Sure Partners Limited

ARKLOW BANK WIND PARK PHASE 2
ONSHORE GRID INFRASTRUCTURE

VOLUME III
Chapter 6 APPENDICES

Appendix 6.1A Commitments Register

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Appendix 6.1A

Commitment Register

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
Chapter 6, Construction Strategy	General environmental management	The Developer, Sure Partners Limited (SPL), will ensure that the contractor complies with the measures that have been outlined in the EIAR to avoid and/or reduce significant adverse effects that have been identified.		EIAR	CEMP	Pre-Construction; Construction	Employer
Chapter 6 Construction Strategy; Chapter 23 Schedule of Mitigation; EIAR Appendix 6.1 CEMP	General environmental management	A Construction Environmental Management Plan (CEMP) has been prepared for the proposed development. The CEMP sets out the principles and control procedures to manage any likely significant effects on the environment from the construction phase. The contractor(s) will establish detailed construction methodologies upon appointment, and will further develop the CEMP, while ensuring that all proposals comply with the requirements detailed in the CEMP. The implementation of proposed mitigation measures, environmental commitments of the proposed development and the monitoring and supervision of these measures will be managed through the CEMP. It includes measures to control/manage the following: Noise and Dust Emissions; Surface Water and Water Quality Management Measures; Fuel and Oils Management; Traffic Management; Management of Concrete; Ecological Management; Invasive Species Management; Management of Archaeology; Waste Management; Environmental Incident and Emergency Response; Site Environmental Training and Awareness; Monitoring and Auditing; Managing Environmental Incidents and Complaints.		CEMP	CEMP	Pre-Construction; Construction	Employer/ Contractor
Chapter 6 Construction Strategy; EIAR Appendix 6.1 CEMP	General environmental management	A final CEMP will be prepared by the contractor in advance of works commencing and will be submitted to the local authority(s) for approval. Construction method statements will be prepared prior to commencement of construction and incorporated into the CEMP.		CEMP	CEMP	Pre-Construction; Construction	Employer/ Contractor
Chapter 6 Construction Strategy; EIAR Appendix 6.1 CEMP	General environmental management/ Stakeholder Engagement	A Community Liaison Plan has been prepared for the proposed development and will be fully implemented as detailed in the CEMP.		CEMP	CEMP	Pre-Construction; Construction	Employer/ Contractor
Chapter 6, Construction Strategy	General environmental management	The CEMP sets out the principles and control procedures to manage any likely significant effects on the environment from the construction phase. The contractor(s) will establish detailed construction methodologies upon appointment, and will further develop the CEMP, while ensuring that all proposals comply with the requirements detailed in the CEMP.		CEMP	CEMP	Pre-Construction; Construction	Contractor
Chapter 7 Air Quality; Appendix 6.1 CEMP	Dust Management	<u>Mitigation for all sites</u> • A Community Liaison Plan that includes community engagement before work commences on site is included in the Construction Environmental Management Plan (CEMP) (**Appendix 6.1** of **Volume 3**). • Dust mitigation measures are included in the CEMP (**Appendix 6.1** of **Volume 3**). All measures therein will be implemented.		CEMP	CEMP	Pre-Construction; Construction	Employer/ Contractor
Chapter 7 Air Quality; Appendix 6.1 CEMP	Dust Management	<u>Site Management</u> • Record all dust and air quality incidents, complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. • Hold regular liaison meetings with other construction sites within 500m to the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised, refer to **Chapter 21** *Summary of Cumulative Effects*.		CEMP	CEMP	Construction	Contractor
Chapter 7 Air Quality; Appendix 6.1 CEMP	Dust Management	<u>Preparing and maintaining the site</u> • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. • Erect a 2m minimum site hoarding around construction compounds. • Keep site fencing, barriers and scaffolding clean using wet methods. • Cover, seed or fence stockpiles to prevent wind whipping.		CEMP	CEMP	Pre-Construction; Construction	Contractor
Chapter 7 Air Quality; Appendix 6.1 CEMP	Dust Management	<u>Construction Operations</u> • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation. • Use enclosed chutes and conveyors and covered skips		CEMP	CEMP	Construction	Contractor

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		• Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate • Ensure equipment and spill kits are readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods					
Chapter 7 Air Quality; Appendix 6.1 CEMP	Dust Management	<u>Measures specific to Earthworks</u> • Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable • Only remove the cover in small areas during work and not all at once		CEMP	CEMP	Construction	Contractor
Chapter 7 Air Quality; Appendix 6.1 CEMP	Dust Management	<u>Measures specific to Trackout</u> • Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. • Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). • Access gates to be located at least 10m from receptors where possible.		CEMP	CEMP	Construction	Contractor
Chapter 7 Air Quality; Chapter 9 Land and Soils; Appendix 6.1 CEMP	Dust & Air Quality Management	<u>Measures specific to Substation Site Remediation</u> • Dust generation and dermal exposure during site construction works will be controlled by appropriate dust control measures e.g. water sprays and appropriate personal protective equipment (PPE). • Where the asphalt layer is removed at the substation site this will occur in a phased basis and will be replaced with granular hardcore as soon as possible to prevent the generation of windblown dust. • There will be a gas drainage layer and ventilation system, incorporated into the substation site remediation works, which will ensure there is no build-up of ground gas (as described in Chapter 9 Land and Soils).		CEMP	CEMP	Construction	Contractor
Chapter 7 Air Quality; Chapter 9 Land and Soils; Appendix 6.1 CEMP Dust Management	Asbestos	<u>Substation</u> Surveys will be undertaken to identify the risk of asbestos on site. Although unlikely, given ground investigations to date, if asbestos is uncovered on site during construction, it will be double-bagged and removed from site by a competent contractor and disposed of in accordance with the relevant procedures and legislation.		CEMP	CEMP	Pre-Construction; Construction	Contractor
Chapter 7 Air Quality; Appendix 6.1 CEMP Dust Management	Dust Monitoring	The following monitoring measures, will be implemented for the construction phase of the proposed development: • The contractor will undertake on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to Wicklow County Council on request. The frequency of the inspections will be increased during site activities with a high potential to produce dust are being carried out. • Dust monitoring will be undertaken at the three nearest sensitive receptors (with agreement from the landowner) to the works during the construction phase. The TA Luft dust deposition limit values of 350 mg/m^2/day applied as a 30-day average.		CEMP	CEMP	Construction	Contractor
Chapter 8 Climate	Carbon	There will be mitigation embedded through the design of the proposed development including the use of low carbon construction materials. This includes the use of less carbon intensive concrete blends (weak-mix concrete) for the cable route. This low carbon approach has been incorporated as a design measure to reduce carbon.		EIAR	Tender Documents	Pre-Contract award	Employer
Chapter 9 Land and Soils; Appendix 6.1 CEMP	Regulatory Compliance	Construction techniques that comply with the requirements of statutory bodies (Wicklow County Council and EPA) in terms of noise, vibration, soil and groundwater contamination and disposal of contaminated material for both soil and rock cuttings will be adopted.		CEMP	CEMP	Pre-construction; Construction	Employer/ Contractor
Chapter 9 Land and Soils; Chapter 10 Water; Appendix 6.1 CEMP	Ground Contamination	Good housekeeping (daily site clean-ups, use of disposal bins, etc.) will be carried out on site during construction, and the proper use, storage and disposal of all substances and their containers will help prevent soil contamination. For all activities involving the use of potential pollutants or hazardous materials, there will be a requirement to ensure that the material such as concrete, fuels, lubricants and hydraulic fluids will be carefully handled and stored to avoid spillages. Potential pollutants will also be adequately secured against vandalism and will be provided with proper containment according to codes of best practice. Any spillages will		CEMP	CEMP	Construction	Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		be immediately contained, and contaminated soil removed from site and disposed of in a licensed waste facility.					
Chapter 9 Land and Soils; Appendix 6.1 CEMP	Ground Contamination	Excavations in made ground will be monitored by an appropriately qualified person to ensure that any hotspots of contamination encountered are identified, segregated and disposed of appropriately. Any identified hotspots will be segregated and stored in an area where there is no possibility of runoff generation or infiltration to ground or surface water drainage. Care will be taken to ensure that the hotspot does not cross- contaminate clean soils elsewhere throughout the site.		CEMP	CEMP	Construction	Employer/ Contractor
Chapter 9 Land and Soils; Chapter 12 Biodiversity, Appendix 6.1 CEMP	Ground Contamination	Potential soil and water pollution will be minimised by the implementation of good construction practices. Such practices will include adequate bunding for oil containers, wheel wash and dust suppression on site roads, and regular plant maintenance. The Construction Industry Research and Information Association (CIRIA) provides guidance on the control and management of water pollution from construction sites in their publication *Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors* (Masters-Williams et al, 2001). An Environmental Incident and Emergency Response Plan has been prepared and will be further developed by the appointed contractor prior to the commencement of works and regularly updated, identifying the actions to be taken in the event of a pollution incident. The Environmental Incident and Emergency Response Plan will address the following: • Containment measures; • Emergency discharge routes; • List of appropriate equipment and clean-up materials; • Maintenance schedule for equipment; • Details of trained staff, location and provision for 24-hour cover; • Details of staff responsibilities; • Notification procedures to inform the relevant environmental protection authority; • Audit and review schedule; • Telephone numbers of statutory water undertakers and local water company; and • List of specialist pollution clean-up companies and their telephone numbers.		CEMP	CEMP	Construction	Contractor
Chapter 9 Land and Soils; Chapter 12 Biodiversity, Appendix 6.1 CEMP	Loss or damage of topsoil	Excavated topsoils will be stockpiled using appropriate methods to minimise the effects of weathering. Care will be taken in reworking this material to minimise dust generation, groundwater infiltration and generation of runoff. Any surplus suitable material excavated that is not required elsewhere for the proposed development, will be reused for other projects where possible, subject to appropriate approvals/notifications or removed off site to a suitable licensed facility. In order to reduce the compaction and erosion of topsoil outside the areas of direct construction, haul routes will be along predetermined routes within the proposed development and deliveries will be along predetermined routes outside the proposed development. Where compaction occurs due to truck movements and other construction activities on unfinished surfaces, remediation works will be undertaken to reinstate the ground to its original condition. Where practical, compaction of any soil or subsoil which is not part of the works or to remain in-situ within the proposed development will be avoided. The Contractor will ensure that any topsoil or subsoil is assessed for re-use within the proposed development ensuring the appropriate handling, processing and segregation of the material. Where practical the removal of soil from the proposed development will be avoided. All earthworks will be undertaken in accordance with TII Specification for Road Works (SPW) Series 600 Earthworks and project specific earthworks specifications ensuring that all excavated material and imported material is classified using the same methodology so as to allow maximum opportunity for the reuse of materials on site.		CEMP	CEMP	Construction	Contractor
Chapter 9 Land and Soils; Chapter 12 Biodiversity; Appendix 6.1 CEMP	Excavations in made ground	Any excavations within made ground should follow the criteria outlined in the CEMP. The CEMP will be updated by the contractor prior to the commencement of construction. Excavations in made ground will be monitored by an appropriately qualified person to ensure that any localised areas of contamination encountered are identified, segregated and disposed of appropriately and to ensure soils are consistent with the descriptions and classifications according to the waste acceptance criteria testing carried out as part of the site investigations. Any identified localised areas of contamination will be segregated and		CEMP	CEMP	Construction	Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		stored in an area where there is no possibility of runoff generation or infiltration to ground or surface water drainage. Care will be taken to ensure that the contaminated material does not cross- contaminate clean soils elsewhere throughout the site. Samples of ground suspected of contamination will be tested for contamination during the detailed investigation and ground excavated from these areas will be disposed of to a suitably licensed or permitted site in accordance with the current Irish waste management legislation. Any dewatering in areas of contaminated ground will be designed to minimise the mobilisation of contaminants into the surrounding environment. Where dewatering in such areas is unavoidable the water will be adequately treated prior to discharge. Where piling is undertaken, it will be completed following the placement of the deeper granular gas drainage layer which will also serve as a piling mat. Following this, the barrier layer and upper drainage layer will be placed around the piles and sealed. Piling may also be completed after the GCL barrier and drainage layer has been laid, which will require excavation of material and sealing the GCL around piles. The geotechnical design will ensure that any future settlement on site does not lead to a disruption of the integrity of the GCL barrier layer that could lead to water ingress.					
Chapter 9 Land and Soils; Chapter 12 Biodiversity; Appendix 6.1 CEMP	Loss of Solid Geology	All excavated material, where possible will be reused within the proposed development. The appointed contractor will ensure acceptability of the material for reuse for the proposed development with appropriate handling, processing and segregation of the material in accordance with the CEMP. This material would have to be shown to be suitable for such use and subject to appropriate control and testing according to earthworks specifications. Care will be taken in reworking this material to minimise dust generation, groundwater infiltration and generation of runoff. Any surplus suitable material excavated that is not required elsewhere for the proposed development, will be used for other projects where possible, subject to appropriate approvals/notifications.		CEMP	CEMP	Construction	Contractor
Chapter 9 Land and Soils; Chapter 12 Biodiversity; Appendix 6.1 CEMP	Earthworks haulage	Earthworks haulage will be along predetermined routes within the proposed development and any deliveries to site will be along existing national, regional and local routes for importation and exportation of materials, in accordance with the Construction Traffic Management Plan (CTMP) included in the CEMP. Haulage along the cable route will be along internal haul roads/access tracks, where practicable. Where compaction occurs due to truck movements and other construction activities on unfinished surfaces, remediation works will be undertaken to reinstate the ground to its original condition. Where practicable, compaction of any soil or subsoil which is to remain in situ along the sites will be avoided. Earthworks operations shall be carried out such that surfaces will be designed with adequate falls, profiling and drainage to promote safe runoff and prevent ponding and flooding. Runoff will be controlled through erosion and sediment control structures appropriate to minimise the water effects. Care will be taken to ensure that surfaces are stable to minimise erosion.		CEMP	CEMP	Construction	Contractor
Chapter 9 Land and Soils; Appendix 6.1 CEMP	Effects on the surrounding ground	Monitoring of ground settlement, horizontal movement will be implemented during construction activities where required to ensure that the construction does not exceed the design limitations. Foundation type and method of construction have been selected to control ground settlement. The foundation types are described in Sections 6.5.4 and 6.5.5 within Chapter 6 Construction Strategy of the EIAR.		CEMP	CEMP	Construction	Contractor
Chapter 9 Land and Soils; Chapter 12, Biodiversity; Appendix 6.1 CEMP	Improvement works for flood defences	All improvement works will be appropriately monitored and supervised and will be enclosed by silt barriers (e.g. straw or silt fence) to prevent any runoff into surface water bodies and will be carried out in accordance with the CEMP. Horizontal movement monitoring of the sheet piles (if used) will be implemented during construction activities to ensure that movement does not exceed the design limitations. Appropriate remedial actions will be implemented should there be any exceedance of design limitations.		CEMP	CEMP	Construction	Contractor

