a 'refuge area' in late January/early February prior to the translocation exercise commencing (weather dependent, it is best to avoid such works when soil conditions are very wet, to avoid damage and disruption to the habitat). The refuge area will encompass areas of habitat required by smooth newts at all times of year, including waterbodies for breeding and terrestrial areas. ○ Prior to installation of amphibian fencing, and where necessary, vegetation will be removed from along a 1m corridor following the route of the amphibian fence. This will be done mechanically (e.g. strimming or clearance of scrub) and following checks for presence by the ECoW. ○ The amphibian fencing will be designed to ensure that amphibians can remain in the refuge area and that they can continue to move between terrestrial and aquatic habitats. It will however serve to prevent amphibians from re-entering the construction areas of the Power Plant Area. ○ If present, amphibians will be translocated (through netting and torching) from Pond 3 to the recipient pond(s) within the refuge area. Translocation will take place during the amphibian breeding season (March to June inclusive). Operations will be planned so that newts and/or frogs are moved from the donor pond to the recipient pond in a single movement. Following translocation, the pond to be removed will be lost drained carefully, ensuring no amphibians remain in the pond. ○ On completion of construction works, the amphibian fencing will be removed, and amphibians will be free to move around. ○ Low ground-pressure tracked vehicles such as bog masters must be used to avoid compacting and smearing peat or soil during translocation. • Removal of the grassland and scrub within the Power Plant Area and within 200m of ponds may potentially injure or kill terrestrial smooth newts and common frogs and therefore should only be removed following checks of these habitats for presence by the ECoW. These areas will be cleared in stages – firstly by cutting back vegetation to around 5-10cm to facilitate easier and more effective searches for these species, and following searches this vegetation can be removed entirely. • Peat storage areas will be checked by the ECoW for the presence of smooth newt and common frog before any deposition commences.
PPA_CON_24	Chapter 9 (Biodiversity)	Breeding and Wintering Birds	Section 9.6	<ul style="list-style-type: none"> • Any removal of vegetation will be restricted to the non-breeding bird season (i.e., carried out from September to February inclusive), unless carried out under the supervision of a suitably experienced ecologist / ECoW who will survey the vegetation

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				<p>for breeding birds immediately prior to removal. For the avoidance of doubt, it should be noted that birds may nest in grass and low scrub, in addition to trees. Birds can also nest in buildings, which must be checked for nests if the buildings are to be demolished in the breeding season. If nests are found, work must stop immediately until birds fledge and cease to return to the nest and the ECoW will advise the contractor of any exclusion zones around potential or confirmed nests.</p> <ul style="list-style-type: none"> The loss of vegetation may displace breeding birds, and this loss of habitat may require them to move to the wider area where there is ample foraging and nesting habitat. Likewise, the loss of some buildings on site will remove nesting opportunities on site. Although new buildings will be constructed, it is possible they will not provide the same opportunities for breeding birds. Therefore, nest cups suitable for house martin and swallow must be provided on new buildings in similar locations to existing nests. These must be installed under the direction a suitably experience ecologist / ECoW.
PPA_CON_25	Chapter 9 (Biodiversity)	Fisheries and aquatics	Section 9.6	<ul style="list-style-type: none"> Mitigation for fish and other aquatic species will focus on the protection given to the water environment as outlined in the CEMP and above, during the construction phase of the Power Plant Area.
PPA_CON_26	Chapter 10 (Landscape and Visual)	Landscape Mitigation Strategy	Section 10.6	<p>The following specific elements will be introduced as part of the Landscape Mitigation Strategy (see Appendix 10B for more detail):</p> <ul style="list-style-type: none"> Mix of Deciduous Trees: positioned to the west of the site, these clusters aim to screen the lower parts of the PPA and the area around the site entrance. Their placement is intended to enhance visual aesthetics and promote integration with the natural environment. Woodland Mix and Grass Mix: to the south of the site, a combination of woodland mix and grass mix will be introduced. This aims to facilitate better integration with the existing scrubland adjacent to the site, extending beyond the site boundary, and to enhance the screening of the lower section of the PPA over time when the woodland mix matures. Retention of existing vegetation: Clusters of existing semi-mature and mature vegetation in the northern section of the existing site entrance east of the R400 shall be retained and protected during construction. An area of approximately 8 hectares will be planted with trees, located to the west of the line-cable interface compound within Ballybeg Bog. This is to replace for the loss of trees, in particular bog woodland, as a result of the construction of the Proposed Development, including the Power Plant Area and Electricity Grid Connection. Replanting will aim to create an area of bog woodland, dominated by downy birch, but include to a lesser extent include Holly, Rowan, Scots pine, Oaks and Willows, which aligns with the Ballybeg Cutaway Bog Decommissioning and Rehabilitation Plan (see Appendix 9J). Habitat loss will be kept to a minimum where possible, by only removing habitat required to facilitate the construction footprint, including working, storage areas, and laydown areas, etc. Where habitats are disturbed, removed, or damaged for temporary construction compounds, these will be reinstated naturally through succession and left unmanaged following construction.
PPA_CON_27	Chapter 11 (Noise and Vibration)	Noise	Section 11.6	<p>To keep noise and vibration levels to a minimum, the following general mitigation will be implemented during construction:</p> <ul style="list-style-type: none"> Good community relations will be established and maintained throughout the construction process to keep residents informed on progress and the measures put in place to minimise noise impacts. Standard construction working hours will be adhered to, i.e., 0700 hours - 1900 hours weekdays and 0800 hours - 1300 hours Saturdays, with no working on Sundays or Bank Holidays (including site deliveries) unless agreed with the local planning authority. Any activities that are required to be undertaken outside of standard construction hours our will be discussed with the relevant authorities in advance.

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				<ul style="list-style-type: none"> • Selection of quiet and low vibration equipment and methodologies in accordance with the principles of 'best practicable means'. • Fixed and semi-fixed ancillary plant such as generators, compressors and pumps will be located away from receptor locations wherever possible. • The appointed Contractor for the construction phase will be provided with electrical power which minimises the requirement for diesel generators at the Site. • Diesel generators, if and when required, will be enclosed in sound proofed containers to minimise the potential for noise impact. • All plant used on site will be regularly maintained, paying attention to the integrity of silencers and acoustic enclosures. • Compressors will be of the "sound reduced" 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. • All noise generating construction plant will be shut down when not in use. • The loading and unloading of materials will take place away from residential properties, ideally in locations which are acoustically screened from nearby NSRs; • Materials shall be handled with care and placed rather than dropped where possible. Drop heights of materials from lorries and other plant shall be kept to a minimum. • Modern plant shall be selected which complies with the latest European Commission noise emission requirements. Electrical plant items (as opposed to diesel powered plant items) shall be used wherever practicable. All major compressors shall be low noise models fitted with properly lined and sealed acoustic covers. All ancillary pneumatic percussive tools would be fitted with mufflers or silencers of the type recommended by the manufacturers. • Site operations and vehicle routes will be organised to minimise the need for reversing movements, and to take advantage of any natural acoustic screening present in the surrounding topography. • No employees, subcontractors and persons employed on the site will cause unnecessary noise from their activities, e.g., excessive 'revving' of vehicle engines, music from radios, shouting and general behaviour etc. All staff inductions at the site shall include information on minimising noise and reminding them to be considerate of the nearby residents; and • As far as practicable, noisier activities will be planned to take place during periods of the day which are generally considered to be less noise sensitive, i.e., not particularly early or late in the day. • These noise and vibration mitigation measures are incorporated into the CEMP (Appendix 5A), which will form the basis of the Contractor CEMP. • The Contractor CEMP will be implemented by the E&C contractor.
PPA_CON_28	Chapter 12 (Water)	General water	Section 12.6	<ul style="list-style-type: none"> • A CEMP has been prepared to accompany this planning application. • The contractor will be contractually obliged to comply with all such measures. • It is intended that the CEMP would be updated prior to the commencement of the development, to include any additional mitigation measures, conditions and or alterations to the EIAR and application documents that may emerge during the course of the planning process and would be submitted to the Planning Authority for written approval in advance of commencement of any construction works on site.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> To minimise the potential for adverse impacts to groundwater, surface water quality and geomorphology during construction, the following is an outline of the mitigation measures that will be in place (Appendix 5A).
PPA_CON_29	Chapter 12 (Water)	General Surface Water Management	Section 12.6	<p>General surface water management measures are detailed within the CEMP and summarised below:</p> <ul style="list-style-type: none"> The existing surface water management system, such as drains, settlement ponds, outfalls and interceptors / separators, will be inspected and confirmed to be in suitable working order prior to any Power Plant Area works commencing on the Site. Additional new drainage installations will be installed in early stages of construction, alongside the remaining existing drainage facilities, which can be used to treat runoff for silt and hydrocarbons early on in the programme. Daily weather forecasting will also be used to inform the works schedule, ensuring excavation works do not coincide with high intensity or extreme rainfall events. The proposed surface water management system, including existing and proposed infrastructure, will be inspected and confirmed to be of sufficient capacity to treat any additional water generated by the Power Plant Area, including runoff from dust suppression, prior to discharge. Washout from power cleaning of drainage lines, oil interceptors or any other pipework which may contain pollutants will be collected and treated. No contaminated washout will be allowed enter any water body or be discharged to ground. There will be regular monitoring and prompt maintenance of the overall surface water management system throughout the Power Plant Area. This will ensure that the drainage system continues to function as designed. There will be no direct discharge to any water body at any time during the construction phases. All surface water run-off within the Site will be directed to this drainage system.
PPA_CON_30	Chapter 12 (Water) Chapter 13 (Land Soils and Geology)	Sedimentation of Surface Water and Management of excavated materials	Section 12.6	<p>The proposed works will be carried out by employing accepted good work practices during construction, and environmental management measures such as those discussed below:</p> <ul style="list-style-type: none"> All materials will be stored within temporary compounds, see CEMP temporary construction compound details, and transported to the works zone immediately prior to construction. Weather conditions will be taken into consideration when planning construction activities to minimise risk of run off from site. Provision of 50m exclusion zones and barriers (silt fences) between any excavated material and any surface water features to prevent sediment washing into the receiving water environment. If dewatering is required as part of the proposed works e.g. in wet areas, water will be pumped via settlement tanks or collection basins where any solids can settle out and suitable best practice de-watering methods will be used. The contractor shall ensure that silt fences are regularly inspected and maintained during the construction phase. If very wet ground must be accessed during the construction process bog mats/aluminium panel tracks will be used to enable access to these areas by machinery. However, works will be scheduled to minimise access requirements during winter months. The contractor shall ensure that all personnel working on site are trained in pollution incident control response. A regular review of weather forecasts of heavy rainfall is required, and the Contractor is required to prepare a contingency plan for before and after such events. The contractor will carry out regular visual examinations of local watercourses that may be impacted by the proposed works during the construction phase to ensure that sediment is not above baseline conditions. In the unlikely event of water quality concerns, the Environmental Manager and ECoW will be consulted.

