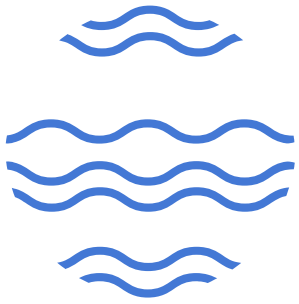

066 Offshore Norge – Recommended guidelines for offshore helicopter operations

PREFACE

These Guidelines were developed by the Offshore Norge Aviation Specialist Network's expert group with input from helicopter operators, authorities, employee organisations, and other relevant stakeholders.

The Guidelines are recommended by the Offshore Norge Aviation Specialist Network, Forum for Supply Chain and Logistics and by Offshore Norge's Operations Committee. They are also approved by the Director General.

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1 Introduction

1.1 Objective

These Guidelines have been prepared for use by energy operating companies and other actors (Companies) as contractual principals.

The Guidelines apply for operations involving fixed installations, mobile installations, vessels, wind turbines, other energy installations and drone activity.

We recommend using the Guidelines as a referenced requirement in contracts with Helicopter Operators and Drone Operators. The Guidelines also describe relevant expectations vis-à-vis Companies for their helicopter, aviation and drone operations.

The Guidelines shall contribute to safe operations and passenger comfort by coordinating the Companies' requirements for offshore operations.

If a topic or recommendation is not explicitly covered in these Guidelines, the following shall apply: IOGP Offshore Helicopter Recommended Practices (OHRP) 690-1 Safety Management Systems, 690-2 Aircraft Operations, 690-4 Engineering, 690-5 Helicopter & Equipment, all with version as of 1 March 2023 and IOGP 696 Remotely Piloted Aircraft Systems (RPAS), version as of November 2023.[1]

The Guidelines contain extensive requirements where the Companies have found this to be appropriate. The Companies can issue dispensations from the Guidelines and IOGP OHRP.

[1] The IOGP Aviation Sub-Committee consists of a broad range of international expertise and arrived at a consensus to prepare IOGP Report 69X Offshore Helicopter Recommended Practices (OHRP), as recommended practices for offshore helicopter operations. OHRP contributes to global standardisation efforts and is the foundation for Offshore Norge's Recommended guidelines 066.

1.2 Definitions and abbreviations

Offshore Norge's Recommended guidelines 066 for offshore helicopter operations uses the term "shall" despite this being a recommended guideline. The objective is to adapt the language used to a contractual context where a recommended guideline can be used as a referenced requirement between Companies and Helicopter Operators.

Definitions:

Definitions and clarifications are as described in aviation legislation and IOGP OHRP.

Company – Energy operating company or other actor that is a contractual principal for the Helicopter Operator.

Helicopter Operator – Enterprise that holds an AOC issued by the Civil Aviation Authority (Norway) or has declared its activities to the Civil Aviation Authority pursuant to the provision in Regulation (EU) No 965/2012.ORO.DEC.100.

Abbreviations

ADS-B:	Automatic Dependent Surveillance-Broadcast
AFIS:	Aerodrome Flight Information Service
AOC:	Air Operator Certificate
ATC:	Air Traffic Control
BSL:	Regulations for Civil Aviation
EASA:	European Aviation Safety Agency
Cat A EBS:	Compressed Air Emergency Breathing System
CAT:	Commercial Air Transport
CAMO:	Continuing Airworthiness Management Organisation
CRM:	Crew Resource Management
EGPWS:	Enhanced Ground Proximity Warning System
EFB:	Electronic Flight Bag
FDM:	Flight Data Monitoring
HFDM:	Helicopter Flight Data Monitoring
HTAWS:	Helicopter Terrain Awareness Warning System
HUMS:	Health and Usage Monitoring System
NVIS:	Night Vision Imaging Systems (NVG)
IOGP:	International Association of Oil & Gas Producers
IOGP OHRP:	Offshore Helicopter Recommended Practices
69X:	Refers to document no. X in the IOGP OHRP 690 document series
ME PICUS:	Multi Engine Pilot-In-Command Under Supervision
NDB	Non-Directional Beacon

PIC:	Pilot In Command
PICUS:	Pilot-In-Command Under Supervision
RPAS:	Remotely Piloted Aircraft Systems
SAR:	Søk & Redning / Search & Rescue
TCAS II:	Traffic Alert and Collision Avoidance System
UAS:	Unmanned Aircraft Systems Services (Drones)

1.3 Normative references

Reference is made to the most recent valid version of regulations, requirements, guidelines and standards.

