



ICPC Recommendation

Recommendation No. 13

Proximity of Wind Farm Developments & Submarine Cables

Note: Issue status suffix 'A' relates to minor format changes, not content.

Contact for Enquiries and Proposed Changes

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TABLE OF CONTENTS

Disclaimer 2

Table Of Contents 3

1. INTRODUCTION..... 4

2. CONSULTATION 4

3. REQUIREMENTS OF EACH INDUSTRY 4

3.1. Wind Farm Industry 4

3.2. Submarine Cable Industry 4

4. SEPARATION RECOMMENDATIONS 4

4.1. General 4

4.2. Turbine Structures 5

4.3. Power Cable Links 7

5. PRECAUTIONS DURING CONSTRUCTION 7

5.1. Anchor Patterns 7

5.2. Support Vessels 7

6. NOTIFICATIONS 7

6.1. General 7

6.2. Contact List 7

6.3. Government Owned Submarine Cables 8

6.4. Operational Notifications 8

7. DEFINITIONS 8

8. ACKNOWLEDGEMENTS 8

1. INTRODUCTION

This document recommends the separation principles to be used when undertaking the planning of new wind farm developments and/or submarine cables where the planned plant approaches close to existing plant.

The information contained in this recommendation is based on established submarine cable repair practices.

NB: Because the majority of wind farms are located in relatively shallow water the separation distances recommended in this document are designed to deal water depths up to 40 metres. This Recommendation will be updated to cover deeper waters when there is evidence of a requirement for it.

2. CONSULTATION

Owners of wind farms and those planning construction are strongly advised to contact the submarine cable owners during the initial planning stage for information on existing and planned submarine cables.

If there is any doubt about who the submarine cable owners may be, the ICPC can be requested for assistance via secretary@iscpc.org

3. REQUIREMENTS OF EACH INDUSTRY

3.1. Wind Farm Industry

The wind farm operator has two prime considerations: the security of the turbines from surface navigation and the security of the wind farm's submarine power cables from other seabed users.

A safety zone of up to 500m around an offshore structure may be established by a coastal State to ensure the safety of the structure and navigation, as described in Article 60 of the United Nations Convention on the Law of the Sea (1982) and the Geneva Convention on the Continental Shelf (1958).

3.2. Submarine Cable Industry

The cable industry also has two prime considerations: the security of existing submarine cables during the wind farm construction phase and access for submarine cable repair vessels afterwards.

4. SEPARATION RECOMMENDATIONS

4.1. General

If wind farms are to have a 500 metre safety zone around the turbines then it is unreasonable to position them where it would force any third party who has to maintain their existing plant to enter that safety zone in order to carry out their legitimate business.

The recommended separation between submarine cables and a wind farm reflects the distances required for a cables ship to carry out a cable repair. The deeper the water the longer the "layback" required to tow a set of grapnels to recover the cable.