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Chapter 9 Land and Soils; Appendix 6.1 CEMP	Pollution of soil and groundwater	The CEMP will be updated by the contractor prior to the commencement of construction. Good construction management practices will be employed to minimise the risk of transmission of hazardous materials as well as pollution of adjacent watercourses and groundwater. The construction management of the site will take account of the recommendations of the CIRIA guidance Control of Water Pollution from Construction Sites – Guidance for consultants and contractors (Masters-Williams et al., 2001) to minimise as far as possible the risk of soil, groundwater and surface water contamination. Measures to be implemented to minimise the risk of spills and contamination of soils and waters will include: • Employing only competent and experienced workforce, and site specific training of site managers, foremen and workforce, including all subcontractors, in pollution risks and preventative measures; • Ensure that all areas where liquids (including fuel) are stored, or cleaning is carried out, are in designated impermeable areas that are isolated from the surrounding area and within a secondary containment system, e.g. by a roll-over bund, raised kerb, ramps or stepped access; • The location of any fuel storage facilities will be considered in the design of all construction compounds and will be fully bunded. These are to be designed in accordance with relevant and current guidelines and codes of best practice at the time of construction. • Good housekeeping will be maintained at the site (daily site clean-ups, use of disposal bins, etc.) during the entire construction phase; • All concrete mixing and batching activities will be located in designated areas away from watercourses and drains; • Potential pollutants will be adequately secured against vandalism in containers in a dedicated secured area; • Provision of proper containment of potential pollutants according to relevant and current codes of practice and legal requirements; • Thorough control during the entire construction stage to ensure that any spillage is identified at early stage and subsequently effectively contained and managed; and • Spill kits to be provided and to be kept close to the HDD and temporary construction compounds. Staff to be trained on how to use spill kits correctly.		CEMP	CEMP	Pre-construction; Construction	Contractor

Chapter 9 Land and Soils; Appendix 6.1 CEMP	Landfall and Cable Route – specific measures	• Any groundwater or rainwater that collects in the HDD drilling pit or in a trench will be pumped away onto adjacent land, not directly into waterways, and through a filter medium in the mud recycling plant;
		• Any bentonite (or similar HDD drilling head lubrication material) will be handled and removed by the drilling contractor. Typically, bentonite is used, which comprises 95% water and 5% bentonite clay which is a non-toxic, natural substance. HDD will be a closed system, with drilling fluid recirculated, the drill cuttings recovered, and drilling fluid reused;
		• In order to minmise the likely migration of drilling fluids through the subsurface to waterbodies the following measures will be employed:
		  ◦ Exit and entry points for the HDD will be enclosed by silt barriers (e.g. straw or silt fence) to prevent any runoff into surface water bodies.
		  ◦ If pressure drops during drilling or if there is a lack of returns the drilling will stop immediately to allow an assessment of a potential leakage of drilling fluid into the surrounding formation. A leak stopping compound may be used to prevent the leak from migrating further into the formation. If the leak stopping compound is not successful, the drilling direction may need to change to avoid the area where the leak occurred.
		• If damming and over-pumping is adopted for the open cut watercourse crossings the water will be discharged through a filtering medium to limit silt carry over or bed disturbance downstream of the crossing point;
				CEMP	CEMP	Construction	Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		• There will be no tracking of machinery within watercourses other than that related to the temporary works associated with construction of the watercourse crossings for the cable route; • Where short-term over pumping or flume pipes are required, equipment will be sized to accommodate surface water flow that might reasonably be expected over the period in question; An Environmental Incident & Emergency Response Plan has been developed and is included in the CEMP, which will be further developed by the appointed contractor prior to the commencement of works and regularly updated. This identifies the actions to be taken in the event of a pollution incident. The CEMP addresses, among other aspects, spoil management, containment measures, emergency discharge routes, a list of appropriate equipment and clean-up materials and notification procedures to inform the relevant environmental protection authority.					
Chapter 9 Land and Soils; Chapter 12, Biodiversity; Appendix 6.1 CEMP	Monitoring during construction	Excavations in made ground will be monitored by an appropriately qualified person to ensure that any contaminated material is identified, segregated and disposed of appropriately. Any material from identified hotspot locations shall be segregated and stored in an area where there is no possibility of runoff generation or infiltration to ground or surface water drainage. Care will be taken to ensure that the hotspot does not cross-contaminate clean soils elsewhere. All excavations will be monitored in accordance with good practice and guidelines at the time of the works. Any excavation and stockpiled material shall be monitored during earthworks to ensure the stability of slopes and to ensure that the soils excavated for disposal are consistent with the descriptions and classifications according to the waste acceptance criteria testing carried out as part of the site investigations. Ground settlement, horizontal movement and vibration monitoring will be implemented during construction activities to ensure that the construction does not exceed the design limitations. Movement monitoring shall be carried out during any activities which may result in ground movements or movements of any nearby structures. Visual monitoring will be undertaken as part of the regular site audits during the construction of the proposed development to ensure existing surface water drainage runoff and natural infiltration to ground is not affected by the proposed development. Implementation of the CEMP will be monitored on an ongoing basis.		CEMP	CEMP	Construction	Employer/ Contractor
Chapter 9 Land and Soils; Appendix 6.1 CEMP	Monitoring during operation	Emergency procedures detailing the measures to be undertaken should any accidental spill happen during operation will be developed as part of the operations manual for the proposed development.		EIAR	Operational Procedures	Operation	Employer
Chapter 10 Water; Appendix 6.1 CEMP	Good Practice	The employment of good construction management practices will minimise the risk of adverse impacts on the hydrological regime, water quality and flood risk. As part of the assessment of the required construction mitigation, good practice construction measures which will be implemented for the proposed development were considered.		CEMP	CEMP	Construction	Contractor
Chapter 10, Water; Chapter 12 Biodiversity, Appendix 6.1 CEMP	General Measures	The following general measures are proposed: • No materials will be stored in flood plains or in areas which would impede flood flow paths; • Where possible, soil excavation will not be completed during periods of prolonged or heavy rain; • Earthworks operations shall be carried out such that surfaces shall be designed with adequate falls, profiling and drainage to promote safe run-off and prevent ponding and flooding; All construction compounds will be in areas that are at low risk of flooding (outside the 1 in 100-year flood zone); • Secure oil and chemical storage in over-ground bunded areas, limited to the minimum volume required to serve immediate needs with specified delivery and refuelling areas; • Emergency spill kits retained onsite at sensitive locations; • Cessation of work and development of measures to contain and/or remove pollutant should an incident be identified; • Silt traps will be employed and maintained in appropriate locations;		CEMP	CEMP	Construction	Contractor

