

28. MATERIAL ASSETS

28.1 Introduction

Material Assets are defined in the ‘*Guidelines on the Information to be contained in Environmental Impact Assessment Reports*’ (EPA, 2022) (hereafter referred to as EPA Guidelines) as “*built services and infrastructure*”. They may be of either human or natural origin. This chapter of the Environmental Impact Assessment Report (EIAR) presents an assessment of the likely significant effects on the material assets pertaining to the Onshore Site.

Material Assets pertaining to the Onshore Site, include roads and traffic, cultural assets, and economic assets of natural heritage for non-renewable resources such as minerals and soils, and for renewable resources such as wind and water. The likely effects on economic assets of human origin such as telecommunications. These assets are addressed in the following chapters of this EIAR:

- Chapter 6: Population and Human Health
- Chapter 22: Land, Soils, and Geology
- Chapter 23: Water
- Chapter 24: Onshore Cultural Heritage
- Chapter 25: Onshore Air Quality
- Chapter 29: Traffic and Transportation
- Chapter 30: Climate

Waste Management is also considered within the EPA Guidelines as part of Material Assets. EPA Waste Management Best Practice Guidelines pertaining to the construction, operation and maintenance, and decommissioning of the Onshore Site is summarised in Chapter 5 of the EIAR, and further information pertaining to waste management is provided in Appendix 5-5: Waste Management Plan.

The Material Assets pertaining to the Offshore Site are addressed in Chapter 18: Other Sea Users and which draws on the outcome of the following Chapters.

- Chapter 13: Commercial Fisheries
- Chapter 14: Shipping and Navigation
- Chapter 15: Civil and Military Aviation
- Chapter 17: Marine Archaeology and Cultural Heritage

This chapter of the EIAR has been prepared in accordance with the requirements of the EIA legislation, policy and guidelines listed in Section 1.2 of Chapter 1: Introduction.

28.1.1 Statement of Authority

This section of The EIAR has been prepared by Keelin Bourke and Robert Kennedy and reviewed by Órla Murphy and Sean Creedon, all of MKO. Keelin is an Environmental Scientist with MKO, with over 1 years’ experience in private consultancy, having joined the company in September 2023. Keelin holds a BSc (Hons) in Environmental Science from University College Cork and an MSc (Dist) in Environmental Engineering from Trinity College Dublin. Prior to taking up her position with MKO, Keelin worked as an Environmental Health and Safety Officer in an EPA licensed Waste Transfer Facility in Cork City. Keelin’s current key strengths and areas of expertise are in environmental surveying, report writing and environmental mapping. Since joining MKO, Keelin has become a member of the MKO Environmental Renewables Team and has been involved in preparing and managing Environmental Impact Assessments and in coordinating large multi-disciplinary teams in

order to produce robust Environmental Impact Assessment Reports for large-scale onshore and offshore wind energy developments. Keelin has completed a number of assessments of effects on material assets of renewable energy projects as part of wider EIAR assessment. Robert is a Project Environmental Scientist working as part of MKO's Renewables Team, having joined the company in June 2022. Robert holds a BSc in Environmental Biology and an MSc in Environmental Policy, both from University College Dublin. Robert's key strengths and areas of expertise are in project management, environmental impact assessment, renewable energy, report writing, policy analysis, and research. Since joining MKO, Robert has gained experience in working with and coordinating large multi-disciplinary teams that are involved in the production of EIA Reports for large-scale renewable energy developments. Robert has experience in working on both onshore and offshore wind farm projects. Robert also played a role in developing MKO's new service offering around Biodiversity Net Gain and other nature-positive mechanisms. Prior to taking up his position with MKO, Robert worked in various roles in Canada and Ireland, giving him a broad mix of skills and experience to apply to his current role with MKO. Robert also holds a membership with the Institute of Environmental Management and Assessment (IEMA).

