To:

European Marine Authorities & Regulators
European Wind Energy Developers
European Wind Energy Operators
Other interested parties

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To whom it may concern

01st August, 2017

The ESCA position on clear sea-room distances required to properly support subsea cable installation and maintenance in Offshore windfarms, in water depths up to approximately 75m

Marine Spatial Planning and the successful co-existence of a number of seabed and sea area users is of paramount importance in the current climate of safe development of our seas as one of the major resources in modern times.

The current drive to deliver greater volumes of environmentally friendly sustainable renewable energy, has resulted in a major acceleration of the planning and development of offshore wind farms, and perhaps soon to be followed by a similar expansion of wave and tidal energy schemes. All of these are currently focussed in shallow shelf seas and the highest concentration is in the waters around Northern Europe which represent one of the finest such areas for these resources.

At the same time, there has never been a greater demand for communications connectivity around the globe, and the demand is increasing near exponentially over time. Internet access is rapidly being considered in the same context as water, electricity supply, heating, lighting and food in developed countries. The world's greatest growth in demand of mobile device data is in the developing countries of the world, such is the desire for reliable connectivity to drive change and improvement in society and future prospects.

The European Subsea Cables Association (ESCA) is a not-for-profit organisation which represents the subsea cable industry sector across Europe. It was formed in 2015 out of Subsea Cables UK, to better reflect the number of European cable owners already involved in SCUK.

With this in mind, ESCA (then known as SCUK) in 2010 updated a guideline first authored in 2003, in conjunction with renewable energy development stakeholders and UK government regulators. The guidance was produced to assist any interested parties in setting out the needs and requirements associated with cables of any type, in relation to fixed structure offshore construction in shallow shelf seas, focusing on offshore wind farms. This was ESCA Guideline No.6, The Proximity of Offshore Renewable Energy Installations & Submarine Cable Infrastructure in UK Waters. (http://www.escaeu.org/guidelines/ select the guideline to download).

This document is currently being updated to change the title to reflect applicability to European waters. It originally referred to UK as the organisation was UK focussed at that time. The remit has now been extended to cover all of Europe and the advice and justification remains unchanged.

The International Cable Protection Committee (ICPC) represent the cable industry on a global level, focussed on the primary aspect of cable safety and awareness. The ICPC have also generated a Recommendation document of global coverage, which includes the same guidance as the ESCA document.

In this document, Section 7 details the Guidance for indicative separation distances. It details the concepts of:

- Working Zone – typically +/- 500m, applied either side of the subsea cable in water depth up to 250m. A Working Zone is required either side of an in-service submarine cable to enable access for cable maintenance and repair operations by a suitable vessel; and
- Hazard Area – a minimum of +/- 250m applied around the cable repair vessel.
    - The Hazard Area is independent of, and in addition to, the Working Zone.
    - It is required, where there are fixed structures near to a vessel undertaking cable operations, close to the limit of the expected or planned Working Zone.
    - It provides amelioration of risks to personnel, vessels and structures in working in close proximity to a structure.
    - A Hazard Area should be considered as a trigger radius around the vessel for planning, and any structure potentially within the Hazard Area will trigger the need for additional risk assessment and identification of pre-planned risk mitigation, such as constraints on operational conditions.

More detailed definition is included in the Guideline.

Figures 5, 6 and 7 in the Guideline document show how these apply to a cable work vessel.

