

# **PART III-A OF THE TENDER DOCUMENTATION**

**DESIGN AND BUILD CONTRACTS NS 8407**

**INVITATION TO TENDER**

**Contract: E3 Sea Barriers**

**Project: 540026 Protection Operational Part**

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## 1 INTRODUCTION

The Norwegian Defence Estates Agency is an administrative agency under the Ministry of Defence. The Norwegian Defence Estates Agency is one of Norway's largest property actors and a full-range provider of property services to the Norwegian Armed Forces. For further information about the Norwegian Defence Estates Agency see: [www.forsvarsbygg.no](http://www.forsvarsbygg.no).

Haakonsvern Naval Base, located outside the City of Bergen, intends to establish sea barriers as illustrated in the appended sketch.

The purpose of the sea barriers is to support the Navy's need to strengthen the land and sea-based protection of the Navy's main base, Haakonsvern (Sjøforsvarets Hovedbase Haakonsvern - SHH), and thus help fulfil statutory requirements concerning the protection of assets. The project's requirements are ambitions for the project and requirements concerning the protection measures' design, performance and use in relation to current needs and those regarded as relevant in the foreseeable future.

The Navy needs sea barriers that can ensure SHH complies with the requirements and regulations that apply for the base today. The sea barriers shall ensure control of the base in relation to access from the sea.

In addition to the sea barriers, equipment will be procured that ensures electronic and automatic control of the means of access to SHH. This equipment is not included in this contract.

Another goal of the sea barriers is to provide security personnel with better control over deliveries of supplies to the base.

Generally, it is expected that the procurement of protection measures will be, to the greatest possible extent, based on available and tested solutions such that their operation and maintenance are simple and reasonable.

In order to ensure that components and other system solutions are chosen in a manner that promotes the project's overall objective, it is very important there is a good, close dialogue in all phases of the project between the project management and the base's operative personnel.

The deliverables include engineering, calculations, delivery and installation of permanent and movable sea barriers.

## 2 GENERAL INFORMATION ABOUT THE PROJECT (THE CONTRACT)

### 2.1 Type of contract

This contract will be executed as a design and build contract pursuant to NS 8407.

### 2.2 The builder's organisation

The builder's organisation, including engineering services, is organised as follows:

Function	Company	Contract person
Regional Manager	Norwegian Defence Estates Agency	Vidar Andersen
Project manager	Norwegian Defence Estates Agency	Kurt Vatnvåg
Site manager	Cowi AS	Anders Strøm
Project coordinator users:	The Royal Norwegian Navy	Arne Leiv Lie
Project coordinator FBMO	Norwegian Defence Estates Agency	Rita Østgulen

## 2.3 Sea barriers

### 2.3.1 Objective

The overall goal of the protection applies and this shall improve the protection of operational activities and be realised through:

- ✓ The establishment of protection measures that limit/impede impacts and penetration of the base.
- ✓ The establishment of flexible protection measures that prevent unauthorised vessels moving into/towards moored vessels.
- ✓ A permanent improvement of the base's capacity for the early detection of unwanted activities at sea.
- ✓ The establishment of measures that limit the effect of any acts of terrorism or sabotage on land and in the sea near SHH.

The protection and safety concept for SHH consists of manual security services on land and at sea, combined with physical and electronic protection measures. The detection equipment, security personnel, and physical perimeter security measures will help to ensure that unwanted activities and events can be discovered before assets are damaged and/or the military activities are affected. Similarly, early warning allows the base to deploy reaction forces in time and in this manner prevent and/or repel illegal acts.

### 2.3.2 General requirements

Permanent and movable, floating barriers will be established in the harbour basin outside Hovedkaien to protect moored vessels. The barriers must be capable of stopping vessels of up to 4 tonnes/30 knots and otherwise withstand collisions from the Navy's and foreign vessels.

It should be impossible for vessels to force their way through the barriers on or below the surface.

The design must be visible under all light and weather conditions. The measure's function must be clear to everyone navigating the harbour basin. The structure must not invite anchoring and/or other unwanted use.

The equipment must be weatherproof and withstand winds of up to 30 m/s and wave heights of up to 1.5 m. The materiel must withstand prolonged use and it must be possible to assemble/disassemble it in all weather conditions, this includes withstanding rough treatment when assembling/disassembling it.

Movable, floating barriers in the harbour basin must be designed such that they can be quickly moved to/from shore and transported with the equipment and materiel (truck, vessel, lifting equipment, etc.) the base possesses. The system must be in sections such that the weight of each component that is going to be lifted and transported does not exceed 1,200 kg.

Alternatively the transport of systems that are larger than 1,200 kg must be able to be towed to a suitable place for storage before then being lifted ashore.

It should be possible to move the sea barriers from storage onshore and install them to protect Hovedkaien using the base's resources within 12 hours. The time requirement does not include the time spent calling in truck operator(s) and tug boat crew(s).

The barriers that will be established must have satisfactory lighting at selected points. The barriers must be visible in the dark such that they can still fulfil their function. The lighting must also help to prevent collisions and accidents.

The nature of the protection measures in the sea must be such that they do not disproportionately hinder the Navy's use of the harbour and sea areas.

