

Risk Assessment for Annex IV Species for the proposed main lay of the 2Africa Submarine Cable System within the Irish EEZ.



15th December 2023

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On behalf of: Apollo Submarine Cable System Limited.

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Introduction

This Annex IV Risk Assessment has been prepared on behalf of Apollo Submarine Cable System Limited to assess whether the proposed 2Africa installation works remove the system of strict protection established for Annex IV species. This risk assessment will aid in the application to obtain a license for the proposed installation of this subsea fibre optic cable. This report will detail the species protected under Annex IV of the Habitats Directive that may be present within the license application area. Under Article 12 and 13 of the Habitats Directive, Member States must establish systems of strict protection for animal and plant species which are particularly threatened, and which are listed on Annex IV of the Habitats Directive. Article 16 provides for derogations from these provisions under limited circumstances. Article 12, 13 and 16 of the Habitats Directive are transposed into Irish law by Regulations 51, 52 and 54 of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended. Annex IV species are afforded strict protection throughout their range, both inside and outside of designated protected areas. It is an offence to deliberately kill, injure or disturb a specimen in the wild, or damage or destroy a breeding site or resting place of an Annex IV animal species. This report contains species which are protected under Annex II, which are protected within Special Areas of Conservation (SACs).

Altemar Ltd.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include residential, infrastructural, renewable, oil & gas, private industry, local authorities, EC projects and State/semi-State Departments. [REDACTED] is the managing director of Altemar. [REDACTED] is an environmental scientist and marine biologist with 28 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. [REDACTED] (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture).

Annex IV Species

All species listed under Annex IV with the potential to be impacted by the proposed works should be included, even if they have been separately assessed in the AA or NIS process.

Of the animal and plant species on Annex IV known to occur in Ireland, the following species (Table 1) were identified for assessment:

Table 1. Annex IV protected species in Ireland

Classification	Species	Conservation Status	Potential for Effect
Cetacea	Humpback Whale (<i>Megaptera novaeangliae</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
Cetacea	Bottlenose Dolphin (<i>Tursiops truncatus</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
Cetacea	Short-Beaked Common Dolphin (<i>Delphinus delphis</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
Cetacea	Harbour Porpoise (<i>Phocoena phocoena</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
Cetacea	Killer Whale (<i>Orcinus orca</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected.

Classification	Species	Conservation Status	Potential for Effect
			Further Assessment Required
<i>Cetacea</i>	Long-Finned Pilot Whale (<i>Globicephala melas</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Risso's Dolphin (<i>Grampus griseus</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Atlantic White-Sided Dolphin (<i>Lagenorhynchus acutus</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	White-Beaked Dolphin (<i>Lagenorhynchus albirostris</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Striped Dolphin (<i>Stenella coeruleoalba</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Cuvier's Beaked Whale (<i>Ziphius cavirostris</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Sowerby's Beaked Whale (<i>Mesoplodon bidens</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Minke Whale (<i>Balaenoptera acutorostrata</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Fin Whale (<i>Balaenoptera physalus</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Blue Whale (<i>Balaenoptera musculus</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Sperm Whale (<i>Physeter macrocephalus</i>)	Favourable	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Northern Bottlenose Whale (<i>Hyperoodon ampullatus</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea</i>	Sei Whale (<i>Balaenoptera borealis</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetacea (Vagrant)</i>	Northern Right Whale (<i>Eubalaena glacialis</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected.

Classification	Species	Conservation Status	Potential for Effect
			Further Assessment Required
<i>Cetancea (Vagrant)</i>	False Killer Whale (<i>Pseudorca crassidens</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetancea (Vagrant)</i>	True's Beaked Whale (<i>Mesoplodon mirus</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetancea (Vagrant)</i>	Pygmy Sperm Whale (<i>Kogia breviceps</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetancea (Vagrant)</i>	Beluga/White Whale (<i>Delphinapterus leucas</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Cetancea (Vagrant)</i>	Gervais' Beaked Whale (<i>Mesoplodon europaeus</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Mustelidae</i>	Otter (<i>Lutra lutra</i>)	Favourable	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Testudines</i>	Leatherback Turtle (<i>Dermochelys coriacea</i>)	Unknown	There is potential for this species to be located within the area of works and therefore be effected. Further Assessment Required
<i>Chiroptera</i>	Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)	Inadequate	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Chiroptera</i>	Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	Favourable	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Chiroptera</i>	Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	Favourable	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Chiroptera</i>	Nathusius' Pipistrelle (<i>Pipistrellus nathusii</i>)	Unknown	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Chiroptera</i>	Natterer's Bat (<i>Myotis nattereri</i>)	Favourable	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Chiroptera</i>	Daubenton's Bat (<i>Myotis daubentonii</i>)	Favourable	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Chiroptera</i>	Whiskered Bat (<i>Myotis mystacinus</i>)	Favourable	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Chiroptera</i>	Brown Long-Eared Bat (<i>Plecotus auritus</i>)	Favourable	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required

Classification	Species	Conservation Status	Potential for Effect
<i>Chiroptera</i>	Leisler's Bat (<i>Nyctalus leisleri</i>)		There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Mollusca</i>	Kerry Slug (<i>Geomalacus maculosus</i>)	Favourable	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Anura</i>	Natterjack Toad (<i>Epidalea calamita</i>)	Bad	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Hymenophyllaceae</i>	Killarney Fern (<i>Vandenboschia speciosa</i>)	Favourable	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Najadaceae</i>	Slender Naiad (<i>Najas flexilis</i>)	Inadequate	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required
<i>Saxifragaceae</i>	Marsh Saxifrage (<i>Saxifraga hirculus</i>)	Favourable	There is no potential for this species to be effected by the proposed works. Further Assessment Not Required

Baseline

Cetaceans

A number of the 24 aforementioned cetacean species have been identified within the proposed works area, including the harbour porpoise and bottlenose dolphin (IWDG, 2017). Many of the other cetacean species from Annex IV have been recorded in the area or region. The harbour porpoise, bottlenose dolphin and common dolphin, in particular, have been recorded frequently within the proposed works area and surrounding region. These species of cetacean may be present year-round in the region (Wall *et al.*, 2013). Whereas larger species such as fin whale or humpback whale are seasonal visitors during the late summer months (Wall *et al.*, 2013).