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				<ul style="list-style-type: none"> • Excavations will be left open for minimal periods to avoid acting as a conduit for surface water flows. • Only emergency breakdown maintenance will be carried out on site. Emergency procedures and spillage kits will be available and construction staff will be familiar with emergency procedures. • Appropriate containment facilities will be provided to ensure that any spills from vehicles are contained and removed off site. Adequate stocks of absorbent materials, such as sand or commercially available spill kits shall be available. • Entry by plant equipment, machinery, vehicles and construction personnel into watercourses or wet drainage ditches shall not be permitted. All routes used for construction traffic shall be protected against migration of soil or wastewater into watercourses; and • Cabins, containers, workshops, plant, materials storage and storage tanks shall not be located near any surface water channels and will be located beyond the 50m hydrological buffer at all times. • Unnecessary clearing and grading will be avoided. • Clearing of adjacent drainage channels will be minimised. • Silt control measures will be installed along the perimeter of the excavation areas adjacent to drainage channels and at locations along the proposed discharge pipeline routes, where there is a potential impact on drains or the Yellow River (process water discharge) and Castlejordan River (surface water discharge). • Construction activities phased to minimise soil exposure, with large areas of grading avoided to minimise erosion potential. • Soils are to be stabilised as soon as is practicable. • To prevent chemical pollution, all liquid fuels and chemicals will be stored in suitable containers within bunds in designated areas away from the main construction site activities. The designated areas will be located an appropriate distance away from drainage channels and onsite boreholes. • On-site refuelling is to be carried out in designated bunded areas only. • Spill kits are to be maintained near working areas. All spills / leaks are to be cleaned up immediately. An emergency response plan will be put in place detailing the measures to be undertaken should pollution be identified, as detailed in the CEMP. • Equipment will be regularly maintained, and leaks repaired as soon as is practicable. If the equipment cannot be repaired, it will be removed from the site. Accidental spillages will be contained and cleaned up immediately. • Contained chemical Portaloo toilets will be used on site during the construction phase. All sewage will be removed from the site to an authorised treatment plant. • Construction of the discharge pipe placement will be carried out in accordance with the Inland Fisheries Ireland Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites (2016). The guidelines will also be consulted regarding discharge pipes (process water and surface water) placement to avoid disruption to the river during the most sensitive stages of salmonid or lamprey development.
PPA_CON_31	Chapter 12 (Water)	Fuel and Chemical Handling	Section 12.6	<p>Fuel and chemical handling will be carried out by employing accepted good work practices during construction, and environmental management measures such as those discussed below:</p> <ul style="list-style-type: none"> • Oils and lubricants will be required to be stored at least 50m away from a watercourse where practical and stored in vessels designed to hold 110% of the capacity of the largest tank / container within the bunded area. All plant and equipment shall be checked for leaks of fuel and lubricants before being allowed onto the site. The Principal Contractor will allow for regular checks and maintenance as required.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • Drainage from the bunded area will be diverted for collection and safe disposal. All containers within the storage area will be clearly labelled so that appropriate remedial action can be taken in the event of a spillage. When moving drums from the bunded storage area to locations within the Site, a suitably sized spill pallet will be used for containing any spillages during transit. • Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles, will take place in designated impermeable refuelling areas isolated from surface water drains. Spill kit facilities will be provided at the fuelling area in order to provide for any accidental releases or spillages in and around the area. Any used spill kit materials should be disposed of via a hazardous waste contractor. • All equipment and machinery will be checked for leaks and other potential sources of contaminants before arriving on-site and on a daily basis. Any equipment or machinery likely to introduce to contaminants will not be brought on-site or will be removed from the Site immediately if any leak is discovered. Spill kits will be available to machine operators, and they will be trained in their use. • The storage of hazardous substances will be necessary during construction and a number of considerations will need to be made to reduce the potential for pollution from these sources. Fuel will be required to be stored at least 50m from a water body and refuelling will only take place in designated areas, on hardstanding by appropriately trained personnel. • Adequate stocks of hydrocarbon absorbent materials (e.g., spill-kits and / or booms) will be held on-site in order to facilitate response to accidental spills. Spill response materials will also be stored on all construction vehicles.
PPA_CON_32	Chapter 12 (Water)	Control of Concrete Lime	Section 12.6	<p>The control of concrete and lime will be carried out by employing accepted good work practices during construction, and environmental management measures such as those discussed below:</p> <ul style="list-style-type: none"> • No wash-down or wash-out of ready-mix concrete vehicles during the construction works will be carried out at the Site within 20m of an existing surface water drainage point. Washouts will only be allowed to take place in designated areas with an impervious surface. • Concrete will be used to construct the Power Plant Area and will therefore need to be managed to reduce the potential for pollution. The Principal Contractor will be required to manage and mitigate concrete works ensuring that no concrete is laid during wet weather if achievable, so to reduce the risk of concrete being washed off the site and into the surface water drains or water bodies. • Concrete mixing will be undertaken in designated impermeable areas, at least 10 m away from a water body or surface water drain to reduce the risk of runoff entering a water body, or the sub-surface, or groundwater environment.
PPA_CON_33	Chapter 12 (Water)	Accidental Spillage, Flooding or Other Emergencies	Section 12.6	<p>Accidental spillages, flooding or other emergencies will be avoided by employing accepted good work practices during construction, and environmental management measures such as those discussed below:</p> <ul style="list-style-type: none"> • Leaking or empty oil drums will be removed from site immediately and disposed of via an appropriately licensed waste disposal contractor. • Spill kits and oil absorbent material will be carried by mobile plant and located at vulnerable locations (e.g., near oil filled equipment). Booms will be held on-site for works near water body/ drains. Spill kits will contain a breakable tie to show use and indicates whether it needs to be replenished. The Site Manager and Environmental Site Representative (ESR) will be responsible for replenishing spill kits. • An Emergency Response Plan will be prepared by the appointed Contractor and included in the CEMP and construction workers trained to respond to spillages.

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				<ul style="list-style-type: none"> • A copy of the Emergency Response Plan will be kept in the Site Emergency Information File (along with other safety emergency preparedness plans) together with the results of any test of the plan. • Oil interceptors will be required for refuelling areas; runoff from washing areas that contains detergents which may prevent oil interceptors from working correctly will be prevented from entering oil separators by providing separate designated areas for washing and refuelling. • Discharge with oils and chemicals from vehicle washing areas will be considered as trade effluent and therefore will be disposed off-site. • The installation of protective bunds along all water body boundaries and drains during construction will filter contaminants and prevent adverse runoff. • Any plant, machinery or vehicles will be regularly inspected and maintained to ensure they are in good working order and clean for use. • Any site welfare facilities will be appropriately managed, and all foul waste disposed of by a licenced contractor to a suitably permitted facility. • During the construction phase, the Contractor will monitor weather forecasts on a monthly, weekly, and daily basis, and plan works accordingly. The Contractor will describe in the Emergency Response Plan the actions it will take in the event of a possible flood event. These actions will be hierarchal meaning that as the risk increases the Contractor will implement more stringent protection measures. This is important to ensure all workers, the construction site and third-party land, property and people are adequately protected from flooding during the construction phase.
PPA_CON_34	Chapter 13 (Land, Soils and Geology)	General land and soils	Section 13.6	<ul style="list-style-type: none"> • A CEMP has been prepared which outlines the mitigation measures that will be implemented during the construction phase and is provided in Appendix 5A. • A final construction programme will be prepared by the Engineering and Construction (E&C) Contractor and presented in a CEMP. • Prior to construction starting onsite, a Final CEMP will be prepared by the Contractor to be approved by the planning authority. • The Final CEMP will detail the measures necessary to avoid, prevent and reduce adverse effects where possible upon soil and geological receptors.
PPA_CON_35	Chapter 13 (Land, Soils and Geology)	Soil structure and quality	Section 13.6	<p>To minimise the potential for adverse impacts to soil structure and quality during construction, the following general mitigation measures will be in place (Appendix 5A):</p> <ul style="list-style-type: none"> • Spoil material will be stored temporarily within the Site in managed stockpiles that will not be allowed to dry out, to avoid generation of wind-blown dust. • Any stockpiled material will be managed in accordance with best practise guidelines (such as Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009)). When required, pre-earthwork drainage will be put in place to avoid sediment being washed off site as outlined in CEMP; and • The CTMP contains provisions to minimise to site traffic and, where relevant, damage to soil structure from smearing and compaction (Chapter 14: Traffic and Appendix 14D).
PPA_CON_36	Chapter 13 (Land, Soils and Geology)	Soil chemistry and to water	Section 13.6	<p>To minimise the potential for adverse impacts to soil chemistry and to water quality during construction, the following mitigation measures will be in place (Appendix 5A and in Chapter 12):</p> <ul style="list-style-type: none"> • The construction of the Proposed Development will be as detailed in Chapter 5: The Proposed Development.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • The E&C Contractor will be required to include measures in the CEMP for minimising erosion by reducing disturbance and stabilising exposed materials. The plan will also consider control measures to minimise the release of mobilised sediment such as stockpile profiling, silt dams on water courses and silt fences. The CEMP will also include methods of handling and storing chemicals and fuels, followed by an Emergency Response Plan to be implemented in the event of a spill or leak. • Water quality monitoring of surface water courses will be undertaken pre and during-construction, details of which will be included in the CEMP. This will be based on a combination of visual observations, in situ testing using handheld water quality probes, and periodic sampling for laboratory analysis. • The E&C Contractor will be required to ensure the safe storage of any hazardous materials or chemicals required onsite. Storage areas for flammable/ toxic/ corrosive materials will be located in a separate, locked, impermeable bunded and fenced off area. Material data sheets will be available for all these materials and the COSHH (Control of Substances Hazardous to Health) assessments kept within the relevant Risk Assessment for the task, all subject to the Applicant's approval. Storage will not be within 50m of a watercourse and designated storage areas will be bunded to 110% of storage capacity to contain the effects of any spills. These areas will be cleared and re-instated following completion of the Site. • A Resource and Waste Management Plan (RWMP) (to be incorporated into the Contractor's CEMP) will be prepared and all relevant contractors will be required to seek to minimise waste arising at source and, where such waste generation is unavoidable, to maximise its recycling and reuse potential. Recycling of materials will take place offsite at appropriately licensed facilities where noise and dust are more easily managed and less likely to impact on surrounding properties. • Should significant contamination occur as a result of construction stage activities, Offaly County Council and the EPA will be notified, and appropriate corrective actions will be agreed and undertaken. • If water is encountered during below ground construction, suitable best practice de-watering methods will be used. Depth to water in all site investigation trial pits and boreholes undertaken at the power Plant site in mid-2023 was greater than 4.0m below ground, other than at TP205 where groundwater ingress was associated with a peat layer, therefore significant groundwater dewatering is not anticipated but, if required, will be undertaken as outlined in Chapter 12.
PPA_CON_37	Chapter 13 (Land, Soils and Geology)	Contaminated land	Section 13.6	<p>Construction works will be carried out in such a way as to prevent, contain, or limit, as far as reasonably practicable, any adverse effects arising from the presence of contaminated land or materials (if encountered) in compliance with the CEMP. These measures will include:</p> <ul style="list-style-type: none"> • The E&C Contractor will ensure that any significant soil contamination not identified during previous site investigations is recorded and dealt with in line with the EPA's "Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites": • Should ground with significant levels of unknown contamination be encountered during construction, working methods and procedures for handling and disposal of material will be employed to minimise risk in line with the EPA's "Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites". If required, the material will be disposed of at a suitably licensed waste facility: <ul style="list-style-type: none"> ○ 'Clean' and 'dirty' (contaminated) work areas will be divided by internal fencing where contamination is encountered. ○ Personal Protective Equipment (PPE) will be worn by ground workers and other staff (see below for more detail on PPE). ○ Those potentially at risk will be made aware of potential site hazards via site safety induction procedures; and ○ No excavated material will be exported off site without a Soil Waste Classification assessment to determine the correct disposal route compliant with waste regulations.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
PPA_CON_38	Chapter 13 (Land, Soils and Geology)	Dust to off-site receptors and workers	Section 13.6	<p>To minimise the potential for adverse impacts to off-site receptors and construction workers, the following outline mitigation measures that will be in place (Appendix 5I and Chapter 7).</p> <ul style="list-style-type: none"> • The Contractor has a duty under the Safety, Health and Welfare at Work Act 2005 and the Control of Substances Hazardous to Health (COSHH) Regulations 2002 to protect their employees against hazardous substances encountered at work. • To that end and in accordance with CIRIA guidance R132 A guide for safe working on contaminated sites (1996), the Contractor will be required undertake a COSHH assessment before any work is carried out at the Site which is likely to expose staff to substances hazardous to health. • No hazardous substances were identified during the site investigation; however, it would be best practice for the Contractor to ensure that all employees (construction workers) are issued with PPE appropriate to the hazards identified. PPE could consist of hazard-specific gloves, eye protection and respiratory protective equipment (RPE). • The Contractor will implement embedded mitigation measures set out in the CEMP (Appendix 5I) to minimise the amount of dust produced during the construction phase, including the preparation of a Dust Management Plan (DMP) in the Final CEMP. There will be a Duty of Care on the E&C Contractor to ensure that dust-raising activities are located away, and upwind where possible, from sensitive receptors, that the duration of dust generation be kept to a minimum when in proximity to a receptor, and for the spread of dust be controlled by judicious use of water, the most effective and efficient way being in the form of a fine spray.
PPA_CON_39	Chapter 13 (Land, Soils and Geology)	Site investigations	Section 13.6	<ul style="list-style-type: none"> • Comprehensive site investigations have been undertaken as described above and the existing ground conditions are therefore understood and have informed the siting and layout of the Proposed Development. • The Proposed Development will be constructed in accordance with current engineering standards, including site investigation and understanding of ground conditions to inform construction works and design. No excavated material will be exported off site.
PPA_CON_40	Chapter 13 (Land, Soils and Geology)	Soil Handling	Section 13.6	<ul style="list-style-type: none"> • Mitigation measures for construction works including soil handling are incorporated into the CEMP (Appendix 5A) which will form the basis of the final CEMP to be implemented by the E&C Contractor who will conduct the works. • Should OCC consider independent supervision of these works to be required at the expense of the developer, the Applicant would be agreeable to this being implemented through an appropriately worded planning condition.
PPA_CON_41	Chapter 14 (Traffic and Transport)	CTMP	Section 14.6	<ul style="list-style-type: none"> • A Construction Traffic Management Plan (CTMP) will be created for the Proposed Development to ensure work activities in, near, or having impact upon the public highway, are undertaken safely and with minimal impact on traffic movement and existing infrastructure throughout the works programme. The CTMP will cover the following points: <ul style="list-style-type: none"> ○ Identify haulage routes; ○ Set out preferred routes for travel to and from the site for staff; ○ Identify designated parking locations; ○ Set out start and finish times to ensure traffic restriction outside of core hours; ○ Set out the provision of additional measures such as wheel wash facilities (if required); and ○ Provision of construction signage and convex mirrors at the site entrance/junctions (subject to agreement with the local authority through the CEMP). This will increase driver awareness at the junction during the temporary construction period (48 months).