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		• Temporary interception bunds and drainage ditches will be constructed up slope of excavations to minimise surface runoff ingress and in advance of excavation activities; • Weather warnings will be monitored during construction to ensure that there is no flood risk to construction workers installing the cable ducts. A risk assessment will be carried out in the case of a weather warning to determine what works can proceed, and what works need to be postponed; and • The temporary foul drainage at the construction compounds will comprise self-contained sanitary facilities, with wastewater stored and tankered off-site to appropriately licensed treatment facilities.					
Chapter 10, Water; Appendix 6.1 CEMP	Landfall	If field drains at the landfall are temporarily diverted, facilities will be put in place to over pump the water into a settlement pond to limit silt discharge into the field drain downstream.		CEMP	CEMP	Construction	Contractor

Chapter 10, Water; Chapter 12, Biodiversity; Appendix 6.1 CEMP	Cable Route - HDD	The following measures are proposed:
		• Any groundwater or rainwater that collects in the HDD drilling pit or in a trench will be pumped away onto adjacent land, not directly into waterways;
		• Any bentonite (or similar HDD drilling head lubrication material) will be handled and removed by the drilling contractor. Typically, bentonite is used, which comprises 95% water and 5% bentonite clay which is a non-toxic, natural substance. HDD will be a closed system, with drilling fluid recirculated, the drill cuttings recovered, and drilling fluid reused;
		• In order to eliminate the migration of drilling fluids through the subsurface to waterbodies the following measures will be employed:
		  • Drilling pressures will be closely monitored and not exceed those needed to penetrate the formation.
		  • Exit and entry points for the HDD will be enclosed by silt barriers (e.g. straw or silt fence) to prevent any runoff into surface water bodies.
		  • If pressure drops during drilling or if there is a lack of returns the drilling will stop immediately to allow an assessment of a potential leakage of drilling fluid into the surrounding formation. A leak stopping compound, such as mica, may be used to prevent the leak from migrating further into the formation. If the leak stopping compound is not successful, the drilling direction may need to change to avoid the area where the leak occurred.
				CEMP	CEMP	Construction	Contractor

Chapter 10, Water; Chapter 12 Biodiversity; Appendix 6.1 CEMP	Cable Route - General	The following measures are proposed: • If damming and over-pumping is adopted for the open cut watercourse crossings the water will be discharged through a filtering medium to limit silt carry over or bed disturbance downstream of the crossing point; • There will be no tracking of machinery within watercourses other than the stream bed excavation for the temporary works associated with construction of the watercourse crossings for the cable route; • Silt pollution caused by working in surface water will be minimised or prevented by keeping water out of the works area using appropriate isolation techniques, such as cofferdams, flume pipes and by-pass channels; • Where short-term over pumping, culverts or flume pipes are required, equipment will be sized to accommodate surface water flow that might reasonably be expected over the period in question; • During the construction of the crossing of the Kilbride watercourse Inland Fisheries Ireland (IFI) will be consulted in relation to protecting fish populations. Measures include only undertaking instream works during the period July to September in the Kilbride watercourse to avoid interference with the spawning migration and spawning process and to protect juvenile fish emerging from the gravels.		CEMP	CEMP	Construction	Contractor
Chapter 10, Water; Chapter 12, Biodiversity; Appendix 6.1 CEMP	Monitoring	Visual monitoring will be undertaken as part of the regular site audits during the construction of the proposed development to ensure existing surface water drainage runoff and natural infiltration to ground is not affected by the proposed development. A monitoring regime/programme for water quality will be put in place. Turbidity monitoring will be carried out downstream, within 20m of the crossing, while works are underway at the Templerainy, Kilbride River and		CEMP	CEMP	Construction	Contractor

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		Johnstown North watercourse crossings to ensure that sediment levels are not significantly elevated above baseline levels. The contractor is required to monitor the weather forecasts to inform the programming of earthworks and stockpiling of materials. Particular regard will be given to trench excavations and other works which may be vulnerable to the generation or conveyance of run-off, and for the protection of site personnel, plant and equipment in flood prone areas.					
Chapter 10, Water; Appendix 6.1 CEMP	Operation - Drainage	The following mitigation measures will be implemented during the operational phase: • Appropriately sized hydrocarbon interceptors will be installed at strategic locations along the proposed surface water drainage network to prevent any hydrocarbons from leaving the site of the proposed substation. • Emergency procedures detailing the measures to be undertaken should any accidental spill happen during operation will be developed as part of the operations manual. • An automated remote monitoring system will be put in place on the proposed attenuation pumping system to monitor on-site infrastructure in an extreme rainfall event. Where this monitoring system notifies an issue appropriate measures will be adopted based on the circumstances.		EIAR	Operations Manual	Operation	Employer
Chapter 10, Water; Appendix 6.1 CEMP	Operation – Flood Defences	The existing flood defences will be inspected annually for signs of disrepair, together with additional inspections after significant flood events (Events with a return period greater than a 1 in 2 year flood event). Maintenance of embankments includes removal of vegetation to allow for inspection of the embankment. The maintenance programme for the drainage system will be set out in the Operation and Maintenance manual which will be prepared during the detailed design. Regular maintenance will consist of regular inspections, silt or oil removal if required more frequently than once per year, vegetation management, sweeping of surfaces, and litter and debris removal.		EIAR	Operations Manual	Operation	Employer
Chapter 11, Noise & Vibration, Appendix 6.1 CEMP	General	Good industry standards, guidance and practice procedures will be followed in order to minimise noise and vibration effects during construction.		CEMP	CEMP	Construction	Contractor
Chapter 11, Noise & Vibration, Appendix 6.1 CEMP	General, Community Liaison	Prior to construction works being undertaken, liaison will be undertaken with occupiers of properties that may be adversely affected by construction noise and vibration. Providing information on the timing and durations of construction works at night and why they are required to be undertaken at night can reduce adverse effects. All communications will contain contact details to direct any questions or complaints to.		CEMP	CEMP	Pre-Construction, Construction	Employer/ Contractor
Chapter 11, Noise & Vibration, Appendix 6.1 CEMP	Noise & Vibration Mitigation Measures - Construction	The following provisions, although not exhaustive, will be adhered to where practicable throughout the construction programme: • Vehicles and mechanical plant used for the purpose of the works will be fitted with effective exhaust silencers, maintained in good and efficient working order, and operated in such a manner as to minimise noise emissions. The contractor will ensure that all plant complies with the relevant statutory requirements; • Machines in intermittent use will be shut down or throttled down to a minimum when not in use; • Compressors will be fitted with properly lined and sealed acoustic covers which will be kept closed whenever in use. Pneumatic percussive tools will be fitted with mufflers or silencers; • Equipment which breaks concrete, brickwork or masonry by bending, bursting or “nibbling” will be used in preference to percussive tools. Where possible, the use of impact tools will be avoided where the site is close to occupied premises; • Rotary drills and bursters activated by hydraulic, chemical, or electrical power will be used for excavating hard or extrusive material; • Wherever possible, equipment powered by mains electricity will be used in preference to equipment powered by internal combustion engine or locally generated electricity; • No part of the works nor any maintenance of plant will be carried out in such a manner as to cause unnecessary noise except in the case of an emergency when the work is absolutely necessary for the saving of life or property or the safety of the works;		CEMP	CEMP	Construction	Contractor