Turtles

Based on the paper "Marine turtles in Irish waters" (King and Berrow, 2009) '*Many records did not have an accurate date, with month often expressed within ranges or estimates such as "June-July" or "summer". However, there were 691 (63.7%) records where the month was recorded. Most records (32.9%) were from August with 63.5% of records occurring between July and September. There were pronounced seasonal differences in species occurrence.*' The leatherback turtle (*Dermochelys coriacea*) is the only turtle species that is protected under Annex IV of the Habitats Directive in Ireland. This species has been recorded proximate to the proposed area of works (NBDC, 2023). This species is another seasonal visitor, leatherback turtles migrate north during the summer months to more temperate waters, some visit the northeast Atlantic and Irish waters where they feed on jellyfish before turning south again in Autumn (NPWS, 2019). These sightings mostly range from the late 1970s to the early 2000s, however, there are some more recent sightings from 2016 located proximate to the marine area of works. There is, therefore, a possibility that the leatherback turtle may be present at the time of the proposed works.

Potential Impacts on Annex IV Species

Cetaceans

The proposed works are temporary in nature. However, due to the high number of cetacean records within the area of works and surrounding region, it cannot be assumed that there is no risk to marine mammals from the proposed works. The cable laying activity which has the potential to pose the greatest threat to cetacean species is the underwater noise levels produced by the main lay vessel and its equipment. However, these levels have been kept within an acceptable range as described by (Southall *et al.*, 2019). Main lay vessels will generate some subsea noise in the marine environment from engine noise and dynamic positioning thrusters. Shipping noise is typically within the 50-300 Hz frequency band and is the dominant noise source in deeper water (DECC, 2011). Propellers on vessels all have the potential to produce cavitation noise. This sound is caused by vacuum bubbles that were generated by the collapse of bubbles created by the spinning of the propellers. Acoustics from the USBL (Ultra Short Baseline) equipment could potentially impact on marine mammals. A USBL is a method of underwater acoustic positioning. It is used to track subsea targets such as ROVs/plough. USBL positioning is used from shallow to deep waters (down to 10,000m and more) and its accuracy is proportional to the distance, typical from 1-2% of the slant distance for basic equipment and up to 0.06% for the ultimate USBL systems. There are a large number of cetacean species that have been previously recorded within the area of works, therefore, the potential for a collision between the main lay vessel or equipment and marine mammals must also be factored in as a potential risk. All of this considered, the speed of the main lay vessel will be at a low speed at which cetacean species will be able to move away from the area with no pressure from the vessel. A detailed assessment of the risks to marine mammals is seen in the accompanying NIS. Mitigation measures (NPWS, 2014) will be in

place to ensure no harm on any cetacean species from the proposed works. This included the presence of a Marine Mammal Observer on board the vessel.

Turtles

Although there have been several leatherback turtle sightings within Irish waters, the potential for impact on this species is incredibly low. The only potential for impact to this Annex IV species is by collision with the vessel or equipment over the duration of the proposed works, which as previously stated are temporary. Vessel speeds are extremely slow. The proposed works do not offend the system of strict protection of turtles under Article 12 of the Habitats Directive. Works in Irish waters will be approximately 24 days.

Mitigation Measures

Cetaceans

The mitigation measures proposed for the protection of cetacean species in proximity of the proposed works are as follows: Having an MMO on board during the marine works. All works will be carried out in compliance with the Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters and as previously stated, the levels of noise produced from the proposed works will be kept within an acceptable range as described by (Southall et al., 2019) and the vessel will travel at a speed at which cetacean species will be able to deviate course and move away with ease and under no pressure from the main lay vessel. The application of these proposed precautionary mitigation measures will ensure no significant impacts on cetacean species from the proposed works in or in proximity to the licence application area.

Turtles

The potential risk of impact on a leatherback turtle from the proposed works are extremely low, however, the possible impacts must be mitigated against in an abundance of caution. An experienced MMO will be present on board for the duration of the proposed works. The proposed works will aim to be undertaken outside of peak seasons for migration of leatherback turtles into Irish waters. The potential for impacts on this species is minimal and the proposed works are temporary, but out of an abundance of caution this specific mitigation will be applied.

Conclusion

This Risk Assessment of Annex IV has taken all species under this annex of the Habitats Directive into consideration. All species in Ireland have been assessed on whether there is a potential of impact. Any species in which this was possible were further assessed. This narrowed the list down to all cetacean species (including vagrant species) and leatherback turtles. The presence of these species within the region was discussed using historical data (NBDC 2023), the use of this data in combination with the proposed works, potential impacts were assessed and finally mitigation measures were specifically designed to protect the species protected under Annex IV of the Habitats Directive (EC, 2023).

There is potential for impact on all of the discussed species from the proposed works, however, out of an abundance of caution, and with the strict implementation of the specific mitigation measures provided, the risk of potential impact of these species or their interests has been significantly lowered.

There is no significant risk for potential impact on Cetacean or Turtle from the proposed works under the Licence Application following the implementation of mitigation measures.

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