

## Appendix 6.3.

# ASSESSMENT OF SAFETY OF NAVIGATION IN CONNECTION WITH MARINE CONSTRUCTION WORKS

Cf. order no. 1351 of 29 November 2013 on safety of navigation in connection with engineering works and other activities, etc. in Danish waters  
(as regards recreational activities, reference is made to the website of the Danish Maritime Authority [\(link\)](#))

### Planning phase

#### Screening

Initially, the client, its consultant or lead contractor makes a screening of the intended project. In case of major projects (offshore wind farms, large port construction works, road/railway bridges, etc.), the Danish Maritime Authority must be contacted in order to clarify the need for any documentation and risk analyses, etc.

The screening must contain a description of the activity and the areas/waters affected (for example geotechnical survey at X Port or in X Belt).

#### **Brief description of the work:**

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This screening as well as "part 1", if filled in, must accompany the tender documentation or be communicated otherwise to the performing contractor.

The performance of an activity is conditional upon the approval hereof by the authority granting permits.

#### **Does the activity take place close to any of these areas?**

If the activity takes place in the port area the port authority must be involved.

**(If one or more of the items below are considered to involve an increased risk, "part 1" must be filled in)**

	YES	NO	If yes, does the activity involve an increased risk? (see note)	Any arguments or reasons for not filling in "part 1"
Navigable spans				

Narrow fairways or channels				
Ship traffic routes				
Ship routing systems, including Traffic Separation Schemes (TSS) and deepwater routes, etc.				
Port entrances				
Leading lights or lights sectors				
Anchorage				
Areas of prohibition or dangers (See <a href="#">Areas of prohibition</a> and <a href="#">Notices to Mariners no. A/8</a> )				
Within 200 metres of submarine cables or submarine pipelines not owned by the person or company responsible				
Pilot boarding places				
Does the activity impede the freedom of navigation				
Other critical places from a navigational perspective				

Though it is possible to answer no to the above, the activity may still be of importance to navigation in the area, for which reason it will be necessary to provide seafarers with information. Contact the Notices to Mariners ([EfS@dma.dk](mailto:EfS@dma.dk)/+45 72 19 60 00) no later than three weeks before it is expected to start the activity in order to ensure that the shipping industry is appropriately warned.

Please note that the Danish Maritime Authority ([mrb@dma.dk](mailto:mrb@dma.dk)/+45 72 19 60 00) must always be informed about water depth reductions of or above 0.2 metres.

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\_\_\_\_\_  
**Signature of the one responsible**

**Note:**

**Examples of activities involving increased danger:**

- Mounting activities/Diving operations
- Anchoring
- Work with dragging gear
- Atypical navigational patterns

- Establishment of permanent structures that may damage ships in case of collision
- Long-term repair or maintenance work on existing structures in case it reduces the free space profile of navigable spans or reduces the width of leading lights, light sectors, port entrances, ship routeing systems, ship traffic routes, narrow fairways or channels
- In case a vessel or a fleet needs to lie still for a long period of time, for example due to geotechnical survey or if the anchoring of the vessel or fleet extends to the areas mentioned
- Dredging
- Special transports with large elements, such as offshore jackets or the like
- Pipeline work (cables and pipelines)

**Examples of activities not involving increased danger:**

- Multibeam Survey, ROV inspections, activities of very limited duration
- Minor works within the waters of the port that do not prevent ships' entrance
- Works of short duration where it is possible for the work vessel to move at short notice
- Works close to coastlines and outside ship routes and ship routeing systems
- Where the area is designated a work area by the Danish Maritime Authority

## **Assessment, part 1 (client/consultant/lead contractor)**

(The template must be filled in and forwarded to the Danish Maritime Authority ([mrb@dma.dk](mailto:mrb@dma.dk)) no later than six weeks prior to start unless otherwise agreed with the Danish Maritime Authority)

### **1. Contact details of the one responsible for part 1:**

<b>Name:</b>	
<b>Address:</b>	
<b>Email:</b>	
<b>Telephone nos:</b>	

### **2. Detailed description of the activity:**

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### **3. Coloured chartlets showing the location of the activity in the territorial waters:**

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### **4. Geographical latitude/longitude and place name of the activity given as geodetic Datum (for example WGS84 and 57°25.86' N 10°42.75' E):**

° . ' N ° . ' E
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### **5. Period during which the activity is expected to be carried out:**

From / -20__ at : to / -20__ at :
From / -20__ at : to / -20__ at :
From / -20__ at : to / -20__ at :
From / -20__ at : to / -20__ at :

### **6. Result of any consultation of the users of the waters. [See the website of the Danish Maritime Authority \(link\)](#)**

**(have any navigational objections to the activity been received):**

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**7. Have any new or changed aids to navigation been approved in connection with the activity? (buoys, lighthouses, beacons, signs, lights, etc. must be approved by the Danish Maritime Authority)**