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • A CTMP covering the above points is included in Appendix 14H and the Contractor CTMP will be provided by the contractors once appointed.
PPA_CON_42	Chapter 14 (Traffic and Transport)	Abnormal loads	Section 14.6	<ul style="list-style-type: none"> • An Abnormal Loads report has also been completed to identify mitigation measures required for movement of abnormal loads. This is provided in Appendix 14B.
PPA_CON_43	Chapter 16 (Material Assets)	Utilities	Section 16.6	<ul style="list-style-type: none"> • A CEMP has been prepared and is presented within Appendix 5A. This will be finalised by the E&C Contractor prior to the start of construction. • As with any excavations there is a potential to disrupt underground services. A confirmatory survey of all existing services will be carried out prior to construction and identify the precise locations of any services. • The developer will liaise with the service provider where such services are identified. These will be mapped and communicated to all contractors working on the Power Plant Area. • All utilities work shall be carried out in accordance with the relevant requirements of the respective service providers / authorities (i.e., ESB, GNI, Eir, Virgin Media and any others of relevance). These works will be carried out in a manner that is safe, and which avoids or minimises interruptions of service which might affect local residents and businesses and adjacent development. • Works during the construction phase, including service diversions and realignment will be carried out in accordance with relevant guidance documents, including GNI’s publication ‘Safety advice for working in the vicinity of natural gas pipelines’; the ESB’s ‘Code of Practice for Avoiding Danger from Overhead Electricity Lines’, and the Health and Safety Authorities (HSA) ‘Code of Practice for Avoiding Danger from Underground Services’. • All new infrastructure will be installed in accordance with the applicable standards, guidelines and codes of practice. • The timing of local domestic connections will be addressed between the developer / Contractor and the local community at the detailed design stage.
PPA_CON_44	Chapter 16 (Material Assets)	Waste management	Section 16.6	<ul style="list-style-type: none"> • Segregation of waste will be carried on-site to maximise the potential for waste recycling and minimise any potential for impacts on waste services. • A licensed waste collector will be used to remove any waste that does occur on-site. • The Contractor’s C&D RWMP and CEMP will include design and construction measures that apply the waste hierarchy principles and minimise effects on waste. These include: <ul style="list-style-type: none"> ○ Planning for the temporary on-site storage of soils, excavated materials and other materials to facilitate reuse. ○ Reusing excavated materials within the construction of the Power Plant Area, where possible, to minimise the need to import and export material. ○ Considering the importation to site of recycled aggregate material, as an alternative to primary aggregate, and establishing procedures to ensure it is uncontaminated. ○ Establishing Key Performance Indicators (KPIs) for monitoring and reporting data on waste arising and diversion from landfill. • The RWMP will set out measures relating to waste management that would be implemented during construction of the Power Plant Area. Contractors will be required to develop the detailed RWMP in accordance with the EPA ‘Best Practice Guidelines for the Preparation of Resource Management Plans for Construction and Demolition Waste Projects’.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> The Contractor will regularly review and update where required the assumptions on waste arisings and management and record and implement procedures for assessing, managing and recording waste arising on site. Opportunities for on-site and offsite reuse, recycling and recovery of excavated material and waste will be identified where feasible. Where required, an Article 27 by-product notification will be prepared and submitted for the necessary approvals prior to the commencement of construction works.
PPA_CON_45	Chapter 17 (Major Accidents and Disasters)	Best practice	Section 17.6	<ul style="list-style-type: none"> The construction of the Proposed Development will be in accordance with international, national and established industry codes, standards and practice, such as the specification of pipework materials, design of structures etc. A CEMP has been prepared (Appendix 5A), which is to be updated by the appointed contractor. Similar plans are anticipated to be developed for eventual demolition activities.
PPA_CON_46	Chapter 17 (Major Accidents and Disasters)	Health and Safety	Section 17.6	<ul style="list-style-type: none"> A site-specific Health and Safety Plan produced by the Contractor covering the construction and commissioning of the Proposed Development will be prepared to ensure compliance with relevant health and safety legislation including the Safety, Health and Welfare at Work Act.
PPA_CON_47	Chapter 18 (Climate)	Climate Change Risk	Section 17.6	<p>The following climate change risk mitigation measures are embedded in the design of the Power Plant Area, and are applicable for mitigating climate change risks across construction, operating and decommissioning phases.</p> <ul style="list-style-type: none"> Flood protection designed to withstand 1:1000 year flood; For periods of drought, site water abstraction is capable of exceeding the daily site water requirement; Infrastructure is to be maintained and monitored for degradation due to extreme temperatures; and Emergency procedures are to be implemented against extreme weather events.
PPA_CON_48	Chapter 18 (Climate)	Greenhouse gases	Section 17.6	<p>The following GHG mitigation measures are embedded in the design of the Power Plant Area and are applicable to the construction phase:</p> <ul style="list-style-type: none"> Implement policies to source materials locally where possible; Use of secondary aggregates and lower carbon materials; and Implement a green procurement policy that considers life cycle analysis of materials.
POWER PLANT AREA – OPERATIONAL PHASE				
PPA_OP_1	Chapter 5 (Proposed Development)	Landscape and Visual	Section 5.4	<p>Embedded mitigation includes:</p> <ul style="list-style-type: none"> Limiting the extent of land-take; Siting of components; Where possible, minimising impacts on established vegetation and features that contribute to landscape character and visual amenity; Proposed colour scheme of building facades to minimise the visual impact of the built structures and to allow the buildings to be as unobtrusive as feasible against their backdrop. The proposed colour scheme will range within a muted mid-dark grey and green spectrum and was drawn from colours found the surrounding local landscape.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
PPA_OP_2	Chapter 7 (Air Quality)	Emissions / IE Licence	Section 7.6	<ul style="list-style-type: none"> The air quality assessment of operational impacts has assumed that the ELVs to be set into the IEL will be met for the operational plant as required under the IED as amended by the revised BREF (the European Commission produces best available technique reference documents or BREF notes) and in accordance with use of BAT under the environmental permitting regime.
PPA_OP_3	Chapter 9 (Biodiversity)	Habitats	Section 9.6	<ul style="list-style-type: none"> Accidental spillages may potentially result in a direct or indirect impact to surface water run-off (including accidental distillate fuel spillages from the proposed tanks and pipelines). The use of SuDs during operation will mitigate the risk of surface run-off to watercourses.
PPA_OP_4	Chapter 9 (Biodiversity)	Lighting: Bats Badgers Otters Other protected mammals Amphibians Wintering Birds	Section 9.6	<ul style="list-style-type: none"> The use of artificial lighting during operation has likelihood to deter bats from using the site to commute or forage, and to cause disturbance to the bat roosts adjacent to the site (B1, 2, B3). The following mitigation regarding lighting (following BCT/ILP: GN08/2023) must be adhered to in relation to these retained roosts and the surrounding habitat on this southern boundary with the Proposed Development during the operation: <ul style="list-style-type: none"> Lighting will be minimised in terms of number of lights and the power of the lights (lux level) along this southern boundary of the Proposed Development, with light reaching these buildings not greater than 1 lux to avoid roost disturbance; similarly strong powerful lighting on wildlife corridors can, for some species, effectively sever connectivity; Directional lighting, facing and located away from these roosts and surrounding vegetation along this southern boundary is proposed; and, Lighting will be turned off when not in use except to meet the minimum requirements for Health and Safety and Security. A lighting design for the operation of the Proposed Development within the Power Plant Area must be produced prior to the commencement of construction to illustrate how this will be achieved. Badger / Otter / Other protected mammals / Amphibians / birds: The use of artificial lighting during operation has likelihood to deter badger / otters / mammals / amphibians / birds from retained setts / habitats / retained habitats / semi-natural habitats. Lighting design will ensure no light spill in excess of one lux on semi-natural habitats, and particularly in proximity to badger setts / proximity to waterbodies and ditches. A lighting design for the operation of the Proposed Development within the Power Plant Area must be produced prior to construction to illustrate how this will be achieved.
PPA_OP_5	Chapter 9 (Biodiversity)	SUDS: Otter Amphibians	Section 9.6	<ul style="list-style-type: none"> The use of SuDs during operation will ensure waterbodies are safeguarded from pollution (including accidental distillate fuel spillages from the proposed tanks and pipelines) and therefore will safeguard otter from negative effects of pollution.
PPA_OP_6	Chapter 10 (Landscape and Visual)	Facade Colour Scheme	Section 10.6	<ul style="list-style-type: none"> The principal visual mitigation measures for the Proposed Development is inherent in the design of its architecture and its colour scheme. The proposed colour scheme was drawn from colours found the surrounding local landscape. The building colours consist generally of a mix between four main colours (refer to Chapter 10 of EIAR Volume I), which range all within a muted mid-dark grey and green spectrum. The colours pick up existing colours of the landscape across the peatland landscape and its hinterland against which the Proposed Development built structures will be seen in the majority of views.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> Sections of Proposed Development will still become a new focus point in a number of available views, particularly the HRSG and turbine halls, as well as storage tanks / silos. The colours will also work with varying weather and visibility conditions, where their muted colours can quickly blend in.
PPA_OP_7	Chapter 10 (Landscape and Visual)	Lighting	Section 10.6	<p>The following mitigation measures will be implemented as part of good lighting design practice:</p> <ul style="list-style-type: none"> All proposed luminaires in the lighting design strategy shall be approved by the International Dark Sky Association (IDA) luminaires; any other exterior lighting will follow this principle. Utilise back shields, glare cowls, louvres and similar to minimize / obscure source intensity towards the adjacent hedges and nearby residences; use reflector types that redirect light back downward to desired work areas. Confine lighting to the task area (use horizontal cut-off optics and zero tilt angles, particularly for floodlights). Careful consideration to luminaire positioning and orientation; all floodlight luminaires to be oriented downward or at very low angles to provide lighting only to the areas directly below and adjacent to a given pole. Ensure low colour temperature lamps (CCT) ≤ 3000 K are in use where possible; and Maximise times where lighting can be shut off or dimmed.
PPA_OP_8	Chapter 11 (Noise and Vibration)	Noise	Section 11.6	<ul style="list-style-type: none"> A commitment is made to adopt the NG4 operational noise limits detailed in this assessment as requirements within the final design, including the need to address distinctive acoustic characteristics of tonality and impulsivity and application of best available techniques (BAT) at detailed design stage as per the requirements of NG4 for licensed operations. The Power Plant Area will be operated in compliance with the conditions of an Industrial Emissions (IE) Licence including all conditions related to control of noise emissions attributable to on-site activities. Application of BAT could be, but is not limited to, the selection of equipment that is a quieter alternative, uses quiet modes or can be readily fitted with acoustic interventions such as silencers, mufflers or attenuators all to reduce the sound emissions. A commitment is also made to: <ul style="list-style-type: none"> Undertake annual compliance noise level monitoring with the nominated NG4 criteria for each NSR. i.e. in-line with the license conditions for the site as agreed under IE Licence Periodic maintenance of the Plant to manufacturer specification and implementation of an energy management strategy (EMS) to keep the operational Plant compliant. As discussed in the previous section (Section 11.5 of chapter 11), noise emissions from the Power Plant Area exceeds the nominated criteria at NSR6 in the evening and night-time periods. An analysis has been carried out to determine an effective noise mitigation strategy that can be incorporated into the Power Plant Area design. The proposed reductions are detailed in Table 11.22 of chapter 11 of the EIAR and are listed in order of dominance at the nearest sensitive receptor. Acoustic interventions are most effective when they address the most dominant sound sources at the receptor. The 3D noise model has been updated to include the above mitigation measures. A noise map is presented in Figure 11.4 of this EIAR showing predicted noise contours across and in the vicinity of the Site.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
PPA_OP_9	Chapter 12 (Water)	General water	Section 12.6	<p>To minimise the potential for adverse impacts to water quality, the following is an outline of the general mitigation measures that will be in place (see Appendix 5A, and EIAR Chapter 12: Water Environment for more detail):</p> <ul style="list-style-type: none"> • The Power Plant Area will comply with the requirements of its IE Licence. This is set out to limit and minimise the impacts to air, soil, surface and groundwater, and the effects on environment and human health. • The Power Plant Area will be operated in line with appropriate standards and the operator will implement and maintain an Environmental Management System (EMS) to the criteria of International Standards Organisation (ISO) 14001. The EMS will implement an approach of Plan-Do-Check-Act and will contain procedures and require appropriate training required to ensure that the Power Plant Area is operating in compliance with all regulatory requirements and in a manner that ensures continuous improvement. • Sampling and analysis of discharges to the Water Environment will be carried out in accordance with the requirements of the IE Licence. This includes monitoring emissions limit values (continuous on the process water line for key parameters and composite or grab for other parameters) in accordance with the IE Licence. • To prevent the risk of spillages, flooding, fire, and other potentially major incidents several measures will be in place. These include compliance with all relevant health, safety and environmental legislation; design, build and operation in accordance with industry practice; regular maintenance and inspections in accordance with manufacturer specification to reduce the risk of equipment failures; bunded or double skinned storage areas breaches; good and regular housekeeping; and spill kits stored on-site. • Water quality monitoring will be undertaken post-construction, details of which will be included in the IE Licence. This is anticipated to be based on a combination of visual observations, in situ testing using handheld water quality probes, and routine water quality monitoring.
PPA_OP_10	Chapter 12 (Water)	Drainage	Section 12.6	<ul style="list-style-type: none"> • The Site drainage system will provide interception, conveyance, treatment, and attenuation of surface water runoff from the areas of hard standing associated with the Power Plant Area. • The maintenance required for drainage networks will be based on standard guidance and practice, such as the manufacturer's guidance for maximum efficiency of the oil interceptors. • As outlined in Appendix 12D WFD Screening Assessment, proof of effective drainage design and treatment systems for water quality mitigation will be required in accordance with the technical requirements of EPA water quality standards and IPC licences. This may require water quality modelling for the ELVs of process wastewater discharge into receiving waters. • A water quality monitoring program may be required for process wastewater and surface water runoff. Monitoring of the receiving water body upstream and downstream of the wastewater discharge point may need to be undertaken on a periodic basis to determine the impact of the discharge on the receiving water. The parameters, thresholds and frequency of the monitoring programmes required would need to be detailed in the IE licence for the Power Plant Area. • The Sustainable Drainage System (SuDS) design and maintenance regime will need to demonstrate that: <ul style="list-style-type: none"> ○ Runoff quantity and quality controls are in accordance with the technical requirements of EPA water quality standards and IPC licences. ○ All process wastewater treatment systems and surface water arrangements including interceptors and shutoff valves will need to be maintained to manufacturer specifications. ○ All bunds and chemical containers comply with the appropriate standards and will be leak tested prior to commencement of operations and at a frequency thereafter to comply with the relevant conditions of the IPC licence.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> ○ The discharge water pipeline will be inspected periodically, to comply with IE Licence conditions. ○ Firewater Retention designs for the Power Plant Area will need to include control of pollutant runoff to water bodies in accordance with the technical requirements of EPA water quality standards and IPC licences. ● Environmentally sympathetic discharge outfall structure designs are required for proof of meeting WFD objectives. <ul style="list-style-type: none"> ○ Ideally for WFD objectives, discharge outfalls would be set back from watercourses and connected with ditches so there are no hard structures in watercourses including channel banks. ○ If hard structures in watercourses are the only pragmatically feasible options available, geomorphology and hydromorphology assessments will be needed to inform WFD Impact Assessment at such time that confirmed design details become available.
PPA_OP_11	Chapter 12 (Water)	Pollution Prevention and Control	Section 12.6	<ul style="list-style-type: none"> ● The Power Plant Area will comply with the Industrial Emissions Directive (IED) under its IE Licence so that any impacts of emissions to air, soil, surface and groundwater, and effects on the environment and human health will be minimised and avoided, where possible. ● The Site will be operated in line with appropriate standards and the operator will implement and maintain an Environment Management System (EMS) which will be in accordance with criteria of International Standards Organisation (ISO) 14001. The EMS will implement an approach of Plan-Do-Check-Act and will contain procedures and require appropriate training required to ensure that the Power Plant Area is operating in compliance with all regulatory requirements and in a manner that ensures continuous improvement.
PPA_OP_12	Chapter 12 (Water)	Hazard Prevention and Emergency Planning	Section 12.6	<ul style="list-style-type: none"> ● Measures to prevent the risks of fire, flooding, spillages or other potentially major incidents will be embedded in the design. Measures to prevent potentially major incidents include: <ul style="list-style-type: none"> ○ Compliance with all relevant health, safety and environmental legislation. ○ Design, build and operation in accordance with good industry practice. ○ Regular maintenance and inspections to reduce the risk of equipment failures. ○ Bunded or double-skinned storage areas for liquid chemicals. ○ Regular maintenance and site housekeeping to reduce the likelihood of leakages and improve leakage detection. <ul style="list-style-type: none"> ○ Spill kits stored on-site. ● A site-specific Health and Safety Plan covering the works, commissioning and operation will be prepared to ensure compliance with relevant health and safety legislation. ● A Site Emergency Plan will be developed in accordance with the IE Licence, which will include a fire strategy and appropriate training procedures. ● A Flood Emergency Response Plan will be prepared in consultation with the EPA. This will define access and egress routes from the Site. ● Procedures will be in place to clearly outline the responsibilities, actions and communication channels for operational staff and personnel on how to deal with emergencies should they occur. Staff will also receive the level of training required for their role and position. This will include dealing with events such as fires, spillages, flooding etc. ● Such measures will be included in the site operating and management system and regulated by EPA through the IE Licence.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
PPA_OP_13	Chapter 12 (Water)	Flood Risk Mitigation	Section 12.6	<ul style="list-style-type: none"> • Suitable drainage systems should be in place to manage any surface water to reduce fluvial flood risk. The comprehensive and detailed design of the surface water system, ground levels, finished slab levels, and SuDs measures will mitigate pluvial flood risk to the Proposed Development and ensure that the Power Plant Area does not increase the pluvial flood risk to neighbouring properties.
PPA_OP_14	Chapter 12 (Water)	Groundwater Abstraction Management	Section 12.6	<ul style="list-style-type: none"> • Prior to the commencement of operational pumping at PW1, the CEMP will be updated to include current operational and water level data, if available, and to outline locations within the Power Plant Area Study Area, at which groundwater levels will be monitored during periods of abstraction. These locations could include the existing ground investigation boreholes and locations within or at the edge of the adjacent Knockdrin Garr Cutover (including Drumman Bog) and Bunsallagh Cutover complexes (including Derryarkin Bog). • The CEMP will also be updated to outline how best to ascertain if groundwater levels in the underlying aquifer and the adjacent GWDTEs are being impacted by operational abstraction.
PPA_OP_15	Chapter 13 (Land, Soils and Geology)	Soil chemistry and water quality	Section 13.6	<p>To minimise the potential for adverse impacts to soil chemistry and water quality, the following is an outline of the general mitigation measures that will be in place.</p> <ul style="list-style-type: none"> • The Proposed Development will follow the standards set out in the IE Directive (IED) under its IE Licence. This is set out to limit and minimise the impacts to air, soil, surface and groundwater, and the effects on environment and human health. • The Proposed Development will be operated in line with appropriate standards and the operator will implement and maintain an Environment Management System (EMS) which will be certified to International Standards Organisation (ISO) 14001. The EMS will outline requirements and procedures required to ensure that the Proposed Development is operating to the appropriate standard. • When required, sampling and analysis of pollutants will occur. This includes monitoring emissions levels in accordance with the IE Licence. • To prevent the risk of spillages, flooding, fire, and other potentially major incidents several measures will be in place. These include compliance with all relevant health, safety and environmental legislation; design, build and operation in accordance with industry practice; regular maintenance and inspections to reduce the risk of equipment failures; bunded or double skinned storage areas; good and regular housekeeping; and spill kits stored on-site. • No hazardous materials will be stored unbunded within the Site. • Water quality monitoring will be undertaken post-construction, details of which will be included in the IE Licence. This is anticipated to be based on a combination of visual observations, in situ testing using handheld water quality probes, and periodic sampling for laboratory analysis.
PPA_OP_16	Chapter 14 (Traffic and Transport)	Road Safety Audit	Section 14.6	<ul style="list-style-type: none"> • Any HGVs proposed to arrive to the site will continue to be encouraged to arrive via the M6 to limit damage on R400. • Further mitigation measures may arise from the competition of a Road Safety Audit. • These will be addressed throughout the planning/ design process.
PPA_OP_17	Chapter 15 (Population and Human Health)	Environment Management System	Section 15.6	<ul style="list-style-type: none"> • The Power Plant Area will comply with the requirements of the EU (Large Combustion Plants) Regulations 2012 S.I. No. 566 of 2012 under its IE Licence (to be applied for). • The operator will implement and maintain an Environment Management System (EMS) which will be certified to International Standards Organisation (ISO) 14001.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • The EMS will establish the requirements and procedures required to ensure that the Site is operating to the appropriate standard. • Sampling and analysis of pollutants will be carried out where required including monitoring of exhaust emissions levels using Continuous Emission Monitoring Systems (CEMS) prior to discharge from the stack, in accordance with the IE Licence.
PPA_OP_18	Chapter 15 (Population and Human Health)	Health and Safety Plan	Section 15.6	<ul style="list-style-type: none"> • A site-specific Health and Safety Plan produced by the Operator(s) covering the operation and maintenance of the Proposed Development will be prepared to ensure compliance with relevant health and safety legislation including the Safety, Health and Welfare at Work Act.
PPA_OP_19	Chapter 15 (Population and Human Health)	Community Benefit Fund	Section 15.6	<ul style="list-style-type: none"> • Bord na Móna is proposing to replicate its Community Benefit Fund model for Derrygreenagh Power. • The fund shall be made by five annual payments of €90,000 (ninety thousand euro) beginning on commencement of construction of the Proposed Development contributing to a total fund of €450,000 (four hundred and fifty thousand euro) over the five-year period. • The fund will look to support the local community, through funding of projects and services, as required. A description of the Community Benefit proposal is outlined below and in the 'Derrygreenagh Power Community Report' which is contained in Appendix 6E.
PPA_OP_20	Chapter 16 (Material Assets)	Utilities – general mitigation	Section 16.6	<ul style="list-style-type: none"> • Prior to the operational phase of the Power Plant Area, utilities infrastructure connections will be tested by a suitably qualified person using an appropriate methodology, approved by the relevant service provider, and under the supervision of the local authority. • Routine maintenance will be undertaken by the plant operators and contractors in accordance with maintenance manuals provided by the EPC Contractor. • Emissions during the operational phase will be regulated and monitored under the IE Licence.
PPA_OP_21	Chapter 16 (Material Assets)	Telecommunication mast	Section 16.6	<ul style="list-style-type: none"> • During operational phase of the Power Plant a replacement telecommunication mast shall be constructed providing links to the northern part of the Power Plant Area to delivering flexibility of service for mobile and wireless communications operators to utilise where possible.
PPA_OP_22	Chapter 16 (Material Assets)	Water supply	Section 16.6	<ul style="list-style-type: none"> • The Power Plant Area water supply will be tested to the satisfaction of the local authority and Irish Water prior to the connection to the public potable water. • Potable water during the operational phase will be regulated and monitored under the IE Licence.
PPA_OP_23	Chapter 16 (Material Assets)	Gas turbine	Section 16.6	<ul style="list-style-type: none"> • The GT's will be subject to maintenance in accordance with the gas turbine manufacturers recommendations. The maintenance regime is generally based on annual, minor and major maintenance outages. The minor and major maintenance outage scheduling is based on the number of operating hours and starts the GT has undergone. • Minor and Major outages replace annual outage in the year they take place. The outage periods may take between three days (Annual) and 17 days (Major) for the GT unit. • These works are likely to take place during the summer months when the units are least likely to be operated. • During this maintenance period, maintenance on balance of plant will also be undertaken.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
PPA_OP_24	Chapter 17 (Major Accidents and Disasters)	Health and Safety – general	Section 17.6	<ul style="list-style-type: none"> • The design and operation of the Proposed Development will be in accordance with international, national and established industry codes, standards and practice, such as the specification of pipework materials, design of structures <i>etc.</i> • The Proposed Development and Overall Project will comply with the requirements of all relevant health, safety and environmental legislation including COMAH, which requires operators to take all measures necessary to prevent major accidents. • A detailed chemical inventory and risk assessments for all materials handled on-site will be produced in accordance with the requirements of the Chemical Agents legislation. All fuels and chemicals stored on-site will be used in compliance with their Safety Data Sheets according to the requirements of REACH. • Regular maintenance and inspection of all facilities will be carried out to reduce the potential for equipment failures which could lead to a loss of containment. In particular, systems containing pressurised natural gas will be subject to the requirements of the Pressure Equipment Regulations. • An Environmental Management System (EMS) will be implemented in the operational phase (regulated by the EPA under IE Licence) for a systematic approach to managing risk and achieving continual improvement of environmental performance based on a process of plan-do-check-act (PDCA)
PPA_OP_25	Chapter 17 (Major Accidents and Disasters)	Emergency management	Section 17.6	<ul style="list-style-type: none"> • A Site Emergency Response Plan (ERP) will be developed for the EMS to include the Proposed Development and Overall Project in accordance with legislative requirements including COMAH and IE Licence, which will include a fire strategy and appropriate training procedures. • Procedures will be in place for the EMS to clearly detail the responsibilities, actions and communication channels for operational staff and personnel on how to deal with emergencies should they occur. Staff will also receive the level of training required for their role and position. This will include dealing with events such as fires, explosions, spillages, flooding <i>etc.</i> • This plan will contain detailed plans for the response to emergencies such as loss of containment of natural gas and Secondary Fuel, fires and severe weather events. A stock of emergency equipment such as spill kits will be maintained on site in particular around the fuel storage areas. • The local Fire and Rescue Service and other key stakeholders would be expected to provide an input to the development of emergency plans and potentially engage with desktop and live emergency training exercises. • All personnel on Site will receive appropriate training in the contents of the Site ERP and be fully aware of their responsibilities during emergency events and participate in regular training exercises. Emergency critical roles will involve personnel trained to use fire hydrants, foam pourers and other fire suppression systems. • In the event of a fire, or if natural gas is detected within the PPA enclosures (CCGT and OCGT), an alarm will be generated to alert operators. An inert gas (CO₂) fire suppression and purging system will automatically operate in addition to trip of enclosure ventilation to displace air from the enclosure and prevent or extinguish the fire.
PPA_OP_26	Chapter 18 (Climate)	Greenhouse gases	Section 17.6	<p>The following GHG mitigation measures are embedded in the design of the Power Plant Area and are applicable to the operation phase:</p> <ul style="list-style-type: none"> • Monitor operational energy efficiency; • Minimise secondary fuel use; • Maintain assets as per manufacturer specification; • Strive for optimal operation beyond Industrial Emissions (IE) compliance;