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		• Plant will be maintained in good working order so that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum; and • Noise emitting machinery which is required to run continuously will be housed in a suitable acoustically lined enclosure.					
Chapter 11, Noise & Vibration, Appendix 6.1 CEMP	Noise & Vibration Monitoring Measures - Construction	Monitoring of noise and vibration levels at the construction site boundary will be undertaken to identify where work procedures need to be modified. In the event of a valid complaint a noise monitoring protocol will be submitted to Wicklow County Council prior to commencement of any noise monitoring. The protocol will include details of: • A description of the complaint; • Construction activities taking place at the time of the complaint; • Noise monitoring methodology and results; and • Any actions taken.		CEMP	CEMP	Construction	Contractor
Chapter 11, Noise & Vibration, Appendix 6.1 CEMP	Noise & Vibration Mitigation - Operation	To address cumulative noise effects with the Crag Digital Avoca Ltd Data Centre permitted application (ref. 18940), noise mitigation is required as part of the onshore 220kV substation. A proposed reduction of sound power levels for the harmonic filters and the 33kV STATCOM reactors (e.g. selection of quieter plant; enclosures; louvres; sound shields, reactor top hats; dynamic vibration absorbers; or active noise cancelling) will be employed by the manufacturer as part of the onshore 220kV substation detailed design so as to avoid cumulative noise levels exceeding the NG4 criteria at surrounding receptors.		EIAR	Tender Documentation	Pre-contract award	Employer
Chapter 11, Noise & Vibration, Appendix 6.1 CEMP	Noise & Vibration Mitigation - Operation	Noise generated from the operational substation site will be periodically reviewed. This will include the following: • Examination of noise sources on site; • Examination of noise propagation factors; • Operational noise monitoring; and • Review of any complaints.		EIAR	Operational Procedures	Operation	Employer
Chapter 11, Noise & Vibration, Appendix 6.1 CEMP	Noise & Vibration Mitigation - Operation	It is proposed that operational noise emissions due to the proposed development are subject to a planning condition that covers the most onerous cumulative assessment. As the predicted noise levels in Table 11.20 of the EIAR do not exceed 38 dB LAr,Tr at surrounding residential properties, suggested wording for the planning condition is provided as follows: • *"The rated noise level due to the Proposed Development, shall not exceed 38 dB LAr,Tr at any existing residential Noise Sensitive Locations (NSL)."*		EIAR	Planning Conditions/ Tender Documentation	Pre-contract award	Employer
Chapter 12, Biodiversity; Appendix 6.1 CEMP	General	Mitigation measures (of relevance in respect of any potential ecological effects) will be implemented throughout the project, including the preparation and implementation of detailed method statements. The works will incorporate the relevant elements of the guidelines outlined below: • *The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads*. National Roads Authority, Dublin (2010). • *Control of water pollution from construction sites. Guidance for consultants and* contractors (C532). CIRIA. H. Masters-Williams et al (2001) • *Control of water pollution from linear construction projects. Technical guidance (C648).* CIRIA. E. Murnane, A. Heap and A. Swain. (2006)		CEMP	CEMP	Construction	Contractor
Chapter 12, Biodiversity; Appendix 6.1 CEMP	General – training an induction	All personnel involved with the proposed development will receive an on-site induction relating to construction and operations and the environmentally sensitive nature of European sites and to re-emphasise the precautions that are required as well as the precautionary measures to be implemented. Site managers, foremen and workforce, including all subcontractors, will be suitably trained in pollution risks and preventative measures. All staff and subcontractors have the responsibility to: • Work to agreed plans, methods and procedures to eliminate and minimise environmental impacts, • Understand the importance of avoiding pollution on-site, including noise and dust, and how to respond in the event of an incident to avoid or limit environmental impact; • Respond in the event of an incident to avoid or limit environmental impact;		CEMP	CEMP	Construction	Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		• Report all incidents immediately to the project manager and the ecological clerk of works (ECOW); • Monitor the workplace for potential environmental risks and alert the site manager if any are observed; and • Co-operate as required, with site inspections.					
Chapter 12, Biodiversity; Appendix 6.1 CEMP	Water Quality	To minimise the potential for elevated silt levels in surface water run-off, the working area used during construction will be clearly outlined prior to the commencement of works and will be kept to the minimum area necessary to effectively complete the works. Vegetation will be retained where possible.		CEMP	CEMP	Construction	Contractor
Chapter 12, Biodiversity; Appendix 6.1 CEMP	Water Quality	A detailed spillage procedure will be put in place and all staff on site will be trained with respect to the relevant procedures to be undertaken in the event of the release of any sediment, hydrocarbons into a watercourse. Spill kits will be maintained on-site and relevant staff will be trained in their effective usage. All site personnel will be trained and aware of the appropriate action in the event of an emergency, such as the spillage of potentially polluting substances. In the event of spillage of any polluting substance and/or pollution of a watercourse, Wicklow County Council, IFI and the NPWS shall be notified.		CEMP	CEMP	Construction	Contractor
Chapter 12, Biodiversity; Chapter 6 Construction Strategy; Appendix 6.1 CEMP	Water Quality – Cable Route	Any groundwater or rainwater that collects in a trench will be pumped to locations agreed with the landowners and local authorities. Typically, this will be onto adjacent land, not directly into waterways, and through a filter medium, to avoid the build-up of silt, as some granular material will, inevitably, be pumped out with the water. The pump flowrates will match that of the water into the trench, as it must be kept generally free of water. A single pump with a 75mm hose will usually be adequate to deal with rainwater running into a trench. A similar arrangement will apply at joint bays, where a sump will be cast into the concrete base for a pump. Dewatering, where required, will incorporate the use of filter media; there will be no direct discharges into the watercourses. The cables will be installed in ducts, so the only section of trench that will be open is that which is being excavated and in which ducts are being installed. Excavated cable trenches will be backfilled as the works progress, as soon as installation is complete and any cement bound surround material has cured sufficiently.		CEMP	CEMP	Construction	Contractor
Chapter 12, Biodiversity; Appendix 6.1 CEMP	Watercourse Crossings	The Kilbride and Johnstown North watercourse crossings will be constructed using open cut trenched techniques. In addition to the general measures described above, the following specific mitigation measures will be implemented for open cut crossings of watercourses: • Works will comply with The IFI's *Guidelines on protection of fisheries during construction works in and adjacent to waters* (IFI, 2016) and IFI will be consulted with regard to any proposed over-pumping at the watercourse crossing. • The open cut methodology will require dams to be put in place. • Appropriate silt control measures such silt barriers (e.g. straw or silt fence) will be employed where required. Once reinstatement of the cable trench is complete, the temporary dams will be removed and over pumping ceased. No haul road is proposed at the watercourse crossing. Plant will utilise existing accesses used by landowners to avoid further works within the watercourse. • Construction activities will be undertaken during daylight hours only. This will ensure that there is potential for undisturbed fish passage at night. The works will be temporary and will not create a significant long-term barrier to fish movement. • Works on the Kilbride Stream will take place during the summer period from July to September inclusive, which is outside the most sensitive time for these species. Due to dryer conditions in the summer period, this will also minimise the risk of ground damage, minimises the potential for silt generation and thus minimise the risk of inadvertent ecological impacts. • Sediment from the stream bed will be stockpiled outside of the flood plain and used to re-create the stream bed.		CEMP	CEMP	Pre-construction; Construction	Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		• Dams will be removed gradually, with silt curtains in place and under ecological supervision to minimise the potential for silt generation. • The banks of the temporary watercourse crossings will be reformed to their original profile in accordance with both the NPWS, IFI and the landowners' requirements. The bed materials which had been removed for construction will be reinstated to the original profile. The temporary flume pipe, packing and sand-bags will be removed once the bed materials and bank profile are reinstated, ensuring the correct sequencing of substrate reinstatement. • Final bank reinstatement may require further measures to stabilise the banks and prevent erosion. Geotextiles may be used in conjunction with seeding of an appropriate grass mix. Heavier solutions such as the importation of locally sourced large stones or rocks may also be used. Bank stabilisation works will be discussed with the NPWS/IFI to ensure that suitable materials and methodologies are being used. Any bank protection, where it is required, will be adequately keyed into both the bed and banks. The materials and methods employed will be in keeping with the surrounding environment and comply with any conditions attached to the planning approval.					
Chapter 12, Biodiversity; Appendix 6.1 CEMP	HDD Works	While the bentonite drilling fluid is non-toxic and can be commonly used in farming practices, if sufficient quantity enters a watercourse it can potentially settle on the bottom, smothering benthic flora and affecting faunal feeding and breeding sites. The drilling contractor will develop a location specific HDD frac-out contingency plan, detailing measures to be taken to reduce the risk of bentonite breakout and measures to be taken for the protection of sensitive ecological receptors, should a breakout occur. A typical procedure for managing a breakout or frac-out on land would include: • Stop drilling immediately; • Contain the bentonite by constructing a bund e.g. using sandbags; • Recover the bentonite from the bund by pumping to a suitable container or back to the entry pit for recycling; • If necessary, inert and non-toxic lost circulation material (mica) will be pumped into the bore profile, which will swell and plug any fissures; • The area will be monitored closely to determine if the breakout has been sealed; and • Check and monitor mud volumes and pressures as the works recommence. A typical procedure for managing a breakout or frac-out under water would include: • Stop drilling immediately; • Pump lost circulation material (mica), which will swell and plug any fissures; • Check and monitor mud volumes and pressures as the works recommence; and • Repeat process as necessary until the breakout has been sealed. Any bentonite will be managed and removed by the specialist drilling contractor on completion of the operation. Water will be brought to site in tankers. (to make up drilling fluid) for lubrication of the bore and to provide the requisite volumes of water to the compound. The water used will be non-saline and non-potable water. For each of the two HDD bores and with an average initial demand of around $10m^3/hr$, the total volume of water required is estimated to be up to $450m^3$ per bore, assuming full drilling fluid returns are maintained. On completion of the operation the drill fluid will be disposed of to an appropriately licensed facility.		CEMP	CEMP	Pre-construction; Construction	Contractor
Chapter 12, Biodiversity; Chapter 11 Noise; Appendix 6.1 CEMP	Biodiversity & Noise	The employment of good construction management practice, as described in Section 5 of the CEMP and in Chapter 11 Noise and Vibration of the EIAR, will minimise the risk of adverse impacts from the noise and vibration during the construction phase.					