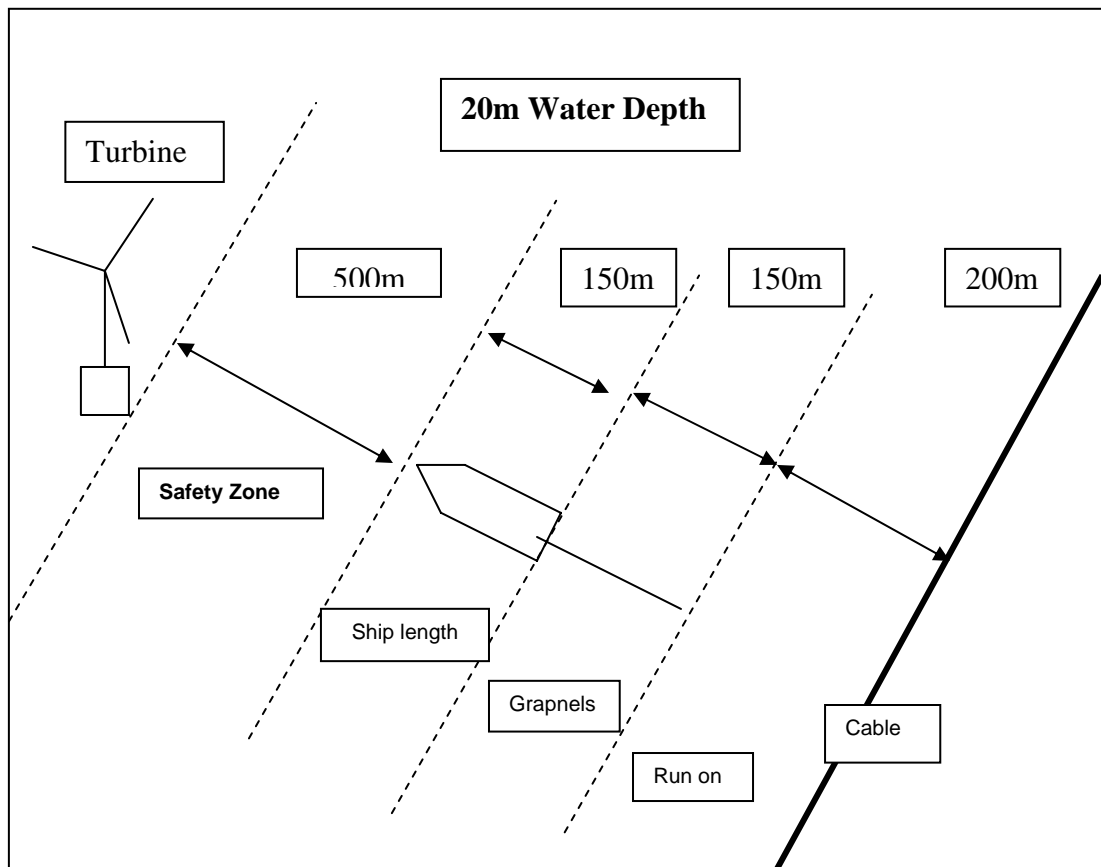
4.2. Turbine Structures

It is recommended that the position of turbine structures in relation to existing submarine cables should allow access for a ship to repair an existing submarine cable in the event of a fault.

The same principles are recommended for the separation of new submarine cables from existing wind farm structures.

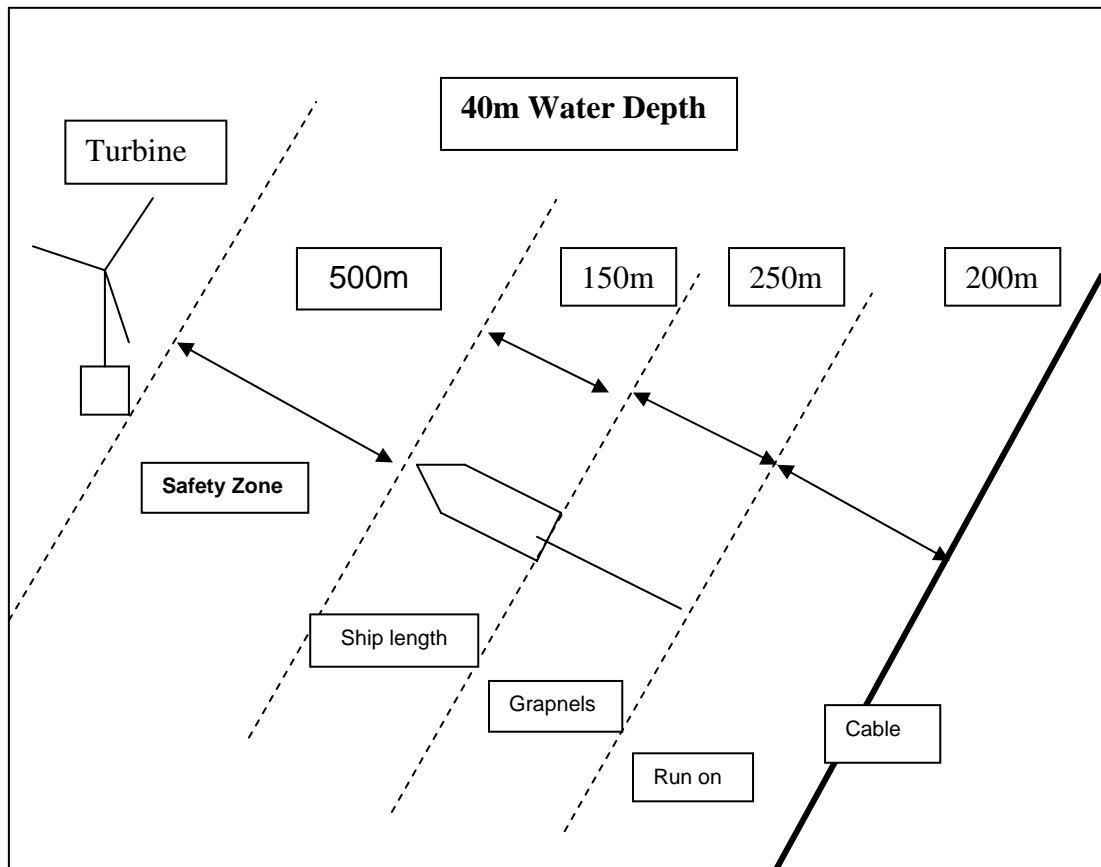
The manoeuvrability and station-keeping (dynamic positioning) properties of a ship should all be taken into account when planning a repair or maintenance operation in the vicinity of a wind farm.