YES	NO	REMARKS

**8. Have any preventive measures been approved by the authorities, cf. item 17?**

YES	NO	REMARKS

**9. Will the activity necessitate any changes of charts, port plans or nautical publications?**

(In case of YES, all relevant information must be forwarded to the Danish Geodata Agency no later than three weeks after the conclusion of the activity [see [www.gst.dk](http://www.gst.dk)])

YES	NO	REMARKS

**10. Does the activity take place within the area of a vessel traffic service (VTS) in the Sound or the Great Belt, respectively?**

Sound VTS: <https://www.retsinformation.dk/forms/R0710.aspx?id=138329>

Great Belt VTS: <https://www.retsinformation.dk/forms/R0710.aspx?id=27581>

YES	NO	REMARKS

**11. Will bottom-fixed structures with sharp edges be established below the surface of the water?**

YES	NO	REMARKS

**12. Is it possible to place any new submarine cables or submarine pipelines in connection with existing layouts of such lines?**

YES	NO	REMARKS

**13. Is it necessary to pass any of the below in connection with new submarine cables or submarine pipelines?**

Where	YES	NO	Can it be done perpendicularly to the direction of navigation?		REMARKS
			YES	NO	
Navigable spans					
Narrow fairways or channels					
Ship traffic routes					
Ship routeing systems, including traffic separation systems and deepwater routes, etc.					
Port entrances					
Leading lights and light sectors					
Other submarine cables or submarine pipelines					

**14. Is it possible, when placing DC heavy current cables, to locate them so as to minimize the impact on ships' compasses?**

(In case of NO, documentation of the impact must be forwarded to the Danish Maritime Authority)

YES	NO	REMARKS

**15. Are work vessels capable of warning approaching ships about the activity and providing guidance about how to pass the area safely and giving notice about any restrictions or obstructions by constantly having an overview of the ship traffic and any other conditions in the area?**

(In case of NO, the use of dedicated guard vessels must be considered; please contact the Danish Maritime Authority)

YES	NO	REMARKS

**16. Have you as the one responsible (client/consultant/lead contractor) examined the conditions in the activity area as regards the following:**

(In case of NO, "Remarks" must be filled in. If it is not considered relevant, please mark n/a)

Condition	YES	NO	REMARKS	n/a
Traffic intensity, including regular ferry connections, fishing and yachting, etc.				
Ports				
Fairways				

Buoyage and aids to navigation				
Presence of submarine cables, pipelines, overhead power lines and bridges, etc.				
Participating ships' obligation to take a pilot				
Wind, weather, ice, sea and current				
Communications				
Nature of the waters, including the bottom and water depths				
Anchorage				
Pilot boarding places				
Military areas and shooting areas				
Other simultaneous activities in the area				
Other things				

### 17. Which preventive measures have been planned?

Abbreviations of approving authorities:

DCA = Danish Coastal Authority, DTA = Danish Transport Authority, DMA = Danish Maritime Authority, DGA = Danish Geodata Agency

No.	Preventive measures	YES	NO	REMARKS/DESCRIPTION
1	Physical safeguards, etc. (DCA or TS)			
2	New or changed buoying, including lighthouses, buoys, beacons, lights and signs, etc. (DMA)			
3	Speed limitations or other restrictions to ships (DMA)			
4	Establishment of special ship routes (DMA)			
5	Establishment of areas of prohibition (DMA, see item 18)			
6	Hydrographic surveys (DGA)			
7	Dredging (DCA or DTA)			
8	Production of charts (DGA)			
9	Information/guidance			
10	Guard or accompanying vessels			

11	Navigational coordination			
12	Communication plans			
13	Surveillance/monitoring			
14	Emergency plans			
15	Start training			
16	Ensuring that the area can be left and be free and safe for navigation before a ship arrives			
17	Other things			

### 18. Request to establish areas of prohibition (cf. item 17-5)

If, in consideration of safety of navigation or prevention of danger, it is requested to establish an area of restriction in connection with an activity, you must send an application hereon to the Danish Maritime Authority no later than six weeks before starting the activity.

A template for the application [is available from the website of the Danish Maritime Authority.](#)

### 19. Risk assessment after having launched preventive measures

(In connection with minor projects, this item can be filled in according to professional discretion)

**M = Planned preventive measure no. from the table in item 17 above.**

**Risk index after preventive measures**

**= Consequence figure + Probability figure (5 or less is normally acceptable)**

<b>Incident</b> (What could go wrong? "brainstorm")	<b>Consequence figure</b> (total amount for environmental cleaning, loss of values, loss of lives/injuries per year): 0 in the amount of DKK 20,000 (limited) 1 in the amount of DKK 200,000 (minor) 2 in the amount of DKK 2,000,000 (considerable) 3 in the amount of DKK 20,000,000 (serious) 4 in the amount of DKK 200,000,000 and above (catastrophic)	<b>Probability</b> 7=10 accidents/year (often) – about once a month 6=1 accidents/year (relatively often) – once a year 5=0.1 accident/year (probable) – once every 10. year 4=0.01 accident/year (possible) – once every 100. year 3=0.001 accident/year (seldom) – once every 1000. year 2=0.0001 accident/year (very seldom) – once every 10,000. year 1=0.00001 accident/year (extremely seldom) – once every 100,000. year 0=0.000001 accident/year (improbably seldom) – once every 1,000,000. year	<b>M</b>	<b>R</b> (C+P) <5>



