

| Project Activities | | | Physical Environment Receptors | | | | Biological Environment Receptors | | | | | Socio-economic Receptors | | | | | | | Mitigations Inherent to Project Design | Scoping Report notes reference for further information | | | | |
|---|--|--|------------------------------------|-------------------------------------|---------------|--|----------------------------------|-----------------|----------|--------------------|----------------|--------------------------|--------------------|-------------------------|----------------------|------------------------|-----------------|------------------|--|--|--------------|------------|--|--|
| Project Activity | Sub-Activity | Potential Impacts/Issues | Geomorphology and Seabed Sediments | Oceanography and Physical processes | Water Quality | Air Quality, Greenhouse Gases and Climate Change | Intertidal Ecology | Benthic Ecology | Plankton | Fish and Shellfish | Marine Mammals | Seabirds | Marine Archaeology | Shipping and Navigation | Commercial Fisheries | Recreation and Leisure | Other Sea Users | Waste Management | | | Human Health | Employment | | |
| Vessel Activities (all stages) | | | | | | | | | | | | | | | | | | | | | | | | |
| Cable Lay Vessel | Use of specialist cable ship in marine waters The shallowest depth in which the cable ship can operate will depend on the vessel used, however at this stage it has been assumed that larger vessels such as a CLV would not be expected inshore of 10-15m depth contour. | Underwater sound profile generated by slow moving vessel during pre-install and install phases. | | | | | | | | x | x | | | | | | | | | | | | Most marine mammals sensitive to low-frequency sounds are likely avoid the areas of increased vessel activity. Noise from engines would be similar to that of other vessels in the area | |
| | | Underwater sound profile generated by the Use of Dynamic Positioning to hold position during cable installation | | | | x | | | | | x | x | | | | | | | | | | | | |
| | | Physical presence of vessel in transit, stationary/ holding position, or slow moving vessels during operation with limited manoeuvrability, including potential for temporary safety zone(s) around activities, leading to deviation of shipping from established routes and increased risk of collision | | | | | | | | | | | | | x | x | x | x | | | x? | | | Assumed safety zone of 500m around Project vessels. Guard vessels will be employed during installation. Notice(s) to Mariners will be issued prior to commencement of activities Avoidance of the main navigational features in the area such as charted and known anchorages, maintained channel depths and prohibited regions All vessels will adhere to the International Regulations for Preventing Collisions at Sea, 1972 (COLREGS); Notice to Mariners (NtM), Radio Navigational Warnings, NAVTEX, and/or broadcast warnings will be made in advance of works |
| Guard Vessel and other support vessels (e.g. Anchor handling tug) | Use of guard vessel(s) in areas of high density other uses/shipping | Underwater sound profile | | | | | | | | x | x | | | | | | | | | | | | | |
| | | Physical presence of vessel in transit, stationary/ holding position, or of slow moving vessels during operation with limited manoeuvrability. | | | | | | | | | | x | x | x | x | | | | | x? | | | | Potential for employment of local boats from local harbours/ports to provide guard vessel services, but they will have to meet certain standards and final decision will be made by the installation contractor |
| Rock Placement Vessel | Use of specialist rock placement vessel in specific identified locations along the route, where target burial depth can't be achieved | Underwater sound profile from vessel and rock placement activities | | | | | | | | x | x | | | | | | | | | | | | | |
| | | Physical presence of vessel in transit, stationary/ holding position, or of slow moving vessels during operation with limited manoeuvrability leading to deviation of shipping from established routes and increased risk of collision. | | | | | | | | | | x | x | x | x | | | | | | | | | Avoidance of the main navigational features in the area such as charted and known anchorages, maintained channel depths and prohibited regions All vessels will adhere to the International Regulations for Preventing Collisions at Sea, 1972 (COLREGS); |
| Cable Lay Barge | Use of shallow draft barge on approach to landfill (if required). Likely a four to six point anchor mooring system covering an area of between 500m and 1000m radius from the vessel to allow barge to hold station. | Physical presence of barge including the use of anchor spread affecting seabed and overlying sea area, and visual disturbance | x | x | x | | | x | | | x | x | x | x | x | x | | | | | | | Written Scheme of Investigation and Protocol for Archaeological Discoveries | |
| All vessels | routine vessel discharges | discharges to sea and air | | | x | x | | | | | | | | | | | | | | | | | within the International Convention for the prevention of pollution from ships (MARPOL), specifically Annex I covering Prevention of pollution by oil & oily water, Annex IV covering prevention of pollution by sewage, Annex V which sets out Regulations for the Prevention of pollution by garbage, and Annex VI with Regulations for the Prevention of Air Pollution from Ships. Non-local vessels will operate in accordance with the IMO regulations for ballast water. | WFD Assessment to be completed |
| | Accidental leaks and spills | discharges to sea | | | x | | x | x | x | x | x | | x | x | x | | | | x | | | | The vessel will comply with MARPOL Annex I - Prevention of Pollution by Oil, and will have a contingency plan for marine oil pollution in the form of Shipboard Oil Pollution Emergency Plan (SOPEP). All vessels will have chemical handling procedures for oils and fuels in place and Health Safety and Environmental monitoring procedures with weather and personnel limits to be implemented during cable installation | WFD Assessment to be completed. Possible interactions between the Project and marine plankton were initial considered specifically as a result of potential for accidental leaks and spills |
| Pre-Installation Works | | | | | | | | | | | | | | | | | | | | | | | | |
| Pre-installation Engineering Surveys | MBES/SSS ROV visual inspection to reconfirm existing geotechnical and geophysical information about seabed conditions, bathymetry and other seabed features | Underwater sound profile generated by survey. | x | | | | | x | | x | x | | x | x | | | | | | | | | A further survey licence will be sought for these activities, once details of the survey including time of year, methods, equipment etc. are identified | |
| Cable Route Clearance | Pre-clearance shallow route ploughing to remove installation obstructions (rocks, boulders etc) and/or Pre-installation grapnel run along parts of the route where particular types of obstructions e.g. out of service cables, abandoned fishing gear etc. may exist | Seabed disturbance, including effects on Suspended Sediment Concentrations | x | | x | | | x | x | x | x | | x | | x | x | | | | | | | Written Scheme of Investigation and Protocol for Archaeological Discoveries | |
| | | Temporary removal or relocation of other seabed features which may cause obstruction, e.g. active use static gear fishing pots. Mooring buoys etc. | | | | | | | | | | | | | x | x | | | | | | | | |
| Route Preparation | Pre-sweeping in areas of identified sandwaves | Seabed disturbance, including sediment entrainment. | x | x | x | | | x | x | x | x | | x | | x | x | | | | | | | Written Scheme of Investigation and Protocol for Archaeological Discoveries | |
| | Cable crossing infrastructure installation | Physical presence and/or seabed sediment disturbance | x | x | x | | | x | | | | | x | x | x | | | | | x | | | Written Scheme of Investigation and Protocol for Archaeological Discoveries | |
| | Pre-installation preparation of trenches through areas of harder seabed? | Seabed disturbance, including sediment entrainment. | x | x | x | | | x | x | x | x | | x | | x | x | | | | | | | Written Scheme of Investigation and Protocol for Archaeological Discoveries | |

