

## HSWE-PLAN

Project: 1107305 Ocean Space Centre  
 Client: Statsbygg  
 Construction site: Trondheim, Tyholt and Heggdalen  
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## 0 Introduction

The HSWE plan (Health, safety and working environment plan) is the client's tools for ensuring that the risks associated with the building work carried out under this project are dealt with in a satisfactory manner in accordance with the Norwegian Construction Client Regulations of 2010, revised January 1<sup>st</sup>, 2021.

An unofficial translation of the Norwegian version of the Regulation and is available here:

[www.arbeidstilsynet.no/en/laws-and-regulations/regulations/construction-client-regulations/](http://www.arbeidstilsynet.no/en/laws-and-regulations/regulations/construction-client-regulations/).

This translated version is for information purposes only. Legal authenticity remains with the Norwegian version. In the event of any inconsistency, the Norwegian version shall prevail.

### 0.1 Brief information on the project

The Ocean Space Centre project comprises of four sub-projects, named: Fløy A, Fløy B, Fløy C, and Fjordlab (Fløy = Building/Wing). The sub-projects are different in scope and time, which is reflected in the governing progress plan. The construction site for the three first-mentioned sub-projects is at Tyholt in Trondheim, while the construction site for the latter is Heggdalen in Trondheim.

### 0.2 Naming and Acronyms

For the key-roles in the HSWE-organization of the projects, the commonly used naming and acronyms in the Norwegian language will be used in this document:

- Construction client representative - **BHR**
- Construction client site manager - **BL**
- HSWE coordinator for the engineering/planning - **KP**
- HSWE coordinator for the construction/implementation – **KU**
- Main contractor coordinating the HSWE activities for all sub-contractors and suppliers on the construction site – **Hovedbedrift**
- PRL – The engineering team organized as part of each main contract.
- ANL – The main contractor's lead for the construction site.
- SJA – Safe Job Analysis
- RUH – Report of Adverse Event

Note: The roles of BL, KU, Hovedbedrift, PRL and ANL are distributed to each sub-project. Hence, a suffix -A, -B, -C, or -Fjord is added to indicate the applicable sub-project (see figure 1).

### 0.3 Preparation, updating and distribution of the HSWE plan

The task of preparing, updating and distributing is allocated as shown in the table below:

Project phase	Document manager	Function
Engineering/planning	Kjersti Skjelle Paulsen	HSWE coordinator for the engineering/ planning (KP)
Construction Fløy A	TBD	HSWE coordinator for the construction/ implementation (KU-A)
Construction Fløy B	TBD	HSWE coordinator for the construction/ implementation (KU-B)
Construction Fløy C	TBD	HSWE coordinator for the construction/ implementation (KU-C)
Construction Fjordlab	TBD	HSWE coordinator for the construction/ implementation (KU-Fjord)

Table 1: Overview of document manager for the plan:

The construction client is responsible for ensuring that the HSWE plan is prepared, updated, and made available to everyone on the construction site.

### 0.3.1 Attachments to the HSWE plan

The following documents constitute attachments to the HSWE plan. Some documents will be used without amendments. In such cases these are specified under *Comments*. If the business is using its own documents, these shall be reviewed and approved by the HSWE coordinator for the construction/implementation (KU) to ensure that they contain the minimum details required by Statsbygg.

<b>Document</b>	<b>Comments</b>
Checklist for notice boards at construction sites (Statsbygg template 16-01-V6)	Must be used.
Emergency notification plan (Statsbygg template 16-02-M1)	To be used and hung up on notice boards and in other suitable places.
Report form for injuries (Statsbygg template 16-02-M2)	Must be used.

## 1 Organization

The Ocean Space Centre project comprises of four sub-projects, named: Fløy A, Fløy B, Fløy C, and Fjordlab. The sub-projects are different in scope and time and are headed by project managers (PM) with support of a construction site manager (BL) and a HSWE coordinator for the construction/implementation (KU) of each sub-project. The Construction client representative (BHR) and the HSWE coordinator for the engineering/planning (KP) are centrally organized.