For safety reasons it is recommended that a cable repair vessel should not operate within the 500m safety zone of a turbine structure. The total separation required will be dictated by the depth of water as illustrated in the two examples below:



20m water depth, recommended separation:

500m Safety Zone
 150m Ship's Length
 150m Grappling rig
 200m Run on
1,000m Total



40m water depth, recommended separation:

500m Safety Zone
 150m Ship's Length
 250m Grappling rig
 200m Run on
1,100m Total

Precise separation distances should be agreed and documented between the parties during the planning process. It is also recommended that wind farm developers consult the following ICPC Recommendation:

No.7: Procedure To Be Followed Whilst Offshore Civil Engineering Work Is Undertaken In The Vicinity Of Active Submarine Cable Systems

This recommendation is available via the ICPC web site www.iscpc.org

4.3. Power Cable Links

When planning the route of power cable links it is recommended that wind farm developers consult the following ICPC Recommendations:

No. 2: Recommended Routing and Reporting Criteria for Cables in Proximity to Others.

No. 3: Criteria to be applied to Proposed Crossings Between Submarine Telecommunications Cables and Pipelines/Power Cables.

These recommendations are available via the ICPC web site www.iscpc.org

5. PRECAUTIONS DURING CONSTRUCTION

5.1. Anchor Patterns

If an anchored vessel, platform or barge is used during the construction of a turbine (i.e. coring, piling or installing the tower) the closest anchor in the mooring pattern should be separated from existing submarine cables by:

- a) a minimum 200 metres if the anchor wire does not cross the cable.
- b) a minimum of 400 metres if the anchor wire crosses the cable.

Anchor wires that cross the cable should maintain 20 metres vertical distance from the cable.

5.2. Support Vessels

All project procedures should include detailed charts with all existing submarine cables clearly identified.

All support vessels must be made aware of the positions of the submarine cables and instructed not to anchor within the safety zone.

6. NOTIFICATIONS

6.1. General

Where wind farm construction will result in their associated power cables running in close parallel to or crossing existing submarine cables, advance notification shall be given to the responsible Maintenance Authority.

6.2. Contact List

The project manager responsible for construction of a wind farm shall establish a list identifying the maintenance contacts for every operational submarine cable system in the general area of the planned wind farm.

This list will be used to facilitate the required notifications and for establishing the location of existing submarine cables for use during the planning of the turbine sites and their associated submarine cable links.

6.3. Government Owned Submarine Cables

The organisation that has responsibility for planning the wind farm construction shall make all reasonable efforts to ensure that the planned wind farm does not conflict with submarine installations that exist for reasons of national security.

If there is any doubt about who to contact, the ICPC can be requested for assistance via secretary@iscpc.org

6.4. Operational Notifications

The wind farm owner should ensure that it is a requirement of the project manager to inform all relevant parties of the intention to commence construction operations at least 30 days prior to commencement.

7. DEFINITIONS

The following words, acronyms and abbreviations are referred to in this document.

Term	Definition
Maintenance Authority	The organisation responsible for the operation and maintenance of a particular submarine cable system

8. ACKNOWLEDGEMENTS

The Directors of ICPC Ltd wish to place on record their appreciation of the United Kingdom Cable Protection Committee (UKCPC) for allowing one of their Recommendations to be used as the basis for this International version.