Órla Murphy is a Senior Environmental Scientist with MKO with 8 years of experience in private consultancy. Órla holds BSc (Hons) in Geography from Queens University Belfast & a MSc in Environmental Protection and Management from the University of Edinburgh. Prior to taking up her position with MKO in January 2018, Órla worked as an Environmental Project Assistant with ITPEnegised in Scotland. On joining MKO Órla has been involved on a range of renewable energy infrastructure projects. In her role as a project manager, Órla works with and co-ordinates large multidisciplinary teams including members from MKO's Environmental, Planning, Ecological and Ornithological departments as well as sub-contractors from various fields in the preparation and production of EIARs. Within MKO, Órla plays a role in the management of and sharing of knowledge with junior members of staff and works as part of a large multi-disciplinary team to produce EIA Reports. Sean is an Associate Director in the Environment Team at MKO. He oversees a team of highly skilled environmental professionals working on EIAR for large and medium scale Renewable Energy infrastructure. Sean has directed and overseen multiple renewable energy projects across wind, solar, battery and hydrogen as well as a range of thermal and other energy related developments. He has worked on the planning and environmental impact elements within all stages of wind farm project delivery. He is a member of the MKO senior management team responsible for developing the business, mentoring team members, fostering a positive culture and promoting continuous employee professional development. Sean has over 22 years' experience in program and project development, holds an MSc from NUI Galway and a Diploma in Project Management from Institute of Project Management Ireland.

28.2 Methodology and Guidance

This section of the EIAR has been prepared in line with the guidance set out in the *Guidelines on the Information to be contained in Environmental Impact Assessment Reports* (EPA, 2022)

The assessment of likely significant effects on material assets uses the standard methodology and classification of effects, as presented in Section 1.8.2 of Chapter 1: Introduction. A full description of the Project is provided in Chapter 5: Project Description.

A full description of the scoping and consultation exercise is provided in Section 2.7 of Chapter 2: Background and Policy of this EIAR.

Data sources which have been used to guide the assessment of likely significant effects on material assets within the Onshore Site including the following;

- 2-D Topographical Survey (October 2023)
- EirGrid Transmission Map

- Commission for Communication Regulations – Site Viewer
- Ordnance Survey Ireland (OSI) aerial photographs

28.3

Scoping and Consultation

As part of the EIAR scoping and consultation process, MKO contacted the relevant national and regional authorities and bodies listed in Section 2.7 of Chapter 2 of this EIAR to identify any potential impact on material assets.

The relevant responses received from the consultees in relation to material assets are presented in Table 28-1 below.

Table 28-1 Built Serviced and Waste Management Scoping Responses

Consultee	Date Response Received	Response Detail
Clare County Council	03/07/2023	Reviewed the EIAR Scoping Report and have no comments to add. Noted the reference to Cable routes, so an Outline Traffic Management Plan will be needed, and any road openings/ Trenches will need to be agreed with the Area Engineer in terms of trench location and reinstatement.
Commission for Regulation of Utilities, Water and Energy	Follow on reminder email was issued to the CRU on the 19/10/2023	No response received
EirGrid	Follow on reminder email was issued to EirGrid on the 19/10/2023	No response received
ESB	Follow on reminder email was issued to the ESB on the 19/10/2023	No response received
Fáilte Ireland	Response received 13/10/2023	Response stated the Fáilte Ireland commitment ‘to support the sustainable development of electricity generation by sustainable and renewable sources’ while also recognising the scale of the Project in a tourist region, requesting a standalone-tourist assessment as part of the EIAR process. Provided a copy of Fáilte Ireland standard <i>EIAR Guidelines for the Consideration of Tourism and Tourism Related Projects</i> which should be considered during preparation of the EIAR. The section on Material Assets; Waste Management indicated the following: ‘ <i>Tourism is a resource heavy activity and can impact waste streams and waste segregation. Impacts here should be considered strongly and with knowledge of the variation that arises from the particular tourist activity. Waste and Waste disposal issues can also impact the perception of an unspoiled environment, effecting tourism, which should be considered.</i> ’
Gas Networks Ireland	Response received 4/09/2023	Provided feedback on the Proposed Onshore Grid Connection option which routed through County Galway. Stated that they have no pipeline assets within the vicinity of the Onshore Site in County Clare.