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • Monitor policy developments to enable smooth transition to hydrogen combustion in line with plans for the gas network; and • Funds set aside for climate and energy efficiency purposes.
POWER PLANT AREA – DECOMMISSIONING PHASE				
PPA_DEC_1	Chapter 5 (Proposed Development)	Decommissioning Plan	Section 5.9	<ul style="list-style-type: none"> • A Decommissioning Plan (including a Decommissioning Environmental Management Plan (DEMP)) will be produced and agreed with the EPA as part of the permit surrender process ahead of any permit surrender. • A DEMP will consider in detail all potential environmental risks on the site and contain guidance on how risks can be removed or mitigated. Site closure planning and liability risk assessment will be within the IE licence for the site and will typically include a requirement for any removal of soils, buildings, plant and equipment, and remedial actions would be undertaken under a Decommissioning Management Plan, part of a Closure, Restoration and Management Plan (CRAMP).
PPA_DEC_2	Chapter 7 (Air Quality)	Emissions	Section 7.6	<ul style="list-style-type: none"> • It is expected that the mitigation measures outlined for the Construction Phase of the Power Plant Area would also be suitable to be applied to the decommissioning works. • Any additional relevant measures for further mitigation will be agreed with the relevant planning authority and/or EPA (as part of site closure works) at the time.
PPA_DEC_3	Chapter 11 (Noise and Vibration)	Noise	Section 11.6	<ul style="list-style-type: none"> • The impact assessment has already established that effects arising from the process of decommissioning of the Power Plant Area are likely to be of a similar or lesser nature and duration to those arising from the construction process. • The general mitigation in the form of good practice presented in construction phase noise mitigation PPA_CON_28 is also applicable to the Power Plant Area decommissioning phase. • Decommissioning will be carried out in compliance with Closure, Remediation and Aftercare Management (CRAMP) under IE Licence. • The CRAMP will be agreed with the Agency under the IE Licence application or conditions of the IE Licence and regularly updated under Licence conditions in advance of closure of the Power Plant Area.
PPA_DEC_4	Chapter 12 (Water)	General	Section 12.6	<ul style="list-style-type: none"> • A Decommissioning Plan will be produced and agreed with the EPA as part of the IE Licence application and licence surrender process. The plan will include all potential environmental risks on the Site and contain guidance on how risks can be removed or mitigated. In addition, the IE Licence Baseline Assessment Report will be referred to in the IE Licence application and updated to determine if any contamination has occurred and what, if any, remediation is required prior to IE Licence surrender. • Additionally, decommissioning activities will be conducted in accordance with the appropriate guidance and legislation at the time of closure.
PPA_DEC_5	Chapter 13 (Land, Soils and Geology)	General - Decommissioning Plan	Section 13.6	<ul style="list-style-type: none"> • As the predicted impacts on soils and geological receptors likely to occur during the decommissioning phase are anticipated to be similar to those likely to occur during the construction phase (with the exception of the soil stripping and excavations and impacts relating to unidentified contamination). • Prior to removing the plant and equipment, all residues and operating chemicals will be cleaned out from the plant in accordance with the IE Licence Decommissioning Plan and disposed of in accordance with national waste management requirements.