BSL A 1-3	Regulations relating to reporting and duty to report aviation accidents and aviation incidents
BSL A 7-1	Regulations relating to aircraft with no pilot on board, etc.
BSL A 8-1	Regulations relating to civil government aviation
BSL D 1-1	Regulations relating to aviation operations
BSL D 1-7	Regulations on carriage of cargo in aircraft
BSL D 2-2	Regulations relating to commercial helicopter aviation
BSL D 2-3	Regulations relating to offshore helicopter operations
BSL D 5-1	Regulations relating to helicopter operations – use of offshore helidecks
BSL G 7-1	Regulations relating to aeronautical meteorological service
EASA OPS	(EU) 965/2012 (HOFO)

IOGP Report 69X Offshore Helicopter Recommended Practices (OHRP)[1]
IOGP Report 696 Remotely Piloted Aircraft Systems (RPAS)[1]
NORSOK WA-S-006 HSEQ evaluation of suppliers and HSEQ requirements in contract
NORSOK C-004 Helicopter decks on offshore installations
Offshore Norge – 002 Recommended guidelines for safety and emergency preparedness training
Offshore Norge – 074 Recommended guidelines – Helideck manual
Offshore Norge - 091 Recommended guidelines for securing supplies and materials in the oil and gas industry
Norwegian Maritime Authority Regulations relating to helicopter decks on mobile offshore units
The Norwegian Ocean Industry Authority's collected regulations
114 - Recommended guidelines for handling noise which may induce hearing loss, Rev. 02.pdf
Noise in and around helicopters - Offshore Norge
NS-ISO 9612 - Acoustics - Determination of occupational noise exposure - Engineering method

The content of normative references will be contingent on the implementation of new regulatory requirements that are relevant for Helicopter Operators and which require compliance.

2 REQUIREMENTS FOR HELICOPTER OPERATORS

The Helicopter Operator's organisation and management system

- The Helicopter Operator shall be an enterprise registered in Norway with a Norwegian AOC and special licence for offshore flights. Their headquarters with management, administration, CAMO, maintenance organisation and facilities shall be located in Norway.
- The Norwegian AOC, CAMO and maintenance organisation shall contain fully-fledged functions and Norwegian authorisations as defined for Part-145 and Part-CAMO pursuant to Annex II to Commission Regulation (EU) No 1321/2014, and the Flight Operation Organisation shall be in accordance with Commission Regulation (EU) No 965/2012.
- The Helicopter Operator's Accountable Manager (ansvarlige leder) shall be formally approved by the Norwegian aviation authorities in accordance with current EASA regulations, and shall have the authority and independence to ensure that all operations and maintenance activities, as well as all current expenses associated with any incidents/accidents, can be funded and are carried out in accordance with requirements established by the aviation authorities and contract with the Companies.
- The Helicopter Operator shall plan and perform maintenance and modification work on helicopters in Norway. Applications can be made to a Company if special competence or equipment is needed from a manufacturer.
- The Helicopter Operator shall have adequate staff levels with relevant technical competence in order to comply with all maintenance requirements defined by manufacturers, aviation authorities and any special requirements set by the Companies.
- The Helicopter Operator shall maintain operative and technical support functions- and facilities in Norway tailored to the scope of work defined by contracts with the Companies.

The Helicopter Operator shall document compliance with IOGP Recommended Practices (OHRP) 690-1 Safety Management Systems, 690-2 Aircraft Operations, 690-4 Engineering, 690-5 Helicopter & Equipment, version of 1 March 2023) and Offshore Norge 066.[1]

3 COMPETENCE REQUIREMENTS

3.1 Introduction

The Helicopter Operator's offshore personnel, permanent or temporary, shall have completed the following:

- Basic safety courses in accordance with “002 - Offshore Norge Recommended guidelines for safety and emergency response training”.
- The Company's internal courses.
- Offshore health certificate or Pilot Medical Class 1 and 2.