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		This section of the CEMP will be updated by the contractor, prior to construction, to include any specific conditions attached to the approval and other specific construction information, but will at a minimum, include the measures described below. Mitigation measures will be employed to ensure that potential noise and vibration impacts at nearby sensitive receptors due to construction activities are minimised. The preferred approach for controlling construction noise is to reduce source levels where possible, but with due regard to practicality. The most effective means of mitigating construction noise are through use of barriers to reduce the levels of noise reaching noise sensitive human receptors. A site hoarding, if suitably impervious, will attenuate noise from construction activities. Where HDD activities will be taking place 24/7 in close proximity, a hoarding will be erected around work sites.					
Chapter 12, Biodiversity; Appendix 6.1 CEMP	Invasive Species	In addition to the possible advance treatment works and pre-construction survey, when the works areas become available to the contractor for fencing and commencement of site clearance, areas identified as requiring specific invasive species treatment will be demarcated and the designated control measures implemented at the earliest possible stage to reduce the risk of spread along the proposed scheme or beyond the land take. There are a number of management options that may be implemented to control and prevent the spread of invasive species. Detail on these measures are outlined in the ISMP (Appendix D of CEMP). It may not be possible to completely eradicate the invasive species before or during the construction phase. For example, if Japanese Knotweed is found at locations where structures are proposed, root barrier membranes may be required to be installed to protect the structures from the plant. The design of these membranes will form part of the detailed design stage. Those involved in the application of herbicides/pesticides will be competent to do so and will have sufficient experience and knowledge in the area of herbicides/pesticides application. All staff involved in the application of herbicides/pesticides will have received appropriate training, which may include achieving competency certification in the safe use of herbicides/pesticides through a National Proficiency Tests Council registered assessment centre or achieving an appropriate FETAC award in this area. A number of possible invasive species control measures have been proposed. Full details on these measures are outlined in the Invasive Species Management Plan.		CEMP	CEMP (Appendix D ISMP)	Pre-construction; Construction	Contractor
Chapter 12, Biodiversity; Appendix 6.1 CEMP	Habitats	The following biodiversity measures are to be implemented with respect to habitats: • The Wildlife Act 1976, as amended, provides that it is an offence to cut, grub, burn or destroy any vegetation on uncultivated land or such growing in any hedge or ditch from the 1 March to the 31 August. Exemptions include the clearance of vegetation in the course of road or other construction works or in the development or preparation of sites on which any building or other structure is intended to be provided. Where possible, vegetation will be removed outside of the breeding season and in particular, removal during the peak-breeding season (April-June inclusive) will be avoided. This will also minimise the potential disturbance of breeding birds outside of the proposed development site boundary. • To prevent incidental damage by machinery or by the deposition of spoil during site works, hedgerow, tree and scrub vegetation which are located in close proximity to working areas will be clearly marked and fenced off to avoid accidental damage during excavations and site preparation. • Habitats that are damaged and disturbed will be reinstated and landscaped once construction is complete. Disturbed areas will be seeded or planted using appropriate native grass or species native to the areas where necessary. Natural regeneration of vegetation will also occur. • There will be a defined working area which will be fenced off with designated haul routes to prevent inadvertent damage to adjoining habitats. • Any hedgerows, treelines or woodland habitat removed during construction will be replanted using a suitable mix of shallow rooted, native species such as Hawthorn and Blackthorn. • Tree root systems can be damaged during site clearance and groundworks. Materials, especially soil and stones, can prevent air and water circulating to the roots. No materials will be stored within the root protection area/dripline of mature trees. The ECoW will specify appropriate protective fencing		CEMP	CEMP	Construction	Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		where required. Retention of the existing network of woodland/ treelines/ hedgerows, where possible, will provide natural screening and help to maintain biodiversity. Where tree root systems cannot be avoided the trees will be assessed by an arboriculturist to determine if crown reduction or other measures are required. • It is intended that the land along the cable route will be reinstated and returned to its current use post-construction. As not all habitat can be reinstated, biodiversity enhancement planting will be provided at the landfall to ensure that there is no net-loss of habitat as a result of the proposed development. The total biodiversity enhancement area will be 16,000m^2					
Chapter 12, Biodiversity; Appendix 6.1 CEMP	Otters	No signs of Otter or Otter holts were noted within 150m of the planning boundary, although Otter are known to occur along the Avoca River. This species is also likely to occur along the Templerainy Stream and potentially the Kilbride Stream. A detailed pre-construction survey will be carried out no more than 10-12 months prior to the commencement of construction works to confirm the absence of Otter holts within 150m of the proposed development area. If Otter holts are recorded at that time, the Environmental Clerk of Works (ECoW) will determine the appropriate means of minimising effects i.e. avoidance, moving works, timing of works etc. If required the ecologist will obtain a derogation licence from the NPWS, to facilitate licenced exclusion from the breeding or resting site in accordance with a plan approved by the NPWS. Any holts found to be present will be subject to monitoring and mitigation as set out in the NRA Guidelines for the *Treatment of Otter prior to the Construction of National Road Schemes* (2006b). If found to be inactive, exclusion of holts may be carried out during any season. No wheeled or tracked vehicles (of any kind) will be used within 20m of active, but non-breeding, Otter holts. Light work, such as digging by hand or scrub clearance will also not take place within 15m of such holts, except under licence. The prohibited working area associated with Otter holts will be fenced and appropriate signage erected. Where breeding females and cubs are present no evacuation procedures of any kind will be undertaken until after the Otters have left the holt, as determined by the ECoW. Breeding may take place at any season, so activity at a holt must be adjudged on a case by case basis. On occasion, Otter holts may be directly affected by the scheme. To ensure the welfare of Otters, they must be evacuated from any holts present prior to any construction works commencing. The exclusion process, if required, involves the installation of one-way gates on the entrances to the holt and a monitoring period of 21 days to ensure the Otters have left the holt prior to removal.		CEMP	CEMP	Construction	Contractor
Chapter 12 Biodiversity; Appendix 6.1 CEMP	Fish – Crossing of Kilbride and Johnstown North	The Kilbride and Johnstown North watercourse crossings will be constructed using open cut trenched techniques. The following mitigation measures will be implemented: • Works will comply with the IFI's Guidelines on *Protection of Fisheries During Construction Works in and Adjacent to Waters* (IFI, 2016) and IFI will be consulted with regard to any proposed over-pumping at the watercourse crossing. • Construction activities will be undertaken during daylight hours only. This will ensure that there is potential for undisturbed fish passage at night. The works will be temporary and will not create a significant long-term barrier to fish movement. • During the construction of the crossing of the Kilbride watercourse IFI will be consulted in relation to protecting fish populations. Measures include only undertaking instream works during the period July to September to avoid interference with the spawning migration and spawning process and to protect juvenile fish emerging from the gravels, • Prior to temporarily damming the Kilbride Stream a fish salvage operation will be carried out under the provisions of a Section 14 licence. Standard biosecurity protocols will be implemented, and fish will be translocated to similar habitat upstream of the works area. This will be carried out following receipt of a Section 14 licence from IFI and in consultation with IFI.		CEMP	CEMP	Construction	Contractor
Chapter 12 Biodiversity; Appendix 6.1 CEMP	Badgers	As a precautionary measure, as Badgers could potentially move into the area prior to the commencement of works, the planning boundary will be surveyed for Badgers no more than 10-12 months prior to the commencement of site works, to confirm the absence of Badgers within the zone of influence of the development. If Badgers are discovered at that time, the mitigation measures outlined in the NRA publication,		CEMP	CEMP	Pre-construction; Construction	Employer/ Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		Guidelines for the Treatment of Badgers Prior to the Construction of a National Road Scheme (NRA, 2006a), are to be followed. If necessary, the following measures will be employed for all construction works where badger issues arise: • Badger sett tunnel systems can extend up to c. 20m from sett entrances. Therefore, no heavy machinery will be used within 30m of badger setts (unless carried out under licence); lighter machinery (generally wheeled vehicles) will not be used within 20m of a sett entrance; light work, such as digging by hand or scrub clearance will not take place within 10m of sett entrances. Based on the results of badger surveys to date the construction works within the planning boundary will not take place within these buffer zones. • During the breeding season (December to June inclusive), no works will be undertaken within 50m of active setts, and no pile driving within 150m of active setts. Based on the results of badger surveys to date, the construction works within the planning boundary will not take place within these buffer zones. • Where badger setts are likely to be affected, they will be clearly marked and buffer zones for vehicles clearly marked by fencing and signage; • Works close to badger setts or removal of badgers from a site will only be carried out under the supervision of a qualified ecologist under license from the NPWS. • Where affected setts do not require destruction, construction works may commence once recommended mitigation measures to address the badger issues as identified by the ECoW and agreed with NPWS, have been complied with. Such mitigation may include hoarding or visual screens. • In the unlikely event that destruction of a badger sett is required this can only be carried out under licence from the NPWS. In these circumstances, which are highly unlikely to arise, badgers must have an alternative sett within their territory that can be utilised or an alternative artificial sett will be provided.					
Chapter 12 Biodiversity; Appendix 6.1 CEMP	Bats	During the site works, general mitigation measures for bats will follow the National Road Authority's '*Guidelines for the Treatment of Bats during the Construction of National Road Schemes'* NRA (2005c) and *'Bat Mitigation Guidelines for Ireland: Irish Wildlife Manuals, No. 25*' (Kelleher, C. & Marnell, F. (2006)). These documents outline the requirements that will be met in the pre-construction (site clearance) stage to minimise negative effects on roosting bats, or prevent avoidable effects resulting from significant alterations to the immediate landscape. No bat roosts were recorded within the proposed planning boundary. The contractor will take all required measures to ensure works do not harm individuals by altering working methods or timing to avoid bats, if necessary. The following mitigation measures will be implemented: • The bat specialist will work with the contractor to ensure that the loss of trees is minimised and that trees earmarked for retention are adequately protected. A preconstruction survey by the bat specialist will be carried out to advise the contractor on minimising tree loss within the cable route corridor. • Tree-felling will be undertaken in the period Septembe to late October/early November. During this period bats are capable of flight and may avoid the risks of tree-felling if proper measures are undertaken. • Felled trees will not be mulched immediately. Such trees will be left lying several hours and preferably overnight before any further sawing or mulching. This will allow any bats within the tree to emerge and avoid accidental death. The bat specialist will be on-hand during felling operations to inspect felled trees for bats. If bats are seen or heard in a tree that has been felled, work will cease and the local NPWS Conservation Ranger will be contacted. • Tree will be retained where possible and no 'tidying up' of dead wood and spilt limbs on tree specimens will be undertaken unless necessary for health and safety. • Treelines outside the proposed development area but adjacent to it and thus at risk, will be clearly marked by a bat specialist to avoid any inadvertent damage. • During construction directional lighting will be employed to minimise light spill onto adjacent areas. If night time works are required for HDD works at the Templerainy Stream and at the M11 there will		CEMP	CEMP	Pre-construction; Construction	Employer/ Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		be no directional lighting focused towards woodland habitat and cowling and focusing lights downwards will be utilised to minimise light spillage. • If bats are recorded by the bat specialist within any vegetation or structure on site i.e. trees, or walls to be removed or impacted on, no works will proceed without a relevant derogation licence from the NPWS. • Upon completion external lighting will be installed at the substation. The lighting system will provide directional illumination within the substation to allow personnel to move without risk to health and safety and to prevent light spill.					
Chapter 12, Biodiversity; Appendix 6.1 CEMP	Birds	The Wildlife Act 1976, as amended, provides that it is an offence to cut, grub, burn or destroy any vegetation on uncultivated land, or any such growing in any hedge or ditch from the 1st of March to the 31st of August. Exemptions include the clearance of vegetation in the course of road or other construction works or in the development or preparation of sites on which any building or other structure is intended to be provided. Vegetation will only be removed outside of the breeding season. Retention of the native treelines, hedgerows and woodland where possible will reduce the loss of breeding and nesting habitat for birds. NRA guidelines on the protection of trees and hedges prior to and during construction will be followed (NRA, 2006).		CEMP	CEMP	Pre-construction; Construction	Employer/ Contractor
Chapter 12, Biodiversity; Appendix 6.1 CEMP	Biodiversity and Landscape	Where possible the working width will be managed to minimise the removal of trees and hedgerows. The substation site, contractors' compounds and temporary work areas will be managed in an orderly manner with security fencing and hoarding kept in good condition, and vehicular access managed to avoid congestion outside the development site. All vehicular traffic leaving work areas will be clean, and the local road network kept clean. Where trees and hedgerows are to be removed, tree protection fencing in accordance with BS 5837: 2012 will be installed to protect adjacent trees from construction traffic or activity to ensure their integrity and vitality. Excavated topsoil and subsoil will be stockpiled appropriately, for later backfilling and top-soiling. Following completion of the civil works, all excavations will be backfilled using stockpiled materials, and ground surfaces prepared for seeding. Treelines and hedgerows removed to facilitate construction will be replanted. It is intended that the land along the cable route will be reinstated and returned to its current use post-construction. As not all habitat can be reinstated, biodiversity enhancement planting will be provided to ensure that there is no net-loss of habitat as a result of the proposed development. The total biodiversity enhancement area will be 16,000m^2. The objective of the planting scheme within the biodiversity enhancement area is to create a semi-natural habitat with a diverse woodland structure. The soil type in this area is alkaline and the natural woodland type on relatively dry, fertile and alkaline ground is Oak-ash-hazel woodland WN2 (Fossit, 2000). This is a relatively uncommon woodland type. Pedunculate Oak (*Quercus robur*) has been included within the planting scheme with a view to creating this woodland type. However, it is noted that the planting site is coastal and exposed and therefore a more diverse planting scheme has been utilised. It is also noted that due to the problems associated with ash die-back disease, ash has not been included in the planting scheme. The objective of the planting scheme therefore is to develop a native woodland which is loosely based on the Oak-ash-hazel woodland WN2, but which is more diverse and better able to survive the prevailing conditions. This will be achieved by using a mixture of native species to provide a canopy, subcanopy and ground layer as the woodland matures. Native woodlands with this type of structure are generally of higher value for flora and fauna and as it matures it will become a locally important habitat for flora and fauna. Some open areas will be left unplanted to form small glades as the woodland matures. All trees will be of Irish origin. The planting scheme can be broadly categorised as follows:					