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • Prohibited materials such as asbestos, polychlorinated biphenyls (PCBs), ozone depleting substances and carcinogenic materials will not be allowed within the design of the Proposed Development, and other materials recognised to pose a risk to health (but which are not prohibited) will be subject to detailed risk assessment. • The prevention of contamination is a specific requirement of the IE Licence for the Proposed Development. Therefore, it is being designed to not create any new areas of ground contamination or pathways to receptors as a result of construction or operation. Once the plant and equipment has been removed to ground level at decommissioning stage any areas of hardstanding and sealed concrete will be left in place. • A Decommissioning Plan will be produced and agreed with EPA as part of the IE Licencing and licence surrender process. The plan will include all potential Land and Soils environmental risks on the Site and contain guidance on how risks can be removed or mitigated, which are anticipated to be similar to the in line with mitigation proposed for the Power Plant Area Construction phase activities. In addition, the IE Licence Baseline Assessment Report will be referred to and updated to determine if any post-construction contamination has occurred and what, if any, remediation is required prior to IE Licence surrender. • Decommissioning activities will be conducted in accordance with the appropriate guidance and legislation at the time of closure. All decommissioning activities will be carried out in accordance with the waste hierarchy and materials and waste produced during decommissioning and demolition will be stored in segregated areas to maximise reuse and recycling. All materials that cannot be reused or recycled will be removed from the Site and transferred to suitably permitted waste recovery/ disposal facilities. It is intended that a large proportion of the materials resulting from the decommissioning will be recycled, and a record will be kept demonstrating that the maximum level of recycling and reuse has been achieved. • To ensure work is done in accordance with requirements, when the decommissioning programme is completed, including any remediation works that might be required, EPA will conduct an Exit Audit inspection post-decommissioning. All records from the decommissioning process will be made available for inspection by the EPA and other relevant statutory bodies, in accordance with the IE Licence requirements.
PPA_DEC_6	Chapter 15 (Population and Human Health)	Decommissioning Plan	Section 15.6	<ul style="list-style-type: none"> • At the end of its operating life, all above-ground equipment associated with the Power Plant Area will be decommissioned and removed from the Site. • Prior to removing the plant and equipment, all residues and operating chemicals will be cleaned out from the plant and disposed of at a suitably licenced facility. • Prevention of contamination is a specific requirement of the IE Licence for the operation of the Proposed Development. • A Decommissioning Plan (including a Decommissioning Environmental Management Plan) will be produced and agreed with EPA as part of the permit surrender process ahead of any permit surrender. • A Decommissioning Environmental Management Plan will consider in detail all potential environmental risks on the site and contain guidance on how risks can be removed or mitigated. • Site closure planning and liability risk assessment will be within the IE licence for the Site and will typically include a requirement for any removal of soils, buildings, plant and equipment, and remedial actions would be undertaken under a Decommissioning Management Plan, part of a Closure, Restoration and Management Plan (CRAMP). • Typically, the EPA insists on a financial bond to underwrite the CRAMP and usually with an EPA bond template. Separately under the IE licence, the applicant will likely have to prepare an Environmental Liabilities Risk Assessment which will require

MITIGATION REF.	EIAR CHAPTER	RELEVANT TOPIC	LOCATION	MITIGATION MEASURES
				provision of financial provision with the EPA to cover any liabilities of past and present activities. The ELRA is typically underwritten with an Impairment Environmental Insurance policy.
PPA_DEC_7	Chapter 16 (Material Assets)	Utilities – general mitigation	Section 16.6	<ul style="list-style-type: none"> • At the end of its operating life, all above-ground equipment associated with the Power Plant Area will be decommissioned and removed from the Site. • Prior to removing the plant and equipment, all residues and operating chemicals will be cleaned out from the plant and disposed of at a suitably licenced facility. • Prevention of contamination is a specific requirement of the IE Licence for the operation of the Power Plant Area. • Once the plant and equipment have been removed to ground level the hardstanding and sealed concrete areas will be left in place. • Site environmental liability risk assessment (ELRA) will be prepared for IE Licence application for the Power Plant Area and reviewed in accordance with requirements as regards control of risk in the operational phase that may subsequently impact closure. • Closure will typically include a requirement for any removal of soils, buildings, plant and equipment, and remedial actions would be undertaken under a Decommissioning Management Plan, part of a Closure, Restoration and Management Plan (CRAMP). Financial Provision for ELRA and CRAMP will be agreed with the EPA under the IE Licence. • During decommissioning there will be a requirement for office, accommodation and welfare facilities which will be located adjacent to the Power Plant Area. • Decommissioning activities will be conducted in accordance with the appropriate guidance and legislation at the time of the Power Plant Area closure.
PPA_DEC_8	Chapter 18 (Climate)	Greenhouse gases	Section 17.6	<p>The following GHG mitigation measures are embedded in the design of the Power Plant Area and are applicable to the decommissioning phase:</p> <ul style="list-style-type: none"> • Segregation of waste materials; • Reuse, repurpose and upcycling of waste; and • Use local channels for waste treatment.