3.2 Helicopter crew

3.2.1 CAT operations

In addition to regulatory and internal requirements, the following requirements shall apply for qualifications and experience:

- At least one of the pilots shall be able to communicate in a Scandinavian language.
- IOGP requirements for the commander consisting of 1000 hours of ME PICUS can be achieved with 1000 hours of ME PIC/PICUS, 2:1 experience as first officer on the NCS (2 hours flown count as 1 hour of PICUS) or a combination of these.

3.2.2 SAR operations

In addition to regulatory and internal requirements, the following requirements shall apply for qualifications and experience:

- All members of the Helicopter Operator's SAR crew and specialist nurse shall be able to communicate in a Scandinavian language.
- The SAR Commander shall have at least 3 years of relevant operative maritime SAR experience.
- The SAR crew shall be selected based on competence, personal suitability, experience and seniority, in that order.
- SAR Pilots can only operate one helicopter type in connection with SAR operations.

3.2.3 Simulator training

The pilots shall complete simulator training in Full Flight Simulator (FFS), level D at least once every 6 months, and this shall consist of at least 8 hours per crew, distributed over two days. SAR pilots shall also complete 2 hours of tailored SAR training every 6 months.

This simulator training shall be in accordance with the following requirements:

- The simulator shall be in accordance with the contract's specified helicopters as regards cockpit layout and instrumentation.

- The simulator and training shall cover the contract's route structure, including bases and relevant types of landing objects with movement patterns, as well as weather/light conditions and night landings.
- Of the 8 hours of crew time, at least 3 hours shall be educational training associated with relevant operations / emergency situations / incidents, etc.
- Helicopter Operators shall also facilitate necessary extra training for individual pilots and describe this in their management system.
- Training programmes shall be updated annually based on experience gained from operations, incidents, statistics and HFDM data, and shall contribute to educational training.
- Helicopter Operators shall develop and use instructors from their own AOC organisation with at least 5 years of offshore helicopter experience from the NCS.

3.3 Maintenance personnel

In addition to regulatory and internal requirements, Helicopter Operators shall conduct training in relevant maintenance management systems for relevant personnel. Helicopter Operators shall have defined which positions/roles will receive which training.

Recurrent training shall be conducted in addition to regulatory requirements, with the following requirements:

- All technical personnel who carry out maintenance on the helicopter type and relevant support functions shall complete at least two days of annual training, including at least one day of repetition and updates on the helicopter type's documentation and technical systems.
- If technical personnel are responsible for checking out multiple helicopter types, the scope of training shall be increased correspondingly, by at least one extra day per helicopter type.
- The repetition shall be carried out using a technical system simulator with interactive interfaces, as well as an opportunity to test and troubleshoot relevant systems.
- The training shall be based on a documented training programme which includes relevant incidents for lessons learned.
- The training shall be carried out in person in suitable teaching premises by competent instructors who can communicate in Scandinavian languages and English.

4 OPERATIVE REQUIREMENTS

4.1 General requirements for flight operations and use of automation

- Helicopter Operators shall have defined criteria for "stabilised approach" that can be monitored in the FDM system.
- Helicopter Operators shall include how to utilise various autopilot modes to their greatest possible extent in the descriptions of the different phases of the flight.

- Helicopter Operators shall facilitate technology including automated approach features, automated assisted take-off, automated go-around and landing features, automated recovery functions, vortex ring detection & warning system.

4.2 Weather conditions

Helicopter Operators shall cooperate to establish and practice equivalent weather restrictions for helicopter operations. Helicopter Operators shall ensure continuous digital access to weather information and helicopter deck information during flights, in addition to facilitating such information on EFB or on integrated screen solutions.

4.3 Wind restrictions on helidecks

Wind restrictions are described in 074 Offshore Norge Helideck Manual.

4.4 Night operations

Helicopter Operators shall ensure the following during night operations:

- Civil twilight tables shall be used for the definition of night.
- Vessels shall be turned at least 30 degrees out of the wind to ensure good visual references in connection with the landing.
- Night operations shall not take place on vessels in Category 2 and 3 with reference to 074 Helideck Manual, unless this has been approved by the Company and Helicopter Operator prior to the flight.