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		• Main woodland planting area with Alder, Blackthorn, Hawthorn, Pendunculate Oak Quercus robur, Whitebeam, Hazel, Downey Birch Betula pubescens, Holly, Rowan Sorbus spp. and Scots Pine Pinus sylvestris. • Perimeter Edge Mix with Alder, Blackthorn, Hawthorn, Wild Privet Ligustrum vulgare, Holly, Spindle and Guelder Rose Viburnum opulus. A rabbit proof fence will be provided to protect trees during early establishment. Weed control should not be necessary in Years 1 or 2, however in year 3 some hand weeding may be required. A 5-year aftercare programme will be implemented. Any plant which die, are removed or become seriously damaged or diseased within a period of five years from the completion of the development shall be replaced within the next planting season.					
Chapter 12, Biodiversity; Appendix 6.1 CEMP	Operation	There will be infrequent visits by personnel to the substation, therefore, foul wastewater generated will be minimal. Foul wastewater will be collected independently from the welfare facilities in both the Transmission 220kV GIS substation building and the Connection 220kV GIS substation building. Foul wastewater will be stored temporarily in respective, appropriately sized, foul wastewater holding tanks and removed from site periodically, by a licensed service provider, to a licensed wastewater treatment facility. A new surface water drainage network has been designed to accommodate the proposed development. The surface water drainage network has been designed to ensure that no flooding or surcharging of the system will occur for all storm events up to and including the 1 in 30 year return period storm event. All buildings and equipment within the site boundary will be protected against flooding for all storm events up to and including the 1 in 200 year return period storm event. The proposed surface water drainage network design includes an allowance for climate change. Appropriately sized hydrocarbon interceptors will be installed at strategic locations along the proposed surface water drainage network to prevent any hydrocarbons from leaving the site of the proposed substation. Should a flood event be forecast to occur it will be required that the substation operator would deploy personnel to the substation to manage on-site infrastructure in the event of a local flood. Emergency procedures detailing the measures to be undertaken should any accidental spill happen during operation will be developed as part of the operations manual. The lighting system will provide directional illumination within the substation to allow personnel to move without risk to health and safety and to prevent light spill. Security lighting will be installed against the building and Glass Reinforced Polymer lighting poles of maximum 6m height will be installed for illuminating the external area within the perimeter fencing. Under normal operating conditions, external lighting would be switched off during the hours of darkness, to avoid creating any unnecessary glare in the night sky. The exception would be for emergency repairs to outdoor equipment, where high-level illumination would be switched on. Motion sensor technology will be used to control lighting at access doors and security gates. Lighting design/locations will be designed to provide minimum lux levels, for security and for safety reasons. The lighting will comply with EirGrid requirements which include for outdoors at ground level horizontal illuminance of not less than 2 lux. Lights will be controlled to automatically switch on at 55 lux and off at 110 lux, with manual override. For emergency lighting a minimum illumination of not less than 30 lux will be provided in all areas to ensure safe movement of personnel, safe access to, and egress from, any part of the substation building.		EIAR	Operational Procedures	Operation	Employer

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
Chapter 12 Biodiversity; Appendix 6.1 CEMP		Ecology and invasive species surveys will be carried out prior to decommissioning and appropriate mitigation will be provided based on up-to-date data and in line with up to date guidelines. The original habitats will be restored and levels of noise, lighting and disturbance will return to levels pre-construction.		EIAR	Decommissioning Plan	Decommissioning	Employer
Chapter 13, Traffic & Transport; Appendix 6.1 CEMP	Construction Traffic Management Plan	A Construction Traffic Management Plan (CTMP) has been prepared and is included in the CEMP. The contractor will update the CTMP prior to commencement of construction, will keep the CTMP updated throughout, will agree the CTMP with Wicklow County Council and An Garda Síochána and will fully implement the CTMP. The CTMP includes the details of the required traffic management measures. It demonstrates how pedestrians, cyclists and motorised vehicles can pass through the area safely where appropriate and that measures are in place which ensure traffic operates in as efficient a manner as possible. The CTMP includes a detailed consultation plan to deal with third party queries from local resident and community groups along the cable route in particular but also in the vicinity of the proposed site compounds. The contractor will appoint a single point of contact to facilitate the communication of the various traffic management plans. The implementation of the CTMP and the co-ordination of works in consultation with Wicklow County Council and local residents, will minimise these impacts.		CEMP	CEMP	Pre-Construction; Construction	Employer/ Contractor
Chapter 13, Traffic & Transport; Appendix 6.1 CEMP	Deliveries to Site	The following measures apply: • Deliveries of materials will be planned and programmed to ensure that the materials are delivered only as they are required at the working areas along the cable route and will avoid peak hours for set-up and removal of equipment; • Works requiring multiple vehicle deliveries, such as concrete pours, will be planned so as to ensure there will be no queuing on the public roadways around the working areas.		CEMP	CEMP	Construction	Contractor
Chapter 13, Traffic & Transport; Appendix 6.1 CEMP	Road/Lane Closures	The following measures apply: • Road closures will be kept to a minimum to avoid disruption to traffic. Each of the road closures will be short in duration and temporary (unlikely to exceed a week with access allowed between working shifts). Where possible, traffic flow will be maintained by use of temporary traffic signals. • For any works related to the cable route that require lane closures the length of lane closure and the required working area will be kept as small as possible.		CEMP	CEMP	Construction	Contractor
Chapter 13, Traffic & Transport; Appendix 6.1 CEMP	Working Areas, Cable Construction Corridor and Construction Compounds	The following measures apply: • All trucks entering and exiting the working areas which are carrying materials which could become windborne will be covered with tarpaulin; • Trucks will not be allowed to park on public roads either outside the working areas or on any of the approach roads leading to the working areas; • All trucks entering the working areas will be restricted to suitable speed limits and will be directed to the relevant area by the site manager, avoiding school areas at drop off and collection times. St Josephs National School is located on the R772 Dublin Road. Bus services and infrastructure along the R772 Dublin Road and the R774 Vale Road in the study area will not be impacted by the proposed development, as no lane closures or traffic diversion will be required along these roads; • Trucks required to wait at the working areas will switch off engines to avoid unnecessary fuel usage and noise; • All trucks exiting the construction compounds will be required to pass through a dry or wet wheel wash. All water from the wheel wash will be collected, treated to remove silt or other contaminants, and removed from site. This will ensure no spread of invasive species from vehicle movements;		CEMP	CEMP	Construction	Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		• Roads immediately adjacent to the construction compounds will be visually inspected on a daily basis and power swept and washed as and when required; and • Adequate parking will be provided at the substation site, landfall compounds (HDD and temporary construction compounds), the cable route HDD compounds and the substation compound to avoid queuing at the site entrances and prevent disruption to neighbouring businesses and residences. Site entrance gates will be set back from the main road to allow a vehicle to pull in off the road before the gate is opened.					
Chapter 13, Traffic & Transport; Appendix 6.1 CEMP	Monitoring	The effectiveness of the Construction Traffic Management Plan will be continually monitored by the contractor to ensure the effects on traffic flows on the surrounding road network are minimised. The monitoring regime will consider all modes of traffic including pedestrians, cyclists and car parking provision.		CEMP	CEMP	Construction	Contractor
Chapter 14 – Landscape and Visual	Substation	Building elements within the substation are designed as simple forms with metal panel cladding panels that will be finished in a matt dark green/grey colour that will be visually absorbed by the mixed woodland backdrop on the northern valley face. Perimeter security fencing will also be a dark grey/green finish.		EIAR	Substation Contract	Pre-construction	Employer
Chapter 14 – Landscape and Visual (LVIA)	Substation lighting design	Site lighting will be provided using lamp standards up to 6.0m in height and fitted with high cut-off LED luminaires so as to minimise light spill.		EIAR	Substation Contract	Pre-construction	Employer
Chapter 14 – Landscape and Visual (LVIA)	Substation operation	Lighting will typically be switched off during the hours of darkness and will be operated by motion sensors.		EIAR	Substation Contract	Pre-construction; Construction	Employer/ Contractor
Chapter 14 – Landscape and Visual (LVIA)	LVIA	The substation site, temporary construction compounds and temporary work areas will be managed in an orderly manner, with security fencing or hoarding as appropriate kept in good condition, and vehicular access managed to avoid congestion outside the development site. All vehicular traffic leaving work areas will be clean, and the local road network kept clean in accordance with the Construction Environmental Management Plan (CEMP).		EIAR	CEMP	Pre-construction; Construction	Employer/ Contractor
Chapter 14 – Landscape and Visual (LVIA)	LVIA	Where trees and hedgerows are to be removed, tree protection fencing in accordance with BS 5837: 2012 will be installed to protect adjacent trees from construction traffic or activity to ensure their integrity and vitality. Excavated topsoil and subsoil will be stockpiled appropriately for later backfilling and top-soiling.		EIAR	CEMP	Construction	Contractor
Chapter 14 – Landscape and Visual (LVIA)	LVIA	Following completion of the civil works, all excavations will be backfilled using stockpiled materials, and ground surfaces prepared for seeding. Trees and hedgerows removed to facilitate construction corridors will be replaced with similar species where possible. An area of coastal woodland planting will be provided at the landfall site extending to 16,000m^2 and comprising native woodland species of Alder, Blackthorn, Hawthorn, Sessile Oak *Quercus petraea*, Whitebeam, Hazel, Downey Birch *Betula pubescens*, Holly, Rowan *Sorbus spp*. and Scots Pine *Pinus sylvestris*, together with perimeter edge mix of Alder, Blackthorn, Hawthorn, Wild Privet *Ligustrum vulgare*, Holly, Spindle and Guelder Rose *Viburnum opulus*. At field boundaries along the cable route, boundaries will be replanted with shallow rooting hedgerow species above the underground cable circuits. At the 220kV substation, the space between the main security fence and the outer fence will be planted with shallow rooting hedge and shrub species.		EIAR	CEMP	Construction	Contractor
Chapter 14 – Landscape and Visual	LVIA	The contractor will be required to include a 24-month defects liability clause for replacement landscaping and any planting that fails to establish or dies will be replaced.		EIAR	Contract	Pre-construction; Construction	Employer/ Contractor
Chapter 14 – Landscape and Visual	LVIA	Orderly operation and maintenance of the substation site area will ensure the facility remains as built, any defects repaired promptly, and lighting fixtures maintained to ensure minimal light spill.		EIAR		Operation	Employer
Chapter 15 – Archaeology, Architectural and Cultural Heritage; Appendix 6.1 - CEMP	Archaeology	A programme of archaeological testing will be carried out in advance of construction within all greenfield areas of the proposed development. This will be undertaken by an archaeologist under licence and will aim to identify the nature, extent and significance of any archaeological remains that may be present within the project extents. If any features of archaeological potential are discovered during the course of the works further archaeological mitigation may be required, such as preservation in-situ or by record and/or archaeological		EIAR	CEMP	Pre- Construction	Employer