20.3 Electricity Grid Connection

Table 20.2: Schedule of Environmental Commitments for the Electricity Grid Connection

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
ELECTRICITY GRID CONNECTION – PRE-CONSTRUCTION PHASE				
EGC_PRE_1	Chapter 8 (Cultural Heritage and Archaeology)	Project Archaeologist	Section 8.6	<ul style="list-style-type: none"> • The Applicant will appoint a suitably qualified archaeologist as Project Archaeologist. • The appointed archaeologist will undertake full-time monitoring of the excavation of the test trenches and, where appropriate, carry out archaeological investigation.
EGC_PRE_2	Chapter 8 (Cultural Heritage and Archaeology)	Archaeology and Testing	Section 8.6	<ul style="list-style-type: none"> • Archaeological testing will be carried out at the pre-construction phase in areas, identified in the construction impacts section above, where the Proposed Development has the potential to impact upon archaeological remains. • These include the substation areas, construction compounds, hardstanding, pylon bases, underground cable and new access tracks (Fig 8.5 of the EIAR). • This testing will take the form of mechanically excavated test trenches. • These will be excavated under the constant supervision of a suitably qualified and licensed archaeological contractor who will be appointed to carry out the archaeological fieldwork. Relevant licenses will be acquired from the Department for Housing, Local Government and Heritage (DHLGH)/NMS and the National Museum of Ireland (NMI) for all archaeological works. • These will be carried out in accordance with an Overarching Method Statement for Archaeological Works prepared by the Project Archaeologist and agreed with the NMS. • It is anticipated that all archaeological works will be completed pre-construction. • The programme of pre-development archaeological testing will consist of the mechanical excavation of test trenches down to sterile glacial tills and bedrock, by means of a smooth toothless bucket. These will be undertaken at specified locations within the Proposed Development. • Should archaeological material/features be encountered during the archaeological testing, the use of machinery shall cease, and further archaeological investigation (by hand) shall be carried out to determine the nature and extent of the archaeological remains. • Archaeological deposits shall not be removed as part of the assessment process. • The testing will be undertaken in advance of construction to allow adequate time to evaluate, record and, where necessary, mitigate any archaeological features that may be revealed. In the event that any archaeological features are uncovered during construction, the appointed Archaeologist and the National Monuments Service will be consulted to determine the appropriate mitigation measures. • These may include preservation in situ, preservation by record through systematic archaeological excavation, and/or archaeological monitoring of specific construction activities during the construction phase.

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> Archaeological issues will be resolved where possible, at the pre-construction stage of the development, although areas within peat bog may require evaluation during the construction phase with groundworks carried out under archaeological supervision. If unexpected archaeological remains or artefacts are discovered during construction work, work in that area will cease and the area will be protected. An unexpected finds procedure will be included in the Overarching Method Statement for Archaeological Works The Project Archaeologist and NMS will be notified, and the unexpected finds procedure will be implemented.
ELECTRICITY GRID CONNECTION – CONSTRUCTION PHASE				
EGC_CON_1	Chapter 5 (Proposed Development)	Health and Safety	Section 5.7	<ul style="list-style-type: none"> Additional safety precautions in place reflecting working in the vicinity of a live line and to mitigate any potential risk to the operational line during construction works.
EGC_CON_2	Chapter 5 (Proposed Development)	General - Cable trench	Section 5.7	<ul style="list-style-type: none"> Excavation of the cable trenches, installation of the duct bedding and ducts, backfilling and reinstatement will generally take place in short sections to minimise the amount of ground disturbed at any one time and the potential for drainage runoff to pick up silt or suspended solids.
EGC_CON_3	Chapter 7 (Air Quality)	Dust / Emissions	Section 7.6	<p>Emissions of dust and particulates from the construction phase of the Power Plant Area will, however, be controlled in accordance with standard good working practices regularly employed in the construction industry on sites of this type. The management of dust and particulates and application of adequate mitigation measures will be enforced through embedded mitigation measures in the CEMP, refer to Appendix 5A.</p> <p>Based on the assessment of the area of sensitivity to dust impacts and the likely risk of impacts arising from each of the key construction activities (demolition, earthworks, construction and trackout of material onto roads) (EIAR Appendix 7A), and as described in Section 7.5 of Chapter 7, appropriate standard mitigation measures to be implemented during construction (good site techniques drawn from the 'low risk' site schedule in IAQM guidance) that have been identified are:</p> <ul style="list-style-type: none"> Storage of sand and aggregates in bunded areas and storage of cement powder and fine materials in silos. Use of water suppression and regular cleaning, as necessary, to minimise mud on roads. Covering of vehicles leaving the construction site that are carrying construction waste materials (note: the transfer of any excavated material off site will be minimised). Employment of a wheel wash system at exits from the Site during the construction phase. Minimising storage duration of spoil during construction as far as is practical; and Prohibiting open fires on Site.
EGC_CON_4	Chapter 7 (Air Quality)	Emissions / NRMM	Section 7.6	<p>Good working practice measures will also be employed for the siting and operation of non-Road mobile machinery (NRMM) to control associated emissions, including:</p> <ul style="list-style-type: none"> Minimising vehicle and plant idling as far as is practical (i.e., when not in use); and Locating static plant in a central area of the Site away from sensitive boundaries or receptors

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
EGC_CON_5	Chapter 8 (Cultural Heritage and Archaeology)	Project Archaeologist	Section 8.6	<ul style="list-style-type: none"> The Applicant will appoint a suitably qualified archaeologist as Project Archaeologist.
EGC_CON_6	Chapter 8 (Cultural Heritage and Archaeology)	Testing	Section 8.6	<ul style="list-style-type: none"> During the construction phase procedures will be adopted, as described in the CEMP (Appendix 5A), to reduce the impact of noise, dust, and vibration during construction. Testing will be undertaken in advance of construction to allow adequate time to evaluate, record and, where necessary, mitigate any archaeological features that may be revealed. In the event that any archaeological features are uncovered during construction, the appointed Archaeologist and the National Monuments Service will be consulted to determine the appropriate mitigation measures. Archaeological issues will be resolved where possible, at the pre-construction stage of the development, although areas within peat bog may require evaluation during the construction phase with groundworks carried out under archaeological supervision. If unexpected archaeological remains or artefacts are discovered during construction work, work in that area will cease and the area will be protected. An unexpected finds procedure will be included in the Overarching Method Statement for Archaeological Works. The Project Archaeologist and NMS will be notified, and the unexpected finds procedure will be implemented.
EGC_CON_7	Chapter 9 (Biodiversity)	General Biodiversity	Section 9.6	<p>The General Biodiversity mitigation for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> PPA_CON_12 PPA_CON_13
EGC_CON_8	Chapter 9 (Biodiversity)	European sites	Section 9.6	<p>The European sites mitigation measures for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> PPA_CON_14
		Habitats replacement		<p>The Habitats replacement mitigation measures for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> PPA_CON_15
		Habitats pollution and water quality		<p>The habitats pollution and water quality mitigation measures for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> PPA_CON_16
		Invasive Species		<p>The Invasive Species mitigation measures for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> PPA_CON_17
		Otter		<p>The otter mitigation measures for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> PPA_CON_20

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
		Other protected mammals		The other protected mammals mitigation measures for the Power Planet Area, are applicable here: <ul style="list-style-type: none"> • PPA_CON_21
		Marsh fritillary		The Marsh fritillary mitigation measures for the Power Planet Area, are applicable here: <ul style="list-style-type: none"> • PPA_CON_22
		Breeding and Wintering Birds		The Breeding and Wintering Birds mitigation measures for the Power Planet Area, are applicable here: <ul style="list-style-type: none"> • PPA_CON_24
		Fisheries and aquatics		The Fisheries and aquatics mitigation measures for the Power Planet Area, are applicable here: <ul style="list-style-type: none"> • PPA_CON_25
EGC_CON_9	Chapter 9 (Biodiversity)	National sites	Section 9.6	<ul style="list-style-type: none"> • The use of oils, chemicals, sediment and other potential pollutants on-site requires significant care and attention. Refer to the CEMP – Appendix 5A.
EGC_CON_10	Chapter 9 (Biodiversity)	Bats	Section 9.6	<ul style="list-style-type: none"> • Construction works in the vicinity of building B6 immediately adjacent to the Electricity Grid Connection, and construction work adjacent to the treelines and hedgerows in the south of the Electricity Grid Connection have potential to disturb and displace roosting and foraging/commuting bats. The bat mitigation measures for the Power Planet Area, are applicable here: <ul style="list-style-type: none"> • PPA_CON_18
EGC_CON_11	Chapter 9 (Biodiversity)	Badger	Section 9.6	<ul style="list-style-type: none"> • Subsidiary sett BA03 is only 6m north of the temporary construction compound for the 400kV substation, and within the permanent soil deposition area, it will require permanent closure for the works to proceed. Outlier sett BA04 is 46m west of the 400kV substation, and therefore within the 50m distance stated by the NRA guidance within which no works should take place during the breeding season (December to June). If works are required within the breeding season, this sett should be temporarily closed, but the sett can remain open if works are to take place in the non-breeding season as the sett is more than 30m away from the works. If there is piling within 150m of outlier sett BA02, this sett will require temporary closure. Sett closure will require a licence and be overseen by a suitably qualified ecologist / ECoW. • As badgers are a mobile species which are active within the vicinity of lands associated with the Electricity Grid Connection, it is possible that badger may establish new setts prior to construction. Therefore, pre-construction badger surveys will be carried out within the Zol of the Electricity Grid Connection no sooner than one month of the works commencing, to determine if any setts have become newly established since baseline surveys. the ECoW will provide advice in the event that additional setts are identified, including potential requirements under licence on a temporary or permanent basis. The badger mitigation measures for the Power Planet Area, are applicable here: <ul style="list-style-type: none"> • PPA_CON_19
EGC_CON_12	Chapter 9 (Biodiversity)	Amphibians	Section 9.6	<ul style="list-style-type: none"> • Mitigation for smooth newt and common frog will focus on safeguarding their breeding habitat from damage and / or disturbance, avoiding impacts to breeding smooth newt and common frog, and minimising disturbance impacts to terrestrial smooth newt and common frog during construction.