In the construction/implementation phases of each sub-project, the main contractor is coordinating the HSWE activities for all sub-contractors and suppliers on the construction site, acting as the “Hovedbedrift”. The sub-project Fløy B will have two main construction phases: (i) demolition, groundwork, and re-construction of the towing tank, and (ii) concrete, building and installation of main user equipment. Hence, one main contractor will act as “Hovedbedrift” for each of these phases.

The tasks and responsibilities for the roles (marked in red text in figure 1) are outlined in the form NS 8440 B in accordance with the Norwegian Construction Client Regulations.

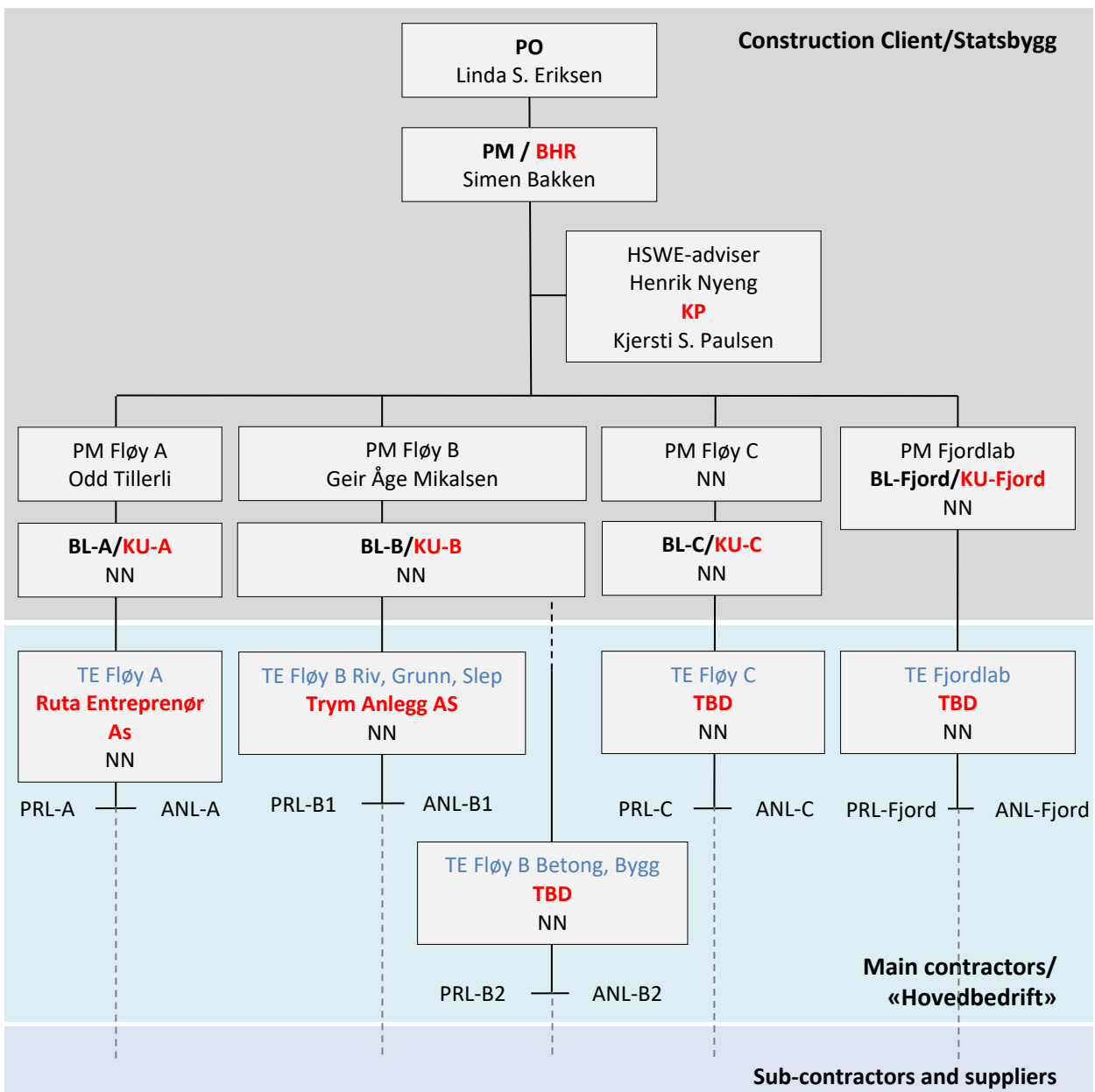


Figure 1 Overall HSWE-organization

## 2 Progress

### 2.1 Main progress plan during the construction period (key milestones)

See the attached overall progress plans for the project.

The table below shows key milestones in the project.

No.	Description	Date
1		
2		
3		

Table 2: Overview of document manager for the plan:

### 2.2 Detailed progress plans (production plans)

Updated progress plans (production plans) showing which activities will take place in different areas over the next 2, 3 or 4 weeks shall be hung on a noticeboard(s) at the construction site and shall be regarded as a part of the HSWE plan. The plans shall clearly state which activities are considered particularly hazardous and which require an SJA prior to start-up.

Progress plans shall be prepared, updated, and hung up by the design and build contractor.

### 3 Hazardous work

Requirements and specific measures are stipulated below that the Client considers necessary to enable the building works to be carried out safely and securely.

General and specific measures are stipulated.

- The general measures are based on Statsbygg's knowledge of risk factors as a multiple-contract Client.
- The specific measures are based on risk assessments that Statsbygg and design engineers have carried out in connection with planning and designing the project. The executing parties shall notify the Client about risk factors not described in this plan.

The risk factors that cannot be eliminated or reduced to an acceptable level through project design and choice of solutions are described in the table below together with specific measures.

#### 3.1 General measures

##### 3.1.1 Employee obligations

Everyone is obliged to familiarize themselves with the HSWE plan and the safety regulations applicable to the construction site. The requirements stated below are minimum requirements.

