

Project title:

10006503 - OSL, Surface monitoring radar antenna and radome

Title:

SHA plan Safety, health, & working environment plan



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1 UPDATING

1.1 Document manager and distribution

The document responsibility for the SHA plan is stated in the table below:

Project phase	Document Controller	Function
The pre-project phase	Terje Larsen / Avinor AS	SHA Coordinator Design (KP)
The detailed project phase	Terje Larsen / Avinor AS	SHA Coordinator Design (KP)
The execution phase	T.b.d. / Avinor AS	SHA Coordinator Execution (KU)

The document responsible for the current phase is responsible for updating and distributing the plan to relevant stakeholders.

All actors/project employees must have access to this SHA plan. The contractor is responsible for distributing the SHA plan to its employees and contracting parties. The updated SHA plan must be easily accessible and made known to everyone who works on the building/construction site.

Changes or errors in the SHA plan must be notified to the document responsible. The document responsible is responsible for updating and distributing changes to the relevant parties in the distribution list below.

No.	Proprietor	Function	E-mail
1	Terje Larsen / Avinor AS	Client's representative (BR)	Alexander.terje.larsen@avinor.no
2	Terje Larsen / Avinor AS	SHA Coordinator Design (KP)	Alexander.terje.larsen@avinor.no
3	T.b.d. / Avinor AS	SHA Coordinator Execution (KU)	
4	Name / company	Main company (to be defined)	
5	Name / company	SMR replacement	
6	Name / company	Radome construction	
7	T.B.D. / Bravida	Local Electrician	
8	T.B.D. / Stena	Waste management	

1.2 Change history

Date	Version	Changes	Modified by
25.08.2026	1	Tender version	GMATL

2 INTRODUCTION

This SHA plan is an overall plan related to safety, health and working environment conditions in the project 10006503 - OSL, Surface monitoring radar antenna and radome.

The SHA plan is based on risk assessments carried out in the planning and design phase and is the client's tool to ensure that the risk factors associated with the works are handled in a responsible manner in accordance with the requirements in the [Construction Client Regulations](#) (Norwegian Law). The SHA plan must be tailored to the individual project and describe how the risk is to be managed so that the work can be carried out without risk to life and health. The SHA plan shall contribute to good safety in the execution phase and be a governing document for follow-up at the building/construction site.

The project's risk assessment(s) and SHA plan must ensure interfaces. In addition to the HSE, the SHA plan may include risk-reducing measures in connection with airside work and safety measures for PAX and ground personnel, where relevant. The work will be on the airside and an additional risk assessment of the building/construction work's impact on flight safety will be carried out.

The risk picture must be assessed on an ongoing basis throughout the project's life cycle. The risk assessment(s) and the SHA plan must be revised in the event of changes that are of importance to safety, health and the working environment, and at least revised when transitioning to a new project phase.

In its assignment-specific internal control, the supplier must implement the parts of the SHA plan that are relevant to the company's HSE plan and work on the project.

2.1 Project description

SMR East and SMR West have antenna, gear, radome and cabling from 1997 and the purpose of this reinvestment project is to extend the lifetime of SMR capacity on SMR East and West through replacement of the aforementioned components. The antenna system and radome are mounted on top of a metal tower, about 23 meters above the ground. Access is via a vertical ladder with associated fall protection solution. Both locations are close to the airport fence in the east and west and the replacement must take considerations to this. The replacement must be done in the period between May and September where the change of the airport entering Low Visibility Procedures are at their lowest.

2.2 0- vision – No serious injuries or accidents

Avinor has a vision of 0 serious injuries and accidents in our building/construction projects. To achieve this, safety work must be planned and carried out systematically and risk-based. The main focus will be on high-risk activities (work that may entail a risk to life/health). Risk management must be an integral part of the project implementation.

The client must ensure that HSE is taken into account in connection with the planning, design and execution of the building/construction project.