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • Pond 1, which was confirmed to support smooth newt, is located within the 220kV substation compound and at the southern boundary of the proposed substation infrastructure of the Electricity Grid Connection. In addition, further suitable terrestrial and aquatic habitat is present within the Electricity Grid Connection. Robust mitigation is therefore required to protect smooth newt and common frogs from impacts arising from construction works. <p>The Amphibians mitigation measures for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> • PPA_CON_23
EGC_CON_13	Chapter 10 (Landscape and Visual)	Landscape Mitigation Strategy	Section 10.6	<p>The following specific elements will be introduced as part of the Landscape Mitigation Strategy (see Appendix 10B for more detail):</p> <ul style="list-style-type: none"> • 220kV Substation: <ul style="list-style-type: none"> ○ Mix of Deciduous Trees: positioned to the east along the R400, additional clusters of deciduous trees will aim to screen the lower parts of the development from the road and the area around the site entrance. Their placement is intended to enhance visual aesthetics and promote integration with the natural environment. ○ Grass Mix: Areas to the north and east of the substation compound shall be planted with a grass mix. This aims to increase the biodiversity in this area which is currently mostly hardstanding. ○ Retention of existing vegetation: Existing regenerating bog vegetation west of the proposed substation compound shall be retained and protected during construction works. • 400kV Substation: <ul style="list-style-type: none"> ○ Woodland Mix: a band of trees is to be planted along the southern and eastern side of the substation compound and separated by a band of grassland from the compound fence. This is to provide screening of the lower section of the substation building and to pick up the pattern of bands of trees along field boundaries. Additional screen planting in form of bands of trees will be provided along the western and southern redline boundary in order to enhance screening in views north from the Grand Canal. ○ Grass Mix: a band of grassland will be created along the eastern (entrance area), northern, western, and southern boundary of the substation compound. Other areas associated with former access tracks and agricultural fields located within the southern tip of the redline boundary are to become grassland. ○ Retention of existing vegetation: existing bands of trees along field boundaries north of the substation compound as well as a wide strip south of the substation compound is to be retained. • Overhead Transmission Line (OHL) and underground cable (UGC): <ul style="list-style-type: none"> ○ Avoidance of locating the proposed OHL where there was a specific conflict with a view or amenity. ○ Restricting the siting of structures close to a road unless it could be screened by an adjoining hedgerow or hedgerow trees. Towers to be set back well from the edges of local roads, where practical, especially where there was a lack of hedgerows. ○ Avoidance of running the proposed OHL close and parallel to a road. ○ Place UGC within existing road / access track corridors where possible. ○ Avoidance of placing overhead transmission line structures on axial views, or where there was a change in direction of a road.

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> ○ Taking advantage of existing tall hedgerows, bands trees, or stands of trees that enclosed fields within the study area, using them either as a background or screen the overhead transmission line. ○ Minimise construction impact on adjoining vegetation. ○ Avoidance of placing the overhead transmission line structures on rising ground where they will break the skyline, where possible. ○ Alignment of the proposed OHL as straight as possible in order to minimise the requirement for angle towers. ○ Micro-siting of proposed towers/pole-sets in order to avoid mature trees. ○ Where possible, location of tower structures near or on field boundaries in order to retain the visual appearance of existing field pattern. ○ Avoidance of traversing relevant roads in a perpendicular manner. ○ Retention of existing mature tree planting where possible. ○ Minimising removal or pruning of hedgerows and trees/woodland areas. ○ Minimising the removal of roadside vegetation where the proposed OHL crosses. ○ Careful analysis has been undertaken for all tower positions in areas where towers are likely to give rise to significant visual effects. These locations will be reviewed at construction stage to ensure optimum micro-siting is achieved with regard to visual effects
EGC_CON_14	Chapter 11 (Noise and Vibration)	Noise	Section 11.6	The noise mitigation measures for the Power Planet Area, are applicable here: <ul style="list-style-type: none"> ● PPA_CON_27
EGC_CON_15	Chapter 12 (Water)	General	Section 12.6	The water mitigation measures for the Power Planet Area, are applicable here: <ul style="list-style-type: none"> ● PPA_CON_28 ● PPA_CON_29
EGC_CON_16	Chapter 13 (Land, Soils and Geology)	General	Section 13.6	The land, soils and geology mitigation measures for the Power Planet Area, are applicable here: <ul style="list-style-type: none"> ● PPA_CON_34
EGC_CON_17	Chapter 13 (Land, Soils and Geology)	Excavation of Borrow Pits, Processing of Materials and Reinstatement	Section 13.6	<ul style="list-style-type: none"> ● No borrow pit locations are envisaged to be required for the Proposed Development and aggregates for temporary and permanent works will be source from local aggregate providers.
EGC_CON_18	Chapter 13 (Land, Soils and Geology)	Construction of access routes	Section 13.6	<ul style="list-style-type: none"> ● Access routes will be carefully selected to avoid damage to land. Local consultation will be carried out with the relevant landowners to ensure that any potential disturbance will be minimised. ● The routes will be constructed as floating roads only. Founded roads are excavated down to and constructed up from a competent geological stratum, whereas floated roads are built directly on top of the peat and soft soils.

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • Prior to the commencement of construction, the contractor will assess all access routes and determine the requirement for bog mats. Any such requirements will be incorporated into the relevant method statement. • Access tracks on the consented land (only if required due to ground conditions and/or landowner requirements) will consist of timber or aluminium bog mats (on peatland) or crushed rock on a geotextile (on mineral soils) to spread the weight of machinery over a greater area to prevent damage to the ground. • If necessary, low ground pressure machinery may also be utilised to spread the vehicle's weight across a wider area thereby reducing the pressure exerted on the ground. • No invasive works, such as removal of peat or topsoil, will be undertaken when placing the matting. • Upon completion of the works, all mats will be removed immediately. • Access routes for construction traffic will be carefully selected to avoid any damage to land. Local consultation will be carried out with the relevant landowners to ensure that any potential disturbance will be minimised. Prior to the commencement of construction, the contractor will assess all access routes and determine the requirement for bog mats. Any such requirements will be incorporated into the relevant method statement.
EGC_CON_19	Chapter 13 (Land, Soils and Geology)	Management of excavated materials	Section 13.6	The Sedimentation of Surface Water mitigation measures for the Power Planet Area, are applicable here: <ul style="list-style-type: none"> • PPA_CON_30
EGC_CON_20	Chapter 13 (Land, Soils and Geology)	Excavation for tower foundations	Section 13.6	<ul style="list-style-type: none"> • To allow for safe construction, where ground conditions are good, the excavation will be stepped back, which requires additional area to be excavated. • In the cut away bog, where ground conditions are likely be poor, sheet piles will be used to support the mast foundation excavations. • The excavated material will be temporarily stored close to the excavation and excess material will be used as berms along the site access roads. • Concrete trucks will pour concrete directly into each excavation in distinct stages and the mast footings will be finished 300mm above the finished ground level. • All surplus excavated material will be removed from the mast locations and stored in berms for reuse across the construction site. • No soil removal to form the hardstand crane pads is envisaged. The aggregate and geogrid will be removed once the mast is in place.
EGC_CON_21	Chapter 13 (Land, Soils and Geology)	Hardstanding, Substations and Cable Compound Foundations	Section 13.6	<ul style="list-style-type: none"> • At the Substation and cable compound sites, a drainage system will be excavated and installed around the compound area. Topsoil and subsoil will be removed from the footprint of the compound and will be temporarily stored in adjacent berms for later use during reinstatement works. • A layer of geotextile material will be laid over the footprint of the compound and an aggregate base layer of Clause 804 material will be laid, followed by a 6F2 capping layer which will provide the finished surface. Both layers will be compacted using a vibrating roller.

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
EGC_CON_22	Chapter 13 (Land, Soils and Geology)	Cable route	Section 13.6	<ul style="list-style-type: none"> • Prior to excavations for installation of Joints Bays, Communication Chambers and Earth Sheath Link chambers, the area around the chamber to be used by heavy vehicles will be surfaced with a geotextile cover if required and stone aggregate to minimise ground damage. • Any roadside drains within the temporary works area will be culverted and check dams made from stone or sandbags covered with Terram will be inserted upstream and downstream of these culverts to intercept any solids generated during the insertion or which wash out during the works. • If the ground slopes from the working area toward a watercourse or if there is evidence of solids washing off the works area toward nearby watercourses or drains, a silt fence with straw bales, will be interposed between the works area and the watercourse. All excavated material will be stored near the excavations and be reused for reinstatement works. Any soil required for reinstatement that will be temporarily stockpiled on site will be placed at least 15m back from the nearest watercourse on level ground and will be ringed at the base by silt fencing and be regularly monitored by a designated competent person for signs of solids escape. In which case an additional line of silt fencing with straw bales will be added in line with the relevant ECM. • If a joint bay needs to be dewatered, the abstracted water will be pumped to a percolation area if the soil is not saturated, otherwise a settlement tank will be used to remove any solids from the water abstracted for the dewatering process to comply with the ECM. • The risk of concrete reaching surface waters is considered very low given that all concrete will be pre-mixed offsite and will be poured into the pit excavated for the joint bay so that any spills will be contained. The basic requirement therefore is that all pouring operations be constantly supervised to prevent accidental spillages occurring outside the chamber pit. • Temporary storage of cement bound sand (if required) will be on hardstand areas only where there is no direct drainage to surface waters and where the area has been bunded e.g., using sand-bags and geotextile sheeting or silt fencing to contain any solids in run-off.
EGC_CON_23	Chapter 14 (Traffic and Transport)	CTMP	Section 14.6	<p>The CTMP and traffic mitigation measures for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> • PPA_CON_41
EGC_CON_24	Chapter 16 (Material Assets)	Utilities – general mitigation	Section 16.6	<ul style="list-style-type: none"> • The utilities mitigation measures for the Power Planet Area, are applicable here: PPA_CON_43 • The final drainage design prepared for the Electricity Grid Connection prior to commencement of construction will have to provide for reactive management of drainage measures.
EGC_CON_25	Chapter 16 (Material Assets)	Waste management	Section 16.6	<ul style="list-style-type: none"> • The waste management mitigation measures for the Power Planet Area, are applicable here: PPA_CON_44 • Segregation of waste will be carried on-site to maximise the potential for waste recycling and minimise any potential for impacts on waste services. • A licensed waste collector will be used to remove any waste that does occur on-site.
EGC_CON_26	Chapter 18 (Climate)	Climate change risk	Section 17.6	<p>The following climate change risk mitigation measures are embedded in the design of the Electricity Grid Connection and are applicable for mitigating climate change risks across construction, operating and decommissioning phases.</p> <ul style="list-style-type: none"> • Flood protection designed to withstand 1:1000 year flood; • Infrastructure is to be maintained and monitored for degradation due to extreme temperatures; and

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATIO N	MITIGATION MEASURES
				<ul style="list-style-type: none"> Emergency procedures are to be implemented against extreme weather events.
EGC_CON_27	Chapter 18 (Climate)	Greenhouse gases	Section 17.6	<p>The following GHG mitigation measures are embedded in the design of the Electricity Grid Connection and are applicable to the construction phase:</p> <ul style="list-style-type: none"> Implement policies to source materials locally where possible; Use of secondary aggregates and lower carbon materials; and Implement a green procurement policy that considers life cycle analysis of materials.
ELECTRICITY GRID CONNECTION – OPERATIONAL PHASE				
EGC_OP_1	Chapter 9 (Biodiversity)	Habitats	Section 9.6	<p>The habitats mitigation measures for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> PPA_OP_3
		Lighting		<p>The lighting mitigation measures for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> PPA_OP_4
EGC_OP_2	Chapter 9 (Biodiversity)	Breeding and Wintering Birds	Section 9.6	<ul style="list-style-type: none"> Mitigation will be delivered to minimise the risk of collision and electrocution of breeding birds with the Overhead Line in the Electricity Grid Connection, or displacement from suitable habitat by the proximity to the electricity transmission lines. Birds with high wing loading (i.e. ratio of body height to wing area) and broad wings are significantly more vulnerable to collision, such as, herons, swans and raptors or many waterfowl (coots, rails, grebes, and shorebirds), or those that fly in large flocks (e.g. lapwings). Transmission lines will be fitted with devices such as flight diverters, hanging tags and marker spheres, to make them more visible to flying birds (see guidance documents, EirGrid, 2020)Overhead lines are a potential risk to commuting and migrating birds in winter, including whooper swans associated with the Derryarkin Bog, and the aforementioned breeding bird species also present in winter, through collision, electrocution, as well as and displacement from suitable habitat in proximity to the electricity transmission lines.
EGC_OP_3	Chapter 10 (Landscape and Visual)	Colour Scheme	Section 10.6	<ul style="list-style-type: none"> The principal visual mitigation measures for the Proposed Development is inherent in the design of its architecture and its colour scheme. The proposed colour scheme was drawn from colours found the surrounding local landscape. The building colours consist generally of a mix between the following four main colours, which range all within a muted mid-dark grey and green spectrum. The colours pick up existing colours of the landscape across the peatland landscape and its hinterland against which the Proposed Development built structures will be seen in the majority of views. The colours will also work with varying weather and visibility conditions, where their muted colours can quickly blend in. The 220kV and 400kV substation buildings should be exclusively coloured in a dark green or olive colour in order to pick up colours used for agricultural tanks or buildings and therefore integrate as much as possible into their setting. The implementation of the proposed colour scheme will help to take the attention away from the Electricity Grid Connection and help assimilate the structures into the landscape colour palette.