**20. General professional assessment of safety of navigation before, during and after the activity**

Question	YES	NO	ELABORATIVE EXPLANATION
Is there, after having filled in this template and according to a general professional estimate, any noticeable danger to ships?			
Is there, after having filled in this template and according to a general professional estimate, any noticeable danger to human beings?			
Is there, after having filled in this template and according to a general professional estimate, any noticeable danger to the environment?			
Is there, after having filled in this template and according to a general professional estimate, any noticeable danger to values?			

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**Signature of the one responsible**

## Performance phase

### Assessment, part 2 (contractor)

**(Part 2 must be filled in before starting the work. In case there are any changes or additions in relation to part 1, please forward the filled in template to the Danish Maritime Authority (mrb@dma.dk))**

In case the activity necessitates any changes in relation to previous notice in Notices to Mariners, please inform the editorial office of Notices to Mariners ([EFS@dma.dk](mailto:EFS@dma.dk)/+45 72 19 60 00) as early as possible in order to ensure an updated warning of the shipping industry.

#### **A-1. 24-7 contact details of the one responsible for part 2:**

<b>Name:</b>	
<b>Address:</b>	
<b>Email:</b>	
<b>Telephone nos:</b>	

#### **A-2. 24-7 contact details of the substitute for part 2:**

<b>Name:</b>	
<b>Address:</b>	
<b>Email:</b>	
<b>Telephone nos:</b>	

#### **B. Acceptance by the contractor of the assessment made in part 1:**

<table border="1"><tr><td><b>YES</b></td><td><b>NO</b></td></tr><tr><td></td><td></td></tr></table>	<b>YES</b>	<b>NO</b>			
<b>YES</b>	<b>NO</b>				

In case of "NO", proceed to item C – In case of "YES", proceed to item D.

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#### **C. Description of deviation from part 1:**

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**D. Any supplementary description of the activity (part 1 – item 2):**

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**E. Period during which the activity is carried out:**

From / -20__ at : to / -20__ at :
From / -20__ at : to / -20__ at :
From / -20__ at : to / -20__ at :

**F. Will the activity lead to an impediment to freedom of navigation that is not evident from the initial screening or from part 1?**

YES	NO	REMARKS

**G. In case any ships are involved in the activity, please list them here:**

(Only primary vessels are to be listed – if changes are made during the process, the list will be updated)

Name of ship	Call sign	MMSI number	Any IMO number	VHF channels listened to			Any cell phone no.

**H. Are the above-mentioned work vessels capable of warning approaching ships about the activity and providing guidance about how to pass the area safely and of warning about any restrictions or obstructions by having an overview at any time over the ship traffic and any other conditions of the area?**

(In case of NO, dedicated guard vessels must be used in accordance with a more detailed agreement with the Danish Maritime Authority, if relevant)

YES	NO	REMARKS

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**I. Have you, as the one responsible, examined the conditions in the activity area as regards the following:**

(In case of NO, "Remarks" must be filled in. If it is not considered relevant, please mark n/a)

Conditions	YES	NO	REMARKS	n/a
Traffic intensity, including regular ferry connections, fishing and yachting, etc.				
Ports				
Fairways				
Buoyage and aids to navigation				
Presence of submarine cables, pipelines, overhead power lines and bridges, etc.				
Participating ships' obligation to take a pilot				
Wind, weather, ice, sea and current				
Communications				
Nature of the waters, including the bottom and water depths				
Anchorage				
Pilot boarding places				
Military areas and shooting areas				
Other simultaneous activities in the area				
Other things				

**J. Establishment of areas of prohibition**

If, in consideration of safety of navigation or prevention of danger, it is requested to establish an area of restriction in connection with an activity, you must send an application hereon to the Danish Maritime Authority no later than six weeks before starting the activity.

A template for the application [is available from the website of the Danish Maritime Authority.](#)

**K. General professional assessment of safety of navigation before, during and after the activity**

Question	YES	NO	ELABORATIVE EXPLANATION
Is there, after having filled in this template and according to a general professional estimate, any noticeable danger to ships?			
Is there, after having filled in this template and according to a general professional estimate, any noticeable danger to human beings?			
Is there, after having filled in this template and according to a general professional estimate, any noticeable danger to the environment?			
Is there, after having filled in this template and according to a general professional estimate, any noticeable danger to values?			

**Date: / - 201**

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**Signature of the one responsible**