### 2.3.3 Specification of requirements

Consult appended document E2 - REQUIREMENT DOCUMENT.

### 2.3.4 Description of options

The barriers that will be established along the main quay provide the template for all of the barriers.

As an option, corresponding barriers shall be established:

- ✓ Between Store Bogøy and Lille Bogøy and between Lille Bogøy and the landside (option 1).  
There shall be both permanent and movable barriers here.
- ✓ Above Hetlevikstraumen (option 2).  
There shall only be movable barriers here.

- ✓ Vågedalen (Laksevåg) UVBB: Outside of the harbor and entrance to the workshop hall for submarines (option 3). There shall be both permanent and movable barriers here.

### **2.3.5 Site conditions**

The sea barriers shall be located in the sea along the lines specified in the appended drawings.

Details about seabed conditions are not included in this description. It can be assumed that the seabed conditions consist partly of sand, mud and stone. Details about the seabed conditions will be supplied once the contract has been signed with relevant contractors. The use of diving/ROVs/cameras or their equivalent must be expected.

Further geological data will also be supplied after the contract has been signed.

The sea will be accessed via the base's ordinary sea access points. It will be possible to use vessels for surveys, installing sea barriers, etc. from the base's quays.

### **2.3.6 Placement of risk regarding seabed conditions**

- Alternative 1: NS 8407 section 23.1 applies as it stands.
- Alternative 2: The design and build contractor bears the risk regarding seabed conditions, ref. NS 8407 section 23.2.

If neither of the alternatives has been crossed off, alternative 1 shall apply.

### **2.3.7 Status in relation to public authorities**

The Norwegian Defence Estates Agency has clarified the necessary permits with the public authorities.

### **2.3.8 Responsible applicant**

- Alternative 1: The design and build contractor shall be the responsible applicant.
- Alternative 2: The design and build contractor shall not be the responsible applicant.

If neither of the alternatives has been crossed off, alternative 1 shall apply.

## **2.4 Main activities in this contract**

### **2.4.1 Rigging and operation**

Space has been allocated for rigging in the area by the quays. A building has been made available for this project. The building contains offices, some storage space, toilets and cloakrooms. There is internet access.

If necessary, special huts can be set up by arrangement. In this case the contractor must provide the necessary equipment for their construction and operation. Just below the building, space has been allocated for storing materiel outdoors.

## **2.5 Assignment and construction site management**

### **2.5.1 Assignment to subcontract**

- Alternative 1: The contractor may be assigned side contractors who will become its subcontractors.
- Alternative 2: The contractor can be assigned to a side contractor.
- Alternative 3: Assignment is not permitted.

If neither of the alternatives has been crossed off, alternative 1 shall apply.

### **2.5.2 Construction site management with progress control of contractor**

- Alternative 1: The contractor may be subject to construction site management and progress control or be ordered to carry out construction site management and progress control of side contractors.
- Alternative 2: Construction site management has not been agreed.
- Alternative 3: The contractor may be subject to construction site management and progress control.

If neither of the alternatives has been crossed off, alternative 1 shall apply.

**2.5.3 Assignment of designers**

- Alternative 1: Assignment is not permitted.
- Alternative 2: The design and build contractor will have \_\_\_\_\_ (name of the designer(s)) assigned to it who will become its agent(s) and independent contractor(s).  
If neither of the alternatives has been crossed off, alternative 1 shall apply.

**2.6 Transfer of risk for executed engineering**

- Alternative 1: The builder bears the risk for solutions and other engineering work prepared by the builder before the contract is signed, ref. NS 8407 section 24.1.
- Alternative 2: The design and build contractor bears the risk for solutions and other engineering work prepared by the builder before the contract is signed, ref. NS 8407 section 24.2.  
If neither of the alternatives has been crossed off, alternative 1 shall apply.

**2.7 Trial operation**

- Alternative 1: There will be no trial operation period.
- Alternative 2: There will be a trial operation period for all technical systems/installations. The trial operation period will be six months.
- Alternative 3: The follow technical systems/installations will be subject to trial operation.

If neither of the alternatives has been crossed off, alternative 1 shall apply.

If trial operation is specified above, the trial operation shall be conducted in accordance with the detailed provisions in Part II of the Tender Documentation.

**3 PROGRESS AND DEADLINES**

The Norwegian Defence Estates Agency has set the following schedule for executing the project. The Norwegian Defence Estates Agency may demand daily liquidated damages in relation to the contractual provisions for overrunning the deadlines subject to the specified daily liquidated damages.

No.	Description	Date	Daily liquidated damages
1	Contract signing		No
2	Presentation of schedule	Four weeks after signing the contract	Yes
3	Application for right to accept responsibility as the responsible applicant	Agreed pursuant to section 2.	No
4	Commencement of the work on the construction site	Agreed pursuant to section 2.	Yes

**Part III-A of the Tender Documentation**  
The Project NS 8407

Project no.: 540026

Project name: Protection Operational Part - E3 Sea Barriers

Contract no.: C00618

5	Delivery of MOM documentation	Three weeks before the start of trial operation	Yes
6	Final inspection (only in the case of agreed trial operation)	Agreed pursuant to section 2.	Yes
7	Take over of the contract work	Agreed pursuant to section 2.	Yes