Iarnród Éireann	Response Received 10/10/23	<p>Noted that the offshore scoping areas and the Onshore Site in County Clare are all remote from the railway thus provided no comments on these.</p> <p>The onshore scoping area in County Galway is bisected by the Athenry to Galway Railway line and requested further consultation prior to any proposed construction works within 100m of the railway.</p>
Office of Public Works	25/10/2023	<p>The OPW Regional Drainage Maintenance office provided the following comments:</p> <ul style="list-style-type: none"> - If any new culverts or bridges (or modifications to any existing culverts or bridges) are required to cross watercourses as part of the development or on proposed or existing access roads to serve or access the development, you should be aware that these require consent from the Commissioners of Public Works. This is a requirement of Section 50 of the Arterial Drainage Act of 1945 as amended. - In the context of seeking consent under Section 50, the current required design standard for bridges or culverts is based on the flood with an annual exceedance probability of 1% (often referred to as the 100-year flood), increased by 20% to cater for the effects of Climate Change. Bridges or culverts are required to be able to convey this design flood without significantly altering the hydraulic characteristics of the watercourse – further details on this issue are available in the brochure and can be clarified depending on the circumstances of any particular proposed bridge or culvert. - A grant of Planning Permission by a planning authority for a development which contains bridges or culverts does not confer section 50 consent on the applicant, nor does it absolve the applicant from the requirement to obtain such consent from the Commissioners. - With regard to any proposed Grid Connection Route which may cross several watercourses. If the cable and ducting are to be buried in the road, as they cross bridges over the water courses, and there is no interference with the opening in the bridge spanning the watercourse, then there is no issue. On the other hand, if it is proposed to pass the cable in its ducting through the opening of any bridge or culvert, this would be considered to be a modification of a bridge, and it would require the consent of the Commissioners under Section 50 as mentioned above. Similarly, if it is proposed to carry the cable in its ducting across watercourses on new support structures spanning the watercourses, these should be treated as if they are bridges, and the consent of the commissioners under Section 50 should be obtained. If the cable and ducting is to be buried under the natural bed of the watercourses being crossed, Section 50 would not apply, and we would recommend that the duct be buried a sufficient distance below the natural bed to allow for erosion and mobility of the stream bed."

Uisce Éireann	19/09/2023	Noted that Uisce Éireann does not have the capacity to provide individual scoping responses, but provided a general response to aspects surrounding Water Services which should be considered in the scope of an EIA, including impacts on Drinking Water Sources, any potential negative impacts to water sources and impacts of the development on the capacity of water services, surface water management, mitigation measures in relation to any impacts on water services.
Waterways Ireland	14/09/2023	Waterways Ireland stated that the Project is not within any Zone of Influence of their waterways, so they will not be commenting.

A full description of the scoping and consultation exercise is provided in Section 2.7 of this EIAR. Copies of formal scoping responses are provided in Appendix 2-2. Responses from TII and Clare County Council in relation to traffic and transportation, along with subsequent consultation, are included in Chapter 29 of the EIAR.

No formal scoping responses have been received from the CRU, ESB and EirGrid at the time of writing, however these consultees have been engaged with the Project team at various stages throughout the Project development. In addition, as the future Transmission Service Operator (TSO) of the Project, EirGrid, have regular (monthly) project meetings with the Applicant's engineering team to discuss the design of the transmission assets for the Project. The Applicant has engaged with ESB throughout the design process, particularly in relation to the connection to the national grid at Moneypoint 220kV Substation.