Before the work starts, the employees must be made aware of the following duties:

As an employee

- You must register daily in and out on the construction site
- You must contribute to a safe and secure workplace. No job is so urgent that it cannot be done safely – carry out a Safe Job Analysis (SJA) before starting if it is considered necessary.
- You have the right and duty to refuse to perform work that you believe is dangerous
- Do not perform work without approved training when required
- Report unwanted incidents to your manager and take immediate action if necessary
- You must wear the required protective equipment (minimum helmet, safety shoes and visibility clothing)
- You must help to keep walkways, scaffolding, escape routes and work areas tidy

##### 3.1.2 Working at heights

Step ladders and work platforms must be designed in accordance with the fact sheet [«Bra arbeidsmiljøvalg for sikkert arbeid på bukker og trappetiger»](#) from EBA.

The use of ladders and step ladders must be limited to a minimum and only used when it is the most appropriate and safe solution.

As a general rule, personal safety equipment (e.g., fall harness) should only be used where joint safety measures are not possible or have not been fully established.

#### Step ladders

Use of step ladders is **not** permitted if:

- The use of force is required
- Heavy and large items must be handled (heavy lifting and heavy machinery / equipment)
- Demolition work must be carried out

**Working platforms** can be used under the following conditions:

- Have railings for work at a platform height above 1.25 m - also below 1.25 m if the work so requires
- Must be steady and without risk of tipping over
- Be CE marked

The type of work platforms that may be relevant in such cases are:

- Platform ladders (level 3 and level 4 in the fact sheet «Bra arbeidsmiljøvalg»).
- Scaffolding / rolling scaffolding (must be marked with owner, status (closed - open))
- Personnel lifts

### **Exceptions from the fact sheet**

In the red zone (according to the building detail sheet for “Clean, dry and tidy construction process”) it is possible to work in a step ladder up to 3.5 meters working height<sup>1</sup> if:

- the work is simple (eg inspection, adjustment, changing light bulb, etc.) AND
- the risk is small

### **Leaning ladders**

Statsbygg requires that leaning ladders should not be used at heights above 3.5 meters. At heights above 3.5 meters, stair towers or other types of secure access must be used.