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		monitoring. Any further mitigation will require approval from the National Monuments Service of the DoHLGH.					
Chapter 15 – Archaeology, Architectural and Cultural Heritage; Appendix 6.1 CEMP	Archaeology	A programme of underwater archaeological assessment, in the form of wade surveys, will be carried out on each watercourse to be directly impacted by the proposed development. This will be carried out by an archaeologist (or archaeologists) under licence and will aim to identify the nature, extent and significance of any archaeological remains that may be present within the sections of watercourses to be affected. If any features of archaeological potential are discovered during the course of the works further archaeological mitigation may be required, such as preservation in-situ or by record and/or archaeological monitoring. Any further mitigation will require approval from the National Monuments Service of the DoHLGH.		EIAR	CEMP	Pre-Construction	Employer
Chapter 16 – Resource & Waste Management; Appendix 6.1 CEMP	Construction Waste Plan	Every effort will be made to ensure that significant environmental effects will be prevented or reduced during the construction phase of the proposed development. A Construction Waste Management Plan (CWMP) is included in the CEMP. This plan meets the requirements of the Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects (Department of Environment, Heritage & Local Government, 2006). The contractor will be obliged to further develop, implement and maintain the CWMP during the construction phase. The key principles underlying the plan will be to minimise waste generation and to segregate waste at source. The measures to achieve these aims include: • Where possible recyclable material will be segregated and removed off site to a permitted/licensed facility for recycling. Waste stream colour coding and photographs will be used to facilitate segregation. • Office and food waste arising on the construction compounds will be source separated at least into dry mixed recyclables, biodegradable and residual wastes. • Waste bins, containers, skip containers and storage areas will be clearly labelled with waste types which they contain, including photographs as appropriate. • The site will be maintained to prevent litter and regular litter picking will take place throughout the site. • Material Management: 'Just in time' delivery will be used so far as is reasonably practicable to minimise material wastage. • The Contractor will ensure that the material transported off site will go to an appropriately licensed/permitted facility. • The Contractor will record the quantity in tonnes and types of waste and materials leaving the site. The name, address and authorisation details of all facilities and locations to which waste and materials are delivered will be recorded along with the quantity of waste in tonnes delivered to each facility. Records will show material which is recovered and disposed of. • Paints, sealants and hazardous chemicals etc. will be stored in secure, bunded locations. • All hazardous waste will be separately stored and labelled, in appropriate lockable containers, prior to removal from site by an appropriate waste collection holder. • Waste generated on site will be removed as soon as practicable following generation for delivery to an authorised waste facility.		CEMP	CEMP	Pre-Construction; Construction	Employer/ Contractor
Chapter 16 – Resource & Waste Management; Appendix 6.1 CEMP	Waste Management Measures	The following measures apply: • The contractor will minimise waste disposal so far as is reasonably practicable; • Source segregation: Where possible, metal, timber, glass and other recyclable material will be segregated during construction works and removed off site to a permitted/licensed facility for recycling. Waste stream colour coding, and photographs of wastes to be placed in each container as required, will be used to facilitate segregation. Where waste generation cannot be avoided this will maximise the quantity and quality of waste delivered for recycling and facilitate its movement up the waste hierarchy away from landfill disposal and reduce its environmental effect; • Supply chain partners: The Contractor will engage with the supply chain to supply products and materials that use minimal packaging, and segregate packaging for reuse;		CEMP	CEMP	Construction	Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		• Waste Auditing: The Contractor will record the quantity in tonnes and types of waste and materials leaving site during the construction phase; • Waste fuels/oils will be generated from equipment used on-site during construction and will be classified as hazardous waste. Such wastes will be stored in a secure, bunded area on-site prior to collection by a Contractor who holds the appropriate waste collection permit; • Possibilities for re-use of clean non-hazardous excavation material as fill on the site or in landscaping works will be considered following appropriate testing to ensure material is suitable for its proposed end use. Where excavation material cannot be re-used within the proposed works the Contractor will endeavour to send material for re-use as a by-product, recovery or recycling so far as is reasonably practicable. Re-use as a by-product can be done under an Article 27 notification once the established EPA criteria for such re-use are met; • Excavated material will be stored onsite within the planning (red line) boundary prior to re-use; • The name, address and authorisation details of all facilities and locations to which waste and materials are delivered will be recorded along with the quantity of waste in tonnes delivered to each facility. Records will show material, which is recovered, and which is disposed of; and • The Contractor will ensure that any off-site interim storage or waste management facilities for excavated material have the appropriate waste licences or waste facility permits in place.					
Chapter 16 – Resource & Waste Management; Appendix 6.1 CEMP	Hazardous Waste	Export of hazardous waste from the proposed development outside of the State is subject to a Europe-wide control system founded on EU Regulation 1013/2006 on the Shipments of Waste (known as the Transfrontier Shipment Regulations), as amended. This legislation is supplemented by the Waste Management (Shipments of Waste) Regulations 2007, as amended, which makes Dublin City Council responsible for the enforcement of this regulatory system throughout Ireland. In 2019 in Ireland, 580,977 tonnes of hazardous waste was generated and of this 333,195 tonnes was exported for treatment. The above procedures will be applied to any hazardous waste generated during the construction phase. Export of hazardous waste from site outside the state will comply with the procedures set out in this legislation. An estimated 2,000 tonnes of hazardous excavation waste will be generated as part of the proposed development.		CEMP	CEMP	Construction	Contractor
Chapter 16 – Resource & Waste Management; Appendix 6.1 CEMP	Monitoring	Monitoring required as part of the detailed CWMP will be undertaken and recorded by the contractor.		CEMP	CEMP	Construction	Contractor
Chapter 16 – Resource & Waste Management; Appendix 6.1 CEMP	Decommissioning	For the decommissioning phase, a materials management plan will be prepared, which will cover the same topics and be based on the same general principles as the construction phase CWMP, included in the CEMP (Appendix 6.1 of Volume 3), updated to reflect best practice at the time. During the decommissioning phase the contractor will segregate materials at source and ensure that all waste and recoverable materials leaving site will be collected by authorised collectors and delivered to permitted facilities in accordance with the relevant Irish legislation, pertaining at the time.		EIAR	Decommissioning Plan	Decommissioning	Employer
Chapter 17 – Material Assets	Utilities - wastewater	Wastewater will be collected independently from the welfare facilities in each of the transmission and connection compounds within the proposed substation. The wastewater will be stored temporarily in holding tanks and removed from site periodically, by a licensed service provider, to a licensed wastewater treatment facility.		EIAR		Operation	Employer
Chapter 17 – Material Assets	Utilities - wastewater	The temporary construction compounds will store wastewater in holding tanks, which will be emptied on a regular basis (typically bi-weekly) by licensed contractors and disposed of appropriately.		EIAR	CEMP	Construction	Employer/ Contractor
Chapter 6 – Construction Strategy, Chapter 17 – Material Assets	Utilities – surface water	To control surface water runoff from the site during construction, temporary drainage will be installed.		EIAR	CEMP	Construction	Employer/ Contractor
Chapter 17 – Material Assets	Utilities – surface water	Maintenance work on the existing drainage network and attenuation pond may be required. This is expected to include de-siltation of existing channels and the attenuation pond to be used as part of the work and will either		EIAR		Operation	Employer