28.4 Baseline Environment

28.4.1 The Onshore Site

28.4.1.1 Onshore Landfall Location

The Onshore Landfall Location (OLL) will be an interface area between the offshore and onshore elements of the Project. The OLL is the point at which the Offshore Export Cable (OEC) will come ashore and connect to the Transition Joint Bay (TJB) located above the High-Water Mark. The OLL is located in the townland of Killard, approximately 1km northwest of White Strand, near Doonbeg in Co. Clare. This area can be accessed from an unnamed local road which runs from northwest to southeast, approximately 220m southeast of the proposed temporary construction compound location. The OLL is currently located within a greenfield site comprising of agricultural land.

28.4.1.2 Onshore Grid Connection

The Onshore Grid Connection (OGC), which consists of a 220kV cable, will originate at the OLL after exiting the TJB in the townland of Killard. From there, the cables will be routed underground in a mostly south-southeasterly direction towards the 220kV Onshore Compensation Compound (OCC) near the Moneypoint 220kV Substation. Upon exiting the TJB, the OGC will travel along third-party lands and the local road network before crossing the N67 in the townland of Doonmore and continuing south into the townland of Carrowmore South and along local road L2034. The cables will travel south-southeast along the L2034 for approximately 6.7 km through the townlands of Tullagher, Einagh, Moanmore North, Moanmore Upper, Moanmore South, Moanmore Lower, Druha and Carnaun, before travelling east and through the Kilrush Golf Club in the townlands of Ballykett and Parknamoney. After exiting the Kilrush Golf Club, the cable will then cross the N68 into third party lands, travelling south for approximately 660m before entering onto local road L6150. The cable will

travel through the townlands of Parknamoney, Kilcarroll, Dysert, Clooneylissaun, and Ballymacrinan. Within the townland of Ballymacrinan, the underground electrical cabling will connect into the OCC. From the OCC, the OGC continues 800m south, in the townland of Carrowdotia North, on the local road network where it joins the N67. From here, it travels 1.7km east in the road verge to the Moneypoint 220kV Substation in the townland of Carrowdotia.

The OGC will primarily be located within the public road corridor, except for some portions to the south of the OLL that will be laid in private agricultural land, and another portion northeast of Kilrush that will run through private agricultural land and the Kilrush Golf Club. There are two sections along the OGC where the cable passes through peat lands. Approximately 1.9km of the OGC is located in ESB lands which include some vegetated areas in the townland of Carrowdotia South. Surrounding land uses along the OGC include agriculture, low density housing, recreational amenity, and the wider road network.

28.4.1.3 Onshore Compensation Compound

An OCC will be constructed close to the Moneypoint Power Station. The proposed OCC is located within agricultural grassland in the townland of Ballymacrinan and will be accessed via local road L6150 and new permanent access tracks within the Onshore Site. The OCC is currently located in a greenfield site in agricultural use.

28.4.2 Existing Services

28.4.2.1 Electricity

There are a number of overhead electricity cables present within the Onshore Site maintained by ESB, including the following:

- 400kV Overhead Line (OHL) which runs northeast from Moneypoint Power Station to the existing Woodland 400kV Substation in Co. Meath.
- 400kV OHL which runs northeast from Moneypoint Power Station to the existing Dunstown 400/220kV Substation in Co. Kildare.
- 220kV OHL which runs from Moneypoint Power Station both southeast towards Tarbert 220kV Substation and east towards Prospect 220kV Substation
- 110kV OHL which runs from Moneypoint Power Station northeast towards Ennis town and northwest towards Kilrush Village
- A number of incidences where an OHL runs adjacent to the OGC in national, regional and local roads as observed from the Topographical Survey;
- Similarly, there are a number of OHL crossing the OGC in national, regional and local roads again observed from the Topographical Survey.

However, no impacts on overhead electricity lines are likely to occur due to the nature of the underground cabling installation works. Measures pertaining to the protection of existing overhead lines, in order to protect the electricity cables from accidental damage, and to ensure the health and safety of workers and site, are set out in Section 5 of Appendix 5-16: Onshore Construction Environmental Management Plan (OCEMP).