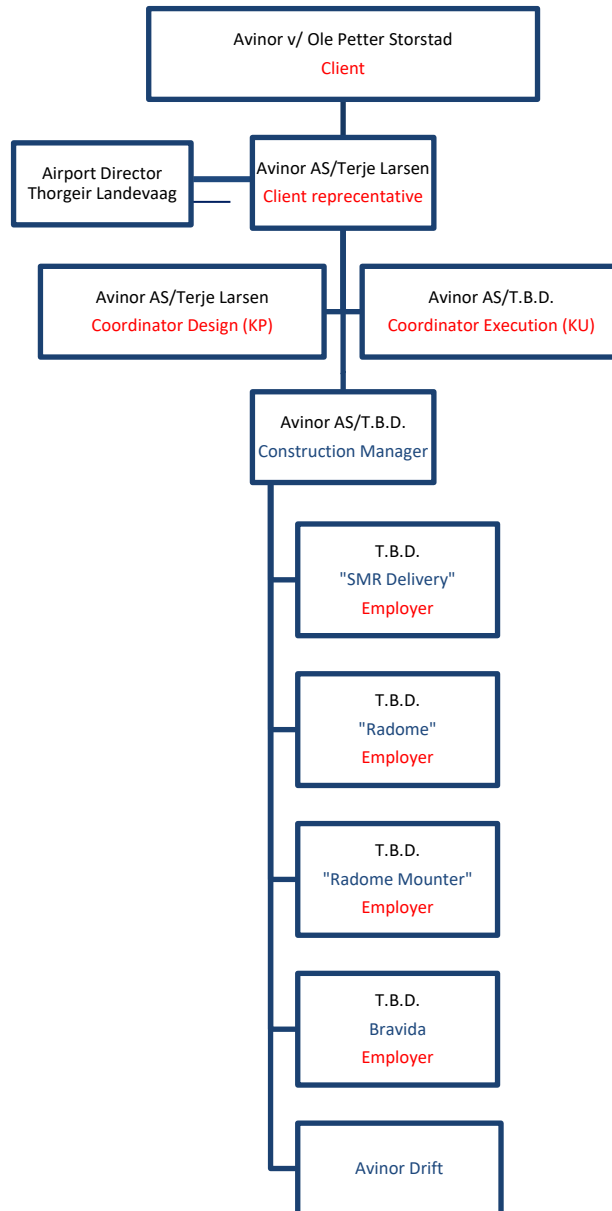
2.3 Security conditions at an airport

The project shall be executed with the necessary care in relation to the ongoing airport operations. There must be no unforeseen operational consequences. The project shall ensure that all aviation safety conditions at the airport, including security, are taken care of. In the case of airside work, the airport must be represented in all construction meetings.

3 ORGANISATION AND RESPONSIBILITY

3.1 Organisation chart SHA

PROJECT ORGANIZATION CHART (high level)



4 MAIN PROGRESS PLAN

No.	Description	Location	Date
1	West - Construction start (radome and SMR)	West	01.05.27
2	West - Mechanical completed (radome and SMR)	West	30.05.27
3	West - In operation	West	30.06.27
4	East - Construction start (radome and SMR)	East	01.08.27
5	East - Mechanical completed (radome and SMR)	East	30.08.27
6	East - In operation	East	15.09.27
7	West - Takeover	West	30.09.27
8	East - Takeover	East	30.11.27

The master progress plan describes the key milestones in the project's execution phase, as well as the estimated completion date for the sub-deliveries.

NOTE: Due to the limited window of opportunity, this plan has a high risk of being altered significantly.

Reference is made to the detailed progress plan for a further description of where/when the various work operations are to be carried out, coordination/coordination of work operations, as well as the time period and, if applicable, the order in which specific measures are to be implemented. **[the joint progress plan/schedule will be created together with the contractors when contracted]**

A detailed progress plan is part of the HSE plan and must be easily accessible to employers and employees on the building/construction site. The progress plan is a tool for coordination that is used in the event of delays or changes in time/place (simultaneity) and can help provide an overview of changes in the risk picture.

5 SPECIFIC MEASURES

Specific measures necessary to reduce the risk to life and health are based on risk assessments carried out by the developer and the designers in connection with planning and design.

In the event of special risk factors in the project, the HSE plan must contain specific measures for works that may entail a risk to life/health, that cannot be eliminated through planning or design, and that are not covered by regulatory requirements, work instructions and safety requirements in the project. This applies to measures with an unacceptable level of risk.