#### **3.1.3 Language and communication**

The contractor shall ensure that:

The work team at all times consists of at least one person who understands and makes themselves understood in Norwegian / Scandinavian / English. In addition, this person must understand, and be understood in a language that all other members of the work crew understand.

Everyone on the construction site must understand the HSWE plan, work descriptions, safety training, HSE routines, safety protocols, safety instructions, SJA, safety datasheets, user instructions for tools and work equipment, warning signs and any other relevant HSWE information. The material must be translated in writing into a language that every employee fully understands.

Legal requirements and guidelines that are otherwise stated on the [Norwegian Labor Inspection Authority's website](#).

Prior to start-up at the construction site, the contractor (Statsbygg's contracting party) shall prepare a project-specific plan for language and communication (language plan) that covers the contractor's own employees, employees of subcontractors and hired-in workers. The plan should make it easy for the commissioning party to ensure that the above-mentioned requirements have been met.

The language plan must contain, as a minimum

- The name of an authorised translator(s)
- Routines for continuous updating of written translations
- Who is proficient in language in the individual work crew.

The language plan must be continuously updated.

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<sup>1</sup> Here «working height» is defined as the height from the floor up to the place where work is performed, e.g., the height from the floor up to the hands when someone is replacing a ceiling tile



### 3.1.4 Other requirements for safety, health and working environment

See Special requirements in the contract for additional requirements set for HSWE according to § 9 of the construction client regulations.

## 3.2 Specific measures associated with work that could entail danger to life and health

No.	Risk factors	Specific measures	Responsibility
1			
2			
3			
4			

The contractor must make risk assessments of selected solutions within its contract. If they reveal risk factors that cannot be reduced to an acceptable level or eliminated by choosing solutions within the framework of their contract, these conditions must be notified to the client. The coordinator for design shall ensure that the table above is updated with risk factors with associated specific measures that are deemed necessary for the work to be carried out without danger to life and health and with a good working environment.

## 4 Routines for changing the HSWE plan

This plan shall be continuously updated if changes occur that are important for safety, health and working environment.

Examples of changes that may provide a basis for updating the plan may be:

- Change in the organization.
- Change of description of where and when the various work operations are to be performed (change of progress plan in time or activity content).
- Change of specific measures, either in time or change of the measure itself.
- Identification of new risk factors that require specific measures that have not been described previously.
- Redesign that entails new / changing risk conditions with a need for specific measures and / or a change in the progress plan.

Both the contractor and the designer have a responsibility to inform about conditions that lead to changes in the HSWE plan, and actively contribute to the collaboration to ensure health, safety and working environment throughout the process.

The responsibility for implementing changes to the HSWE plan is defined in the «Client Regulations – division of tasks» that applies to the project.

## 5 Reporting of adverse events

In order to learn from incidents, it is important that undesirable incidents and conditions are reported. Statsbygg therefore operates with a goal of having a minimum of 8 RUH (Report of Adverse Event) / construction site deviations per 1,000 working hours.

The main company must report number of hours worked, number of skilled work hours, number of apprentice work hours, number of lost time injuries and injuries without absence, as well as number of deviations from safety inspections and number of reports of adverse events. These data must be reported in Statsbygg web-based reporting form by the main company.

Serious adverse events (incidents with personal injury or with the potential for serious personal injury) must be reported to Statsbygg from the main supplier on the form «Reporting damage - potential damage».

In other respects, the individual employer shall have a deviation management system for handling undesirable incidents in accordance with the Internal Control Regulations §5 point 7.

## **6 Attachments**

- Checklist for notice boards at construction sites
- Emergency notification plan
- Report form for injuries
- Fullmakt Skatteetaten engelsk