The Project is proposed to connect to the national grid via the existing Moneypoint 220kV Substation, located in Carrowdotia South, Co. Clare, which is classed as an Upper Tier SEVESO site. The ESB was consulted regarding this, and confirmed the Project is not considered a significant modification to the establishment.

There are a number of underground electricity cables present along the OGC route, in particular in the vicinity of Moneypoint Power Station. Damage of underground electricity cables during construction

operations could potentially result in serious injury or death of site staff. The OGC has been designed in consultation with ESB and EirGrid to minimise any effects and works adjacent to any identified third-party services and standard mitigation measures are in place for cable crossings including a minimum of 300mm clearance which must be maintained from the edge of the OGC ducts to the edge of third-party ducts, and the implementation of standard construction site management practices for protection of overhead lines. All works adjacent to third-party services and third-party service crossings will be completed in line with Eirgrid specifications. Further information on the construction methodologies that will be employed during the construction phase in order to avoid conflict with Third-Party Services is provided in Appendix 5-17: Onshore Grid Construction Methodology.

28.4.2.2 **Telecommunications**

There are a number of telecommunication assets at or within the vicinity of the Onshore Site, which run both adjacent to and across the OGC route on national, regional and local roads as observed from the Topographical Survey. The cable installation works have been developed to minimise impacts on telecommunications infrastructure along the OGC. Due to the type of infrastructure involved in the OGC, the decision was made to not scope with non-statutory telecommunications providers, as the likelihood of interaction between the OGC and any above ground telecommunications infrastructure such as masts, is very low. Further information on the protection of existing infrastructure during the construction, operation and maintenance, and decommissioning of the Onshore Site is provided in the Onshore Grid Construction Methodology in Appendix 5-17.

Consultation with other telecommunications operators and statutory consultees relevant to aviation and radar (such as Coimisiún na Meán and the Irish Aviation Authority), which may have the potential for interaction with the Offshore Site, have been addressed in Chapter 15: Civil and Military Aviation.

28.4.2.3 **Gas Network**

There are no gas pipelines assets in or within the vicinity of the Onshore Site as confirmed by Gas Networks Ireland during the scoping exercise.

28.4.2.4 **Water Supply and Wastewater Infrastructure**

There are a number of water and wastewater supply drain and pipe infrastructure within the Onshore Site as per the topographical survey data. Damage of underground services during construction activities could potentially result in disruption to those local services, and a risk to the health and safety of site staff. The Onshore Site has been designed to avoid direct interaction with existing underground services and the appropriate separation distances in accordance with Uisce Éireann requirements have been maintained. The Onshore Site does not intend to connect to any existing water supply or wastewater infrastructure, and thus will not impact the capacity of water services.

28.4.3 **Waste Management**

A Waste Management Plan (WMP) has been prepared and forms part of Chapter 5: Project Description, and the OCEMP in Appendix 5-16 of the EIAR.

For the OGC as material is removed during construction, it is to be taken off-site by a licensed haulier and brought to a licenced facility for disposal in-line with the WMP. Records of any materials taken off-site are to be maintained and recorded throughout the construction of the Onshore Site. Receipts from the licenced waste disposal facility are to be included in the Project safety file upon completion.

Where waste is generated on site, the WMP outlines the methods of waste prevention and minimisation by recycling, recovery and reuse at each stage of construction of the Onshore Site. Disposal of waste will be a last resort.

28.4.4 Electromagnetic Fields (EMF)

Both the adopted 2006 and the Draft Revised 2019 ‘*Wind Energy Development Guidelines for Planning Authorities*’ produced by the Department of the Environment, Heritage and Local Government (DOEHLG) state that interference with broadcast communications can be overcome by the installation of deflectors or repeaters where required. There are currently no known effects of EMF from the proposed infrastructure on material assets, but as stated above, mitigation measures have been put in place in order to avoid any conflict with third party telecommunication operators.