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> All lattice structures should be coated with an anthracite grey or another muted mid-dark grey colour from the outset, as the silver colour of the galvanised lattices will take at least 10-15 years to dull down and will otherwise stand out significantly.
EGC_OP_4	Chapter 10 (Landscape and Visual)	Lighting	Section 10.6	<p>The following mitigation measures will be implemented as part of good lighting design practice:</p> <ul style="list-style-type: none"> All proposed luminaires in the lighting design strategy shall be approved by the International Dark Sky Association (IDA) luminaires; any other exterior lighting will follow this principle. Utilise back shields, glare cowls, louvres and similar to minimize / obscure source intensity towards the adjacent hedges and nearby residences; use reflector types that redirect light back downward to desired work areas. Confine lighting to the task area (use horizontal cut-off optics and zero tilt angles, particularly for floodlights). Careful consideration to luminaire positioning and orientation; all floodlight luminaires to be oriented downward or at very low angles to provide lighting only to the areas directly below and adjacent to a given pole. Ensure low colour temperature lamps (CCT) ≤ 3000 K are in use where possible; and Maximise times where lighting can be shut off or dimmed.
EGC_OP_5	Chapter 12 (Water)	Water	Section 12.6	<p>The water mitigation measures for the Power Planet Area, are applicable here:</p> <ul style="list-style-type: none"> PPA_OP_9 PPA_OP_10 PPA_OP_11 PPA_OP_12 PPA_OP_13 PPA_OP_14
EGC_OP_6	Chapter 13 (Land, Soils and Geology)	Soil chemistry and to water quality	Section 13.6	<p>The mitigation measures that will be in place during operational phase of the Electricity Grid Connection to minimise the potential for adverse impacts to soil chemistry and to water quality will be similar to the mitigation measures required for the construction phase of the Electricity Grid Connection and will apply in the event of any maintenance being required to the power transmission infrastructure or to the switching equipment.</p>
EGC_OP_7	Chapter 16 (Material Assets)	Utilities – general mitigation	Section 16.6	<ul style="list-style-type: none"> The utilities mitigation measures for the Power Planet Area, are applicable here: PPA_OP_20 Routine maintenance will be carried out in accordance with the maintenance procedures. The 220 kV Substation: The layout of electrical equipment in the substation will be designed to EirGrid specifications.
EGC_OP_8	Chapter 18 (Climate)	Greenhouse gases	Section 17.6	<p>The following GHG mitigation measures are embedded in the design of the Electricity Grid Connection and are applicable to the operation phase:</p> <ul style="list-style-type: none"> Maintain assets as per manufacturer specification; and Appropriate monitoring, detection, and maintenance of SF6 to prevent leakage in substations.

20.4 Gas Connection Corridor

Table 20.3: Schedule of Environmental Commitments for the Gas Connection Corridor

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
GAS CONNECTION CORRIDOR – PRE-CONSTRUCTION PHASE				
GCC_PRE_1	Chapter 8 (Cultural Heritage and Archaeology)	Project Archaeologist	Section 8.6	If after planning is consented and the project proceeds, GNI will appoint a suitably qualified archaeologist as Project Archaeologist and archaeological testing will be carried out at the pre-construction phase.
GAS CONNECTION CORRIDOR – CONSTRUCTION PHASE				
GCC_CON_2	Chapter 7 (Air Quality)	Dust / Emissions	Section 7.6	<p>Emissions of dust and particulates from the construction phase of the Power Plant Area will, however, be controlled in accordance with standard good working practices regularly employed in the construction industry on sites of this type.</p> <p>The management of dust and particulates and application of adequate mitigation measures will be enforced through embedded mitigation measures in the CEMP, refer to Appendix 5A.</p> <p>Based on the assessment of the area of sensitivity to dust impacts and the likely risk of impacts arising from each of the key construction activities (demolition, earthworks, construction and trackout of material onto roads) (EIAR Appendix 7A), and as described in section 7.5 of Chapter 7, appropriate standard mitigation measures to be implemented during construction (good site techniques drawn from the 'low risk' site schedule in IAQM guidance) that have been identified are:</p> <ul style="list-style-type: none"> • Storage of sand and aggregates in bunded areas and storage of cement powder and fine materials in silos. • Use of water suppression and regular cleaning, as necessary, to minimise mud on roads. • Covering of vehicles leaving the construction site that are carrying construction waste materials (note: the transfer of any excavated material off site will be minimised). • Employment of a wheel wash system at exits from the Site during the construction phase. • Minimising storage duration of spoil during construction as far as is practical; and • Prohibiting open fires on Site.
GCC_CON_3	Chapter 7 (Air Quality)	Emissions / NRMM	Section 7.6	<p>Good working practice measures will also be employed for the siting and operation of non-Road mobile machinery (NRMM) to control associated emissions, including:</p> <ul style="list-style-type: none"> • Minimising vehicle and plant idling as far as is practical (i.e., when not in use); and • Locating static plant in a central area of the Site away from sensitive boundaries or receptors
GCC_CON_4	Chapter 10 (Landscape and Visual)	Landscape Mitigation Strategy	Section 10.6	<p>Landscape mitigation can be developed once a route alignment becomes available. General landscape mitigation measures should comprise the following:</p> <ul style="list-style-type: none"> • Provision of a new native hedgerow planting along the boundary of the future AGI site to screen above ground structures. • Replanting of native hedgerows at crossing points of the pipeline route with field boundaries and along the local road network where existing vegetation is required to be removed to facilitate the undergrounding works and access tracks to the construction site.

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> • Protection of all existing retained vegetation during the construction phase according to BS 5837:2012; and • Ensure that maintenance and replacement of failing or failed planting is undertaken.
GCC_CON_5	Chapter 12 (Water)	General	Section 12.6	<ul style="list-style-type: none"> • The water mitigation measures for the Power Planet Area, are applicable here: PPA_CON_9 • To minimise the potential for adverse impacts to groundwater surface water quality and morphology during construction, the following is an outline of the additional general mitigation measures that will be in place. • Maintenance and restoration of pre-construction land drainage patterns and drainage management features (ditches, culverts), and watercourse crossings will be agreed with the landowner/tenant and any third-party consultants employed on their behalf. • It is expected that crossings of ditches, minor water courses and roads will be by open cut methods and appropriate diversion techniques. Major water courses and road crossing may require the use of techniques such as horizontal directional drilling, auger or thrust boring. Minor crossing activities will take place at the same time as the pipe is laid. Major crossing activities involving HDD, auger or thrust boring require specialist teams and will be carried out before the pipe reaches the crossing area. • Watercourse crossings for the gas pipeline will be constructed such that the top of the gas pipeline shall be located not less than 1.7m from the bottom of the watercourse and will maintain a depth of cover of not less than 1.2 m in the adjoining fields. All watercourses, trenches, ditches, or culverts shall be maintained in effective working condition over their full working width for the duration of the Project and shall be restored to a condition at least as good as before the commencement of the Works. • If necessary, suitable measures will be put in place to prevent sediment being washed off site, and soil stockpiles will be monitored/ measured for wash away to determine whether maintenance and/or remedial action is required.
GCC_CON_6	Chapter 13 (Land, Soils and Geology)	General	Section 13.6	<p>For the Gas Connection corridor, typical mitigation measures will be implemented in relation to:</p> <ul style="list-style-type: none"> • Reinstatement of impacts to fencing, walls and hedges or any feature from within any part of the working width • Maintenance and restoration of pre-construction land drainage patterns and drainage management features (ditches, culverts), and watercourse crossings will be agreed with the landowner/tenant and any third-party consultants employed on their behalf. • Watercourse crossings for the gas pipeline will be constructed such that the top of the gas pipeline shall be located not less than 1.7m from the bottom of the watercourse and will maintain a depth of cover of not less than 1.2 m in the adjoining fields. • Track and road crossings and some water course crossings maybe by either open cut trenches, auger boring, tunnelling or directional drilling, depending on the length and risk of the crossing. In all cases the trenches/pits, bores will be appropriately backfilled with excavated materials and, if required, the surface of the road / track / ditch will then be reinstated appropriately and in a timely fashion. • The pipeline trench will then be backfilled with the excavated, graded subsoil. • Spoil material, overburden and topsoil excavated during topsoil stripping of the working width and from trench construction will be segregated during excavation and stored temporarily within the Site close to the point of origin. • Soil storage will be managed to minimise impacts on soil structure and quality, and appropriate measures to minimise short term and long-term impacts on land drainage will be discussed and agreed with each landowner. Reinstatement of soil impacts may include deep cultivation or ripping of the subsoil if it has been significantly compacted and spreading of the stored topsoil, subject to agreement with the project stakeholders, including the landowners / tenants. • If necessary, suitable measures will be put in place to prevent sediment being washed off site, and soil stockpiles will be monitored/ measured for wash away to determine whether maintenance and/or remedial action is required. • The gas pipeline trench will be backfilled with the excavated subsoil. Graded soil will be used for backfilling operations.

MITIGATION REF.	EIAR CHAPTER	RELEVANT EIAR TOPIC	LOCATION	MITIGATION MEASURES
				<ul style="list-style-type: none"> In areas of poor soil conditions, topsoil stripping may be omitted in favour of temporary roadways constructed with a geotextile material and / or aggregate laid over the ground to prevent damage to the soil structure.
GCC_CON_7	Chapter 14 (Traffic and Transport)	Abnormal loads	Section 14.6	<ul style="list-style-type: none"> Detailed mitigation measurements will not be known until a detailed analysis of the full gas Connection is completed. An Abnormal Loads report has also been completed to identify mitigation measures required for movement of abnormal loads. This is provided in Appendix 14D of the EIAR.
GCC_CON_8	Chapter 18 (Climate)	Climate change risk	Section 17.6	<p>The following climate change risk mitigation measures are embedded in the design of the Gas Connection Corridor and are applicable for mitigating climate change risks across construction, operating and decommissioning phases.</p> <ul style="list-style-type: none"> Flood protection designed to withstand 1:1000 year flood; Infrastructure is to be maintained and monitored for degradation due to extreme temperatures; and Emergency procedures are to be implemented against extreme weather events.
GCC_CON_9	Chapter 18 (Climate)	Greenhouse gas emissions	Section 17.6	<p>The following GHG mitigation measures are embedded in the design of the Gas Connection Corridor and are applicable to the construction phase:</p> <ul style="list-style-type: none"> Implement policies to source materials locally where possible; Use of secondary aggregates and lower carbon materials; and Implement a green procurement policy that considers life cycle analysis of materials.
GAS CONNECTION CORRIDOR – OPERATIONAL PHASE				
GCC_OP_1	Chapter 10 (Landscape and Visual)	Colour Scheme	Section 10.6	<ul style="list-style-type: none"> AGI such as buildings, fences, lattice structures, etc., should generally consist of a mix between Grey Olive and Anthracite Grey, ranging within a muted dark grey and green spectrum.
GCC_OP_2	Chapter 13 (Land, Soils and Geology)	General	Section 13.6	<ul style="list-style-type: none"> A walkover survey will be carried out at an agreed number of years along the entire length of the cross-country pipeline route to check the condition of the marker posts and identify if there has been any ground movement that could affect the integrity of the buried gas pipeline.
GCC_OP_3	Chapter 18 (Climate)	Greenhouse gas emissions	Section 17.6	<p>The following GHG mitigation measures are embedded in the design of the Gas Connection Corridor and are applicable to the operation phase:</p> <ul style="list-style-type: none"> Maintain assets as per manufacturer specification; and Appropriate monitoring of infrastructure performance.