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		be completed by an excavator or hydro-vac. The silt will be removed from site as required, to an appropriately licensed disposal facility.					
Chapter 17 – Material Assets	Utilities – surface water	Other maintenance work such as water jet cleaning of existing drainage culvert pipes to remove any blockages or debris, replacement of damaged culvert pipes using equivalent size twin walled HDPE or precast concrete pipes and the shoring up of culvert pipe headwalls may also be required.		EIAR		Operation	Employer
Chapter 17 – Material Assets	Utilities – surface water	Any existing field drainage crossing the landfall site will be temporarily diverted or facilities put in place to over-pump to settlement ponds prior to discharge of treated water into the existing surface water drainage system.		EIAR	CEMP	Construction	Contractor
Chapter 17 – Material Assets	Utilities – surface water	Where existing drainage is present along the cable route, whether in open ditch or buried field drains, these will be temporarily diverted, or facilities put in place to over-pump to the temporary surface water drainage system.		EIAR	CEMP	Construction	Contractor
Chapter 17 – Material Assets	Utilities – surface water	Field drains will be reinstated on completion of the works or new drainage installed to match the drainage characteristics of the ground prior to development, to ensure agriculture is not affected. Landowners will be consulted on the proposed drainage provisions prior to any installation.		EIAR	CEMP	Construction	Employer/ Contractor
Chapter 17 – Material Assets	Land Use	For the installation of the cables, the temporary cable construction corridor along the cable route will be fenced-off on a phased basis and this land will not be available for its current use for the duration of the construction phase. Similarly, the construction compounds will be fenced off and the area of the compounds will not be available for their current use for the duration of the construction phase. Apart from the access tracks to the jointing bays, which will be retained as permanent access tracks, the land will be returned to its original condition and use after the works are complete.		EIAR	CEMP	Construction	Employer/ Contractor
Chapter 17 – Material Assets	Utilities – Power supply	Where possible, the working areas will be powered by existing mains supplies, but if not available, via a diesel generator. The mains supply in the area is expected to have adequate capacity for any proposed requirements.		EIAR	Construction Contracts	Construction	Employer/ Contractor
Chapter 17 – Material Assets	Utilities – Potable Water	Potable water will be supplied to the construction compounds from Irish Water mains where available. If a connection is not feasible, the water required in the works areas during the construction period will be transported to site. Water will also be required in these areas for wheel washes and/or for dust control in dry windy weather. Grey water for construction and toilets will be sourced via rainfall collection or transported via tanker to site. Any potable water supplies, affected by the works, will be reinstated as soon as is feasible, or an alternative supply provided on a temporary basis until the permanent supply can be reinstated.		EIAR	Construction Contracts	Construction	Employer/ Contractor
Chapter 17 – Material Assets	Utilities – General	The proposed cable route will cross underground services and utilities. These have been identified through consultation with the utility providers. There is the potential for disruption to these utilities when the cable trench is being excavated. Some utilities may need to be disconnected for a brief period, with the agreement of the utility owner.		EIAR	Construction Contracts	Construction	Employer/ Contractor
Chapter 17 – Material Assets	Utilities – Potable Water Supply	The water demand at the substation will be minimal and will be less than a domestic requirement. Water will be supplied to welfare facilities in the substation via an upgraded Irish Water watermain.		EIAR	IW Connection Agreement	Operation	Employer
Chapter 17 – Material Assets	Utilities - general	The developer will require the contractor to put measures in place to ensure that there are no interruptions to existing services unless this has been agreed in advance with the relevant service provider. Adequate separation distances will be established between the cables and the existing services. Further methods that will be used to mitigate the risk of damage to existing services will be as follows: • Assessing route records for existing assets to understand their depth, location and proximity to the planned cable trenches; • The use of Ground Penetration Radar (GPR), to provide greater confirmation of the locations of existing assets; • The use of trial holes, again to provide greater knowledge on the exact location of existing assets; and • Full liaison with asset owners to discuss and agree clearances and where necessary designs. All works near existing services and utilities will be carried out in ongoing consultation with the relevant utility company or local authority and will follow any requirements or guidelines they may have.		EIAR	Construction Contracts	Pre-construction; Construction	Employer/ Contractor
Chapter 18 Population and	General Measures covered elsewhere	Mitigation for emissions during construction is proposed throughout under measures in Chapter 7 Air Quality, Chapter 8 Climate, Chapter 9 Land and Soils, Chapter 11 Noise and Vibration, Chapter 13 Traffic and		EIAR	CEMP	Pre-construction; Construction	Employer/ Contractor

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
Human Health; CEMP		Transport, Chapter 16 Resource and Waste Management, Chapter 17 Material Assets and Chapter 19 Major Accidents and Disasters. The use of hoarding at the temporary construction compounds and management of the timing and duration of works will, in most cases have the effect of reducing the significance of effects on the population.					

Chapter 18 Population and Human Health; CEMP	Community Liaison/Good Neighbour Policy	The developer recognises the importance of effective community liaison in order to reduce nuisance to residents during the works, to ensure public safety and welfare, and to help ensure the smooth running of construction activities. Important issues in ensuring good relations are:
		• Providing information for the public during the construction phase, (particularly nearby sensitive receptors);
		• Providing the correct points of contact and being responsive; and
		• Ensuring good housekeeping in all aspects of the operations.
		• A 'good neighbour' policy will also be implemented.
		• Key aspects of this policy include:
		  • Early implementation of the policy i.e. from the commencement of construction;
		  • Reduction of nuisance factors;
		  • Maintaining access to neighbouring premises;
		  • Clear and concise information; and
		  • Undertaking timely liaison with stakeholders.
				EIAR	CEMP	Pre-construction; Construction	Employer/ Contractor

Chapter 18 Population and Human Health; CEMP	Community Liaison Plan	With regard to liaison, the contractor will be required to implement the Community Liaison Plan (included in the Construction Environmental Management Plan (CEMP), which includes details of how the local community, road users and affected residents will be notified in advance of the scheduling of major works, any temporary traffic diversions and the progress of the construction works. This plan includes details of the following: • The Developer's 'good neighbour' policy; • Personnel nominated to manage public relations; • A methodology for processing observations, queries and complaints from the general public, relevant authorities, the media and emergency services; and • The strategy for project-wide liaison with all relevant parties. A Community Liaison Officer will be responsible for managing such tasks as the following: • Briefing neighbours on progress and issues as necessary; • Liaison with Wicklow County Council and emergency services as appropriate; • Liaison with local Gardaí, particularly in relation to traffic movements and permits where necessary; and • Contact details for the Community Liaison Officer will be posted on all construction site notice boards and on any other information or correspondence, which may be distributed from time to time.		EIAR	CEMP	Pre-construction; Construction	Contractor
Chapter 18 Population and Human Health; CEMP	General Measures for Population	The selected construction methodologies will help to avoid/minimise negative effects to the surrounding population during the construction phase of the proposed development: • The implementation of a CEMP to minimise effects of construction works on local amenity and on traffic flow • The implementation of the Environmental Incident & Emergency Response Plan to cover foreseeable risks; • Industry-standard traffic management measures will be put in place to alleviate construction-related traffic disruptions as outlined in **Chapter 13** *Traffic and Transport* and herein; • Dust emissions will be controlled throughout the construction phase. Further details of dust mitigation measures are outlined in **Chapter 7** *Air Quality* and herein*;*					

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		• Best practice measures for noise control on construction sites will be adhered to during construction. Further details of noise and vibration mitigation measures are outlined in **Chapter 8** *Noise and Vibration* and herein; • As required by regulation and legislation, a Health and Safety Plan will be prepared to address health and safety issues during the construction phase. Further details are provided in **Chapter 6** *Construction Strategy;* • A Construction Traffic Management Plan (CTMP) has been prepared and is included in the CEMP; • Temporary traffic management signage Chapter 8 of the Traffic Signs Manual and Temporary Traffic Management Document Guidelines (Department of Transport, Tourism and Sport, 2019) will be erected which will provide advance warning of site entrances as described in **Chapter 13** *Traffic and Transport*; • Deliveries of materials will be planned and programmed to ensure that the materials are delivered only as they are required at the working areas. • Storage of material will be at the supplier or at the temporary construction compounds, depending on the type of material; • Works requiring multiple vehicle deliveries, such as concrete pours, will be planned so as to ensure there will no queuing on the public roadways around the working areas. Deliveries will, where appropriate, be limited to outside of peak traffic hours					
Chapter 19 – Major Accidents and Disasters, Appendix 6.1 - CEMP	Fire/Explosion Risk	As outlined in the EIAR**,** the scenario with the highest risk score in terms of a major accident and/or disaster during the construction phase was identified as 'fire and/or explosion', with a secondary effect of 'fire water/foam/powder reaching nearby receptors'. The mitigation measures, which will limit the likelihood and consequence of a fire or explosion, will include: • The storage of fuels and oils in contained and bunded areas, with quantities stored being limited to the minimum volume required to meet the immediate requirements. This will mitigate, by prevention, the risk of fire/explosion resulting from the potential spillage of fuels or oils. • Portable fire extinguishers will be available for use at each of the onshore working areas. • Appropriate site personnel will be trained as first aiders and fire marshals. • Monitoring of site activities to minimise fire and explosion risk will be a key part of the duties of the site safety officer and fire marshals.		EIAR	CEMP	Pre-construction; Construction	Employer/ Contractor
Chapter 5 Description of Development, Chapter 6 Construction Strategy, Chapter 19 – Major Accidents and Disasters	Operations	The proposed development will be operated in line with industry good practice as described in **Chapter 5** *Description of Development* and **Chapter 6** *Construction Strategy* including operational management procedures implemented so as to minimise the risk of major accidents occurring.		EIAR		Operations	Employer
Chapter 19 – Major Accidents and Disasters, Appendix 6.1 - CEMP	Fire/Explosion Risk	The scenarios with the highest risk score during the operational phase were a 'fire and/or explosion', with a secondary effect of 'fire suppressant powder reaching nearby receptors.' The mitigation measures, which will limit the likelihood and consequence of a fire or explosion, will include: • The proposed development will comply with BS 9999 Fire safety in the design, management and use of buildings. • A Fire Plan specific to the substation site will detail the pre-planned procedures in place for use in the event of a fire. • Fire detection and alarm will be designed to BS 5839 Fire Detection and Alarm Systems for Buildings • The buildings will be equipped with firefighting equipment that may aide safe evacuation in the event of a fire. • Fire suppression systems will be fitted to all enclosed areas with equipment/plant containing oil unless it can be demonstrated at detailed design stage that it is safe not to do so.		EIAR		Operations	Employer

Planning Condition No.; EIAR Chapter/EIAR Appendix Commitment	Topic	Commitment	Related Planning Condition (PC)	Related Existing (Draft Document)	To be covered in Construction Document	Project Phase	Responsible Party
		• Cable routes and other holes through walls and floors will be designed to be capable of being fire sealed after installation of all equipment/plant and cables. • Smoke detection will be provided throughout the substation building.					