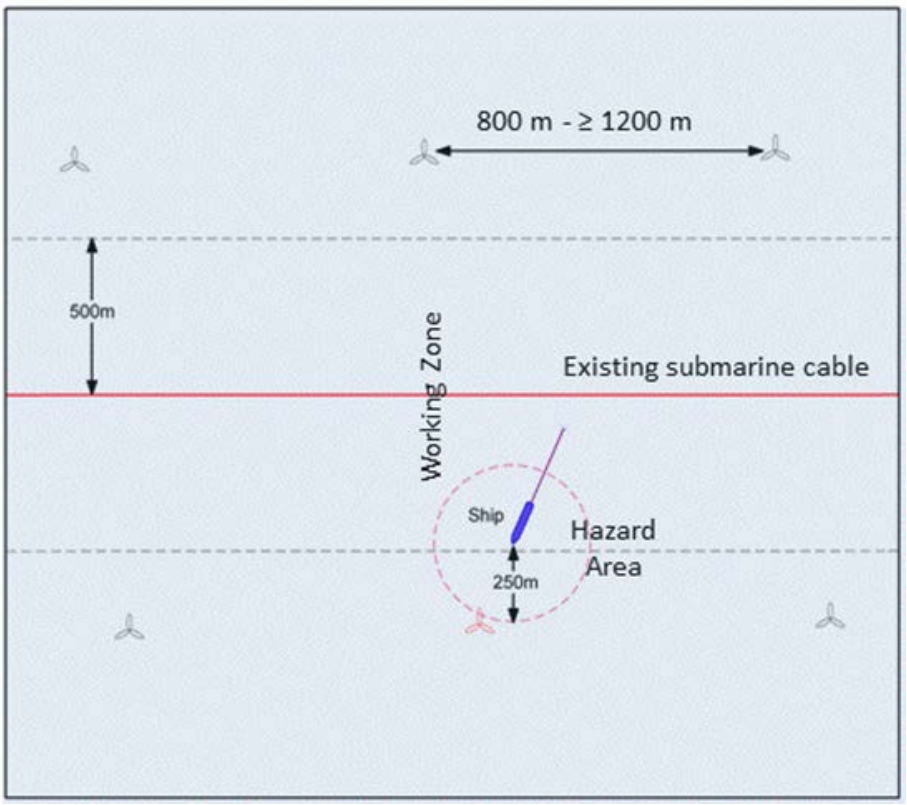

Figure 6 from Guideline 6

The areas and the distances indicated are agnostic of cable type and can be applied equally to telecom and power cable operations.

As can be seen from the diagram, the key requirement for safe cable working in line with existing maintenance agreement contract operational constraints is this overall distance either side of the cable position.

From the diagram above (which represents the minimum acceptable condition that can generally be agreed without extended discussion and assessment) this distance is Working zone plus hazard area radius.

This means the minimum distance is +/- 750m

This can be applied to telecommunications or power cables that are already in situ and over which a wind farm is to be developed.

Or it can be applied to any planned cable installation to be conducted as part of the wind farm development.

Or it can be the guidance for leaving space for a future cable to cross a wind farm development that is being planned.

If this level of space is not provided for in terms of spatial planning, either due to perceived legislation issues, or refusal to collaborate effectively in successful seabed co-existence, then the impacts are several and potentially significant.

For the cable that is already present or planned and is then restricted in the ability to be repaired, will be subject to increase cost of repair as well as increased time to complete repair. The cost has to be covered by some party, and in this instance, any proximity agreement would indicate that the responsibility for any future cost lies with the wind farm developer or operator as applicable.

Loss of connectivity or risk of extended outage, means that connection to internet information hubs for communications cables needing repair may be unacceptably delayed. The impact of this might be that cable owners look to plan their cables to land elsewhere in the longer term. In the shorter term, the cable owners may reduce their traffic to hubs served by cables with this risk.

If these constraints are imposed by a failure to adopt pragmatic distances to allow for co-existence, then major internet hubs in some countries may become isolated as a result of offshore energy development, and so reduce in importance and status where internet connectivity is concerned.

Certainly this would be an issue and for the “over the top” providers like Google and Facebook, for whom the internet connectivity is paramount.

This is why these Guidelines detail the distances and why +/- 750m is the minimum recommended distance around subsea cables for marine spatial planning in co-existence with Offshore Renewable energy developments

The ideal minimum distance (for waters up to 75m deep) as detailed in the Guideline is somewhat larger than this minimum. This ideal distance **+/- 1 Nautical Mile (equivalent to +/- 1852m).**

At this distance in these water depths, it is accepted that neither party even needs to consult the other for undertaking their construction or operations and maintenance activities, as there is no constraint placed by either party on the other.

It is of course prudent for each party to be aware of the other and their plans but this can be informal. Even for a cable through a planned windfarm development, in this instance the courtesy of advising the other party of planned or active operations is all that would be expected, if the separation distance is 1 nautical mile.

This statement is provided in support of cable owners undertaking to make clear to relevant authorities, regulators, offshore energy developers and any other interested party, the industry recommended clear distances needed around cables, based on input from expert seabed stakeholders from the same sectors.

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