Specific measures necessary to reduce risk to life and health

Activity/source of danger	Danger	Specific measures	Responsible
Installation and dismantling of existing antenna and radome	- Work at height on radar tower - Work at height with heavy loads - Falling components - Necessary work under suspended load (radome)	- Include in the HSE plan and work instructions - Facilitate modular installation and lifting points; to be described in the tender documentation - Lifting plan	- Contractor - Crane company
Use of mobile crane	- Crane tilt/fall - Falling load	- Evaluate and define the crane rig area and lifting zone - Lifting plan - Conduct a risk assessment (IFS)	- Client representative
Work in strong winds	- Loss of control during lifting	- Simulate the lifting limitation - included in the lifting plan	- Crane company/ Contractor
Transport of antenna, radome and equipment	- Traffic accident within the airport	- Evaluate transportation route, limitation and rig area. - Conduct a risk assessment (IFS)	- Contractor
Work near airport operations	- Conflict with aircraft or vehicles - Impact on air navigation equipment	- Establish safe access road and rigging area - Notification and evaluation of the work	- Contractor
Work on existing power supply	- Electric shock	- Only work on system when power is off - Electrical work done by electricians	- Contractor
Temporary loss of radar function	- Operational impact on the airport	- Detailed phase planning before dismantling	- Client representative
Concurrent work on different contracts/enterprises	- Collision between activities, resulting in personal injury	- Clarify interfaces with other suppliers and include them in planning - Coordination meeting between contractors - Toolbox meeting	- Contractor
Access to tower	- Limited evacuation possibilities	- Evacuation from height must be assessed for execution work - Coordination meeting between contractors - Risk awareness	- Contractor
Foreign object Debris (FOD)	- Objects blown onto the manoeuvring area resulting in damage to aircraft or other vehicles	- Waste management solution to be designed - Information meetings - Implement FOD control routines	- KP/KU

Future maintenance on the equipment	- Rotating antenna - Radiation	- Require safe solutions in the tender documentation	- Client representative
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6 ROUTINE FOR PROCESSING CHANGES AND UPDATING THE SHA PLAN

Needed or desired changes to this SHA plan must be reported, both from the Client to the Contractor's personnel and from the Contractor's personnel to the Client in the following way;

- The changes must be reported in writing/orally to the Coordinator execution (KU) immediately.
- KU registers reported/discovered changes from the SHA plan through the client's system.
- The KU follows up that the necessary measures are taken to ensure that the change is implemented.
- Decisions on adequate necessary measures shall be done by the Client through the project manager/construction manager in consultation with the KU, construction manager or equivalent at the contractor.
- Information about changes and measures for all parties involved follows from the SHA plan's distribution list.
- The SHA plan is updated by the person who is listed as the document manager at the Client.

7 ATTACHMENT 1: NOTIFICATION PLAN

The contractor's notification to the Client - telephone list in the event of accidents. Must be hung clearly visible on all building/construction sites. The contractor ensures translation into the relevant languages.

OSL, Surface monitoring radar antenna and radome



IMPORTANT PHONE NUMBERS

Ambulance – 113

Fire – 110

Police – 112

Poison Information Centre – 22 59 13 00

APOC Operations Center fire/emergency – 648 12 911

The caller then notifies their superior officer

INSTRUCTIONS IN CASE OF ACCIDENTS:

1. Notify the ambulance, fire brigade and/or police
2. Secure the accident site in a responsible manner and keep unauthorized persons away
3. Provide first aid to those in need and assist in the rescue work according to given orders
4. Notify your immediate superior/construction manager/project manager (airport manager/airport director if agreed)

INSTRUCTIONS IN CASE OF FIRE:

1. Trigger fire alarm
2. Start extinguishing with the fire extinguishing equipment that is available, if it seems possible.
Assess the risk of spreading and try to limit the fire if it is not possible to extinguish it
3. Call the fire service as stated on the notice or the airport's own rescue service
4. Notify and call the project manager/facility manager/construction manager, (airport manager/airport director if agreed)

Serious environmental incidents must be notified in accordance with the airport's notification procedure.

The caller notifies the following key employees on the project:

Project Manager: +47 913 94 1177

Construction Manager: T.B.D

HSE coordinator execution (KU): T.B.D

Project manager in Avinor's construction management warns

Airport Manager/Director: +47 971 11 033

The project manager ensures that the police and the Norwegian Labour Inspection Authority are notified in the event of serious personal injuries.

To the extent necessary, the project manager also notifies the Directorate for Civil Protection and Emergency Planning (48 21 20 00).

Avinor's project management notifies Avinor centrally via CIM- Avinor's internal whistleblowing system