The consensus from health and regulatory authorities is that extremely low frequency EMFs, typically associated with powerlines of this nature, do not present a risk to human health as they are in compliance with the international guidelines for ELF-EMF set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), a formal advisory agency to the World Health Organisation, as well as the EU guidelines for human exposure to EMF. EMF and its effects on human health is addressed in Section 6.8.4.1 of Chapter 6 of this EIAR.

28.4.5 ESB Moneypoint Power Generating Station, Co. Clare

The ESB Moneypoint Power Station is Ireland's largest electricity generation station with an installed capacity of 915MW. Moneypoint Power Station is a strategically important part of Ireland's electricity generating network. The recently granted permission for the change of fuel use at the Moneypoint Power Station will facilitate a conversion from its primary fuel source (coal) to Heavy Fuel Oil and a change to its operation to a ‘generator of last resort’, with limited run hours from 2024, up until the end of 2029.

28.5 Likely Significant Effects and Associated Mitigation Measures

28.5.1 ‘Do-Nothing’ Scenario

If the Project were not to proceed, the existing land-use practices of low-intensity agriculture, transport along the public road corridor, and recreational amenity would continue within the Onshore Site.

Both the offshore and onshore elements of the Project would not be constructed, and no wind farm would become operational off the west coast of Ireland as part of Phase One projects.

The opportunity to capture available offshore renewable energy resource and connect it to Ireland's electricity grid would be lost, as would the opportunity to contribute to meeting Government and EU targets for the production and consumption of electricity from renewable resources and the reduction of greenhouse gas emissions.

The opportunity to generate local employment and investment would also be lost. It is likely that the trends of population decline and rural deprivation that have been recorded within the Population Study Area would continue in the absence of investment, as discussed in Chapter 6 of this EIAR on Population and Human Health. Overall, the potential impact of this is considered to be long term, negative and slight.

28.5.2 Construction Phase

28.5.2.1 Existing Services

There are existing services present within and in the vicinity of the Onshore Site. As detailed above, these include underground electricity cables, telecommunication assets, as well as water and wastewater supply drain and pipe infrastructure. Working near Third-Party Services is somewhat unavoidable when installing cables within the public roadway. The Onshore Site has been designed to avoid direct interaction with existing services where possible, which can be described as mitigation by design. Prior to any works commencing during the construction phase, a re-surveying exercise will be undertaken along the OGC to confirm the presence of all existing services. All relevant bodies such as ESB Networks, EirGrid, Gas Networks Ireland, EIR, Uisce Éireann and Clare County Council will be contacted prior to commencement on-site to reconfirm and provide record drawings of all relevant services. Accommodation of Third-Party Services has been considered during the design of the Onshore Site and selection of appropriate construction methodologies. When installing a cable trench parallel to an existing underground service, a minimum of 300mm clearance must be maintained from the edge of the ducts to the edge of the third-party duct. This distance may increase depending on the size and depth of third-party services. Existing services were identified as part of the cable route design and the OGC route has been designed to minimise works adjacent to any identified services. All works adjacent to third-party services and third-party service crossings will be completed in line with EirGrid specifications. In addition, trenchless methods such as Horizontal Directional Drilling (HDD) will be utilised in certain instances where obstacles are encountered, including at sensitive features such as major roads. This includes the 3 no. national road crossings (2 no. crossings under the N67 and 1 no. crossing under the N68) along the OGC route, as well as 1 no. section under an area of peat. This will minimise disruption to the road and disturbance of the peat.

The routes of any natural drainage features will not be altered as part of the development of the Onshore Site. The OGC cabling route has been selected to avoid natural watercourses where possible. When water courses such as bridges, culverts and streams are encountered along the OGC route, the preferred method of installation is to place the cable ducts within the bridge deck where minimum cover can be achieved. This methodology is outlined within Appendix 5-17 Onshore Grid Construction Methodology. This is not always possible and other solutions have been considered where this is the case. These alternative solutions include HDD or replacement/upgrades of culverts.

Further details on watercourses and bridge crossings are provided in Chapter 23: Water and Chapter 29: Traffic and Transportation.