4.5 Helicopter decks

The following applies for operations to and from helicopter decks:

- Helicopter Operators shall only fly to moving helicopter decks with the most recent relevant Helideck Monitoring System (HMS) version.
- Helicopter operations shall only be carried out to helicopter decks from which a helideck report has been received, as described in 074 Offshore Norge - Helideck Manual.
- The system for information about helicopter decks shall contain verified information about such helicopter decks, and shall be available to both the Helicopter Operator, pilots and helicopter deck owners.

4.6 Fuel reserves

Helicopters shall bring enough fuel to reach an alternative landing site onshore, with the exception of shuttle/special operations, where operations are permitted according to the Helicopter Operator's procedure.

4.7 NDB operations

Helicopter Operators shall ensure that helicopters used for offshore operations are outfitted for NDB operations, the crew has undergone sufficient training, and that procedures have been established for this.

4.8 Helicopter flight preparations

Helicopter Operators shall facilitate prudent time intervals in connection with planning flight programmes for preparing helicopters for take-off, after landing and before the next take-off.

4.9 Loose objects in cockpit

Helicopter Operators shall ensure that the helicopter contains devices to secure loose objects in the cockpit.

5 TECHNICAL REQUIREMENTS

5.1 Helicopter technology

Helicopter Operators shall ensure that helicopter types and technical equipment are in accordance with FAR/EASA-CS29 (post 1 January 2000 amendment standard), as well as certification requirements in IOGP 690.

5.2 General requirements

Helicopter Operators shall ensure that helicopters and helicopter equipment are operative and in accordance with requirements in BSL D 2-3 Regulations relating to offshore helicopter operations during take-off from airports onshore and from fixed technical bases offshore. This also applies for HUMS, HTAWS (EGPWS) and TCAS II systems.

5.3 HUMS

Downloading and first analysis of HUMS data from the helicopter shall, as a minimum, be carried out prior to take-off from onshore technical bases and from fixed technical bases offshore.

5.4 Data communication

Helicopters shall be equipped with an opportunity to transmit relevant data to and from helicopters during flight. Helicopter Operators shall safeguard IT Cyber Security by using such technology, including the transmission of sensitive personal data.

5.5 De/anti-icing equipment

Helicopter Operators shall ensure that helicopters are equipped with operative de/anti-icing equipment during the period from 1 September to 1 May.

5.6 Tool control

Helicopter Operators shall use digital tool control for hand tools.
It is not acceptable to use personal tools on aircraft.

5.7 Ventilation

Helicopters shall be equipped with a heating and ventilation system.
Air conditioning shall be operative before take-off from shore during the period from 1 May to 1 September.

5.8 Noise

Attempts shall be made to reduce noise and vibration levels in the helicopter to the lowest possible level. Helicopter Operators shall state the noise level in the passenger cabin for the helicopter type measured pursuant to NS-ISO 9612 at the passengers' head level.
Helicopter Operators shall strive to outfit the helicopter with ear defenders in accordance with the DIN EN 352-1 standard with a single number rating (SNR) value listed by the manufacturer of at least 30 dB.
Helicopter Operators must have established maintenance routines for hearing protection in accordance with the manufacturer's recommendations.

5.9 Maintenance planning

Helicopter Operators shall ensure that they plan maintenance in an optimised manner that seeks to avoid simultaneous maintenance on duplicate systems.

6 EMERGENCY HELICOPTERS

Emergency helicopters may be stationed offshore or onshore, and shall be designed to meet quantitative and qualitative requirements. Emergency helicopters may have the opportunity to carry out ambulance transport, hoisting operations, and search and rescue. The normal staffing comprises a captain, first officer, hoist operator, rescuer and specialist nurse. Specialist nurses have the status of medical passenger during flight operations.

Helicopter Operators shall carry out a tailored training programme for relevant helicopter types, including CRM for the Helicopter Operator's crew and specialist nurse to ensure operative cooperation between professions. This training shall be conducted annually.

The cockpit and cabin in emergency helicopters shall be technically prepared and ready for the use of NVIS.
Use of NVIS shall be the preferred standard.

The Helicopter Operator's crew members and specialist nurse shall be outfitted with and trained to use Cat A EBS.

7 DRONE OPERATIONS

As a minimum, drone operations - Unmanned Aerial Systems and Remotely Piloted Aircraft Systems - shall be carried out in accordance with IOGP Report 696 Remotely Piloted Aircraft Systems (RPAS), the November 2023 version, and shall not be carried out without a contract with a Company.