Proposed Mitigation Measures

Notwithstanding the above, specific measures are incorporated into the OCEMP, included as Appendix 5-16 of this EIAR and the Onshore Grid Construction Methodology, included as Appendix 5-17, to ensure that the construction of the OGC will not have an effect on existing underground services. The mitigation measures include the following:

- Prior to works commencing, a re-surveying exercise along the OGC will be undertaken in order to confirm the presence of all existing services. All relevant bodies will be contacted prior to the commencement of works in order to re-confirm and provide record drawings of all relevant services.
- Liaison will be had with the relevant sections of the Local Authority and statutory undertakers including all the relevant area engineers to ensure all services are identified.
- Excavation permits will be completed, and all plant operators and general operatives will be inducted and informed as to the location of any services.

- A minimum clearance distance of 300m must be maintained from the edge of the ducts of the OGC to the edge of third-party ducts, with cables routed under the existing services where possible.
- A Cable Avoidance Tool (CAT) and Genie will be required as works progress, in order to ensure that services are not encountered unexpectedly, along with a visual inspection as works progress.
- Methods for crossing bridges and culverts have been specifically designed to cater for each crossing along the OGC.
- The contractor must comply with all standard construction codes of practice in relation to working around electricity, gas, water, sewage and telecommunications networks.

Residual Effect

In any construction activity, there is the potential for Short-Term, Slight, Negative Effects on existing services, even when mitigation and best practice measures are followed. Following the implementation of the above mitigation measures and any other mitigation which may be agreed with Clare County Council prior to construction, the Onshore Site has the potential to have a Short-Term, Imperceptible, Negative Effect during the construction phase of the OGC, that is considered Not Significant.

Significance of Effects

Based on the assessment above, there will be no significant effects on existing services during the construction phase of the Onshore Site.

28.5.2.2 Waste Management

During the construction phase, waste may be generated on the Onshore Site due to excavations and installation of onsite infrastructure. Spoil management within the Onshore Site will be carried out in accordance with BS6031:2009 Code of Practice for Earthworks. Soil handling, extraction and management will be undertaken with regard to best practice guidelines such as Guidance on the Waste Management (Management of Waste from the Extractive Industries) Regulations. Excess spoil that arises from the excavation works due to the construction of the OCC will remain within this OCC site, within an area to the east of the OCC compound. A landscape management plan has been prepared for the long-term use of the area.

All spoil material from the OGC joint bays and trench excavations will be removed off-site by a licenced haulier and brought to a nearby licenced facility for disposal or managed onsite.

Proposed Mitigation

As detailed above, a Waste Management Plan (WMP) has been prepared and forms part of the OCEMP in Appendix 5-17 of the EIAR.

The WMP outlines the methods of waste prevention and minimisation by recycling, recovery and reuse at each stage of construction of the Onshore Site. Disposal of waste will be a last resort.

As outlined in Section 5.3.2.8.7 and Section 5.6.2.3.3 of Chapter 5 and Appendix 5-16: OCEMP, a number of best practice methods will be followed during the construction of the Onshore Site. For the OCC any excavated material will be stored for reuse, with storage occurring a minimum distance of 20m away from any watercourse. All topsoil and subsoil will be stored separately, with the volume of exposed ground and soil stockpiles kept to a minimum. Any excavated soil which is not re-used or dispersed across the Onshore Site shall be stored on the impermeable surface on the construction compound, which will be covered to prevent silt runoff or the creation of dust. For the OGC as

material is removed it is to be removed off-site by a licensed haulier and brought to a licensed facility for disposal in-line with the WMP.

All waste generated from the Onshore Site will be contained in waste skips at a waste storage area on site. This waste storage area will be kept tidy with any skips clearly labelled to indicate the allowable material to be disposed of therein. The expected waste volumes generated on the Onshore Site are unlikely to be large enough to warrant source segregation at the Onshore Site. Therefore, all waste streams generated from the Onshore Site will be deposited into a single waste skip. This waste material will be transferred to a licensed Materials Recovery Facility (MRF) by a fully licensed waste contractor where the waste will be sorted into individual waste streams for recycling, recovery or disposal.

It is not envisaged that there will be any waste material arising from the materials used to construct the access tracks as only the quantity of stone necessary will be sourced from local quarries and brought on the Onshore Site on an 'as needed' basis.

Site personnel will be instructed at induction that under no circumstances can waste be brought to the Onshore Site for disposal in the on-site waste skip. It will also be made clear that the burning of waste material within the Onshore Site is forbidden.

Residual Effect

Following the implementation of the above mitigation measures, there will be a Short-Term Imperceptible Negative Residual Effect during the construction phase of the Onshore Site, that is considered Not Significant.

Significant of Effect

Based on the assessment above there will be no significant effects on waste during the construction phase of the Onshore Site.

28.5.3 Operation and Maintenance Phase

It is not anticipated that any significant volume of waste will be generated within the Onshore Site during the operation and maintenance phase of the Project, as only a small number of operational and maintenance personnel will be present within the Onshore Site at certain times. Any waste generated due to the operation and maintenance of the OCC will be disposed of in a covered skip, located within the on-site substation compound. The waste material will be transferred to a Materials Recovery Facility (MRF) by a fully licenced waste contractor where the waste will be sorted into individual waste stream for recycling, recovery or disposal. There will be no operational phase impacts or associated effects on built services and waste management associated with the Onshore Site.

The Project will have a maximum export capacity (MEC) of 450MW, and total annual MWh generation over the operational phase of 2,010,420, and the total MWh generation over the 38-year operational lifetime of 76,395,960. The Onshore Site, in supporting the Project to deliver this amount of energy to the national grid, will therefore have a Positive, Moderate, Long-Term Effect on built services, that is considered Not Significant.

28.5.4 Decommissioning Phase

The Onshore Site, being an essential part of the Project, will operate in conjunction with the Offshore Site and will be decommissioned as described in Appendix 5-18: Rehabilitation Schedule.

The potential effects associated with decommissioning will be similar to those associated with construction but of significantly reduced magnitude. The activities associated with decommissioning may cause disruption to built services and infrastructure. As a result, the Onshore Site has the potential to have Short-Term, Imperceptible, Negative Effects on built services and infrastructure, even when mitigation and best practice measures are followed. This is considered Not Significant.

28.5.5 Cumulative Impact Assessment

The potential cumulative impact of the Onshore Site and other relevant developments has been carried out with the purpose of identifying what influence the Onshore Site will have on the surrounding environment when considered cumulatively and in combination with relevant approved, proposed, and existing projects in the vicinity of the site.

During the development of any large project that has the potential to have effects on existing services and telecommunications, the developer is responsible for engaging with all relevant bodies to ensure that the proposals will not interfere with these services. In the event of any potential impact, the developer for each individual project is responsible that the necessary mitigation measures are in place. Therefore, as each project is designed and built to avoid impacts arising, a cumulative impact cannot arise.

On the basis of the assessment above, the Onshore Site will have no impact on existing services and waste management during the construction, operation and maintenance, and decommissioning phases. It is also assumed that all mitigation measures in relation to the other cumulative projects, as set out in Section 4.3.3.4 of Chapter 4: Environmental Impact Assessment Methodology will also be implemented.

It is on this basis that it can be concluded that there would be a Short-Term, Imperceptible Cumulative Effect on built services and waste management, during the construction phase, from the Onshore Site and other developments in the area, that is considered Not Significant.

28.5.6 Conclusion

Following consideration of the residual effects (post-mitigation), it is noted that the Onshore Site, in facilitating the Project, will not result in any significant effects on material assets within the Onshore Site.

Provided that the Onshore Site is constructed, operated and decommissioned in accordance with the design, best practice and mitigation measures that are described within this application, and any other further mitigation measures which may be agreed with Clare County Council, significant effects on material assets are not anticipated.