As a rule of thumb, Drones shall be visible to helicopter traffic using a transponder in Mode S during Beyond Visual Line Of Sight (BVLOS) operations. Helicopter Operators and ATC / Offshore AFIS shall be informed prior to such operations.

8 HELICOPTER OPERATIONS TO WIND TURBINES

CAT flights and operations to wind turbines and wind farms shall be carried out in accordance with requirements for offshore helicopter operations, as well as relevant recommended guidelines from HeliOffshore and G+ (international association of wind farm operators).

9 REQUIREMENTS FOR PASSENGERS AND FREIGHT

9.1 Luggage-free cabin

Passengers cannot bring hand luggage, loose equipment or headgear into the helicopter cabin. The exception is reading materials in paper format that can be stored in the inner pocket of the survival suit. If a mobile phone is brought into the cabin, it shall be switched off and stored on the inside of, or in another pocket in the survival suit.
Crews shall not store unsecured luggage or personal protective equipment in the cabin.

9.2 Safety briefing

Helicopter Operators shall give a standard safety briefing before each helicopter take-off from onshore helicopter terminals. In addition to regulatory requirements, this briefing shall include the following information, as a minimum:

- Survival suit and emergency breathing system,
- Helicopter type,
- Embarking/disembarking and hazard zones during embarking/disembarking,
- Luggage-free cabin,
- Location and use of rescue equipment.

Company-specific information shall not be included in the same safety briefing. Information that is not related to helicopter transport shall not be displayed in the departure hall or passenger briefing room at the helicopter terminal. The safety briefing shall be approved by the Company.

9.3 Use of survival suit, protective equipment and helmet

Passengers shall use approved survival suits during all flights. If there is a "medically incapacitated passenger" on board, the Helicopter Operator and Company shall adhere to AMC1 SPA.HOFO.165 (i).

Passengers shall not wear a helmet in the helicopter cabin. Helmets shall be placed in a bag/luggage. The exception is helicopter deck crew in transit to unmanned facilities. Helicopter Operators shall approve the safety equipment to be used in helicopters.

9.4 Size and weight of personal luggage

The size of bags and other items brought aboard as personal luggage shall not exceed 30 x 50 x 60 cm. The weight per item brought aboard shall not exceed 10 kilos. Heavier luggage will be rejected at check-in.

10 NOTIFICATION, REPORTING AND INFORMATION

10.1 Emergency response

Helicopter Operators shall have an established, competent and trained emergency response organisation, emergency response procedures and appropriate emergency response tools. Business continuity plans shall be established. Helicopter Operators shall cooperate with Companies in the handling of incidents and coordinate information processes.

All passengers, crew and the Helicopter Operator's personnel shall be registered in DaWinci on the relevant flight, before the flight starts up.

10.2 Measures following incidents

Helicopter Operators are responsible for reporting to authorities and regulatory agencies in accordance with regulatory requirements. Companies shall be informed about notifications submitted to regulatory agencies and authorities.

Helicopter Operators shall inform Companies about relevant incidents:

- Verbal information shall be provided immediately to Company contacts from duty personnel and/or operation rooms (OPS).
- Written, up-to-date information shall be provided to Company contacts on a continuous and regular basis, prepared such that the information can be forwarded internally.
- The company shall be informed on a regular basis and in the event of changes, both verbally and in writing.

Helicopter Operators shall provide tailored information to passengers:

- Passengers should be informed during the flight if this is possible.
- After landing, crews should provide tailored information about the incident to passengers and give the opportunity to ask questions.
- Passengers at helicopter terminals shall be informed as agreed with the relevant Companies.
- In the event of serious accidents and incidents that involve multiple Companies and Helicopter Operators, Offshore Norge and the Offshore Norge - Aviation Specialist Network will quality-assure and coordinate information, as well as coordinate recommended measures.

Helicopter Operators shall keep the Companies and other Helicopter Operators informed in order to contribute to transparency and coordination of measures.

10.3 Investigations

Helicopter Operators shall investigate aviation incidents, near-incidents and incidents with a potential for serious injury. The Company is entitled to participate in investigation groups

established by the Helicopter Operator. The Company can demand that the Helicopter Operator shall investigate incidents or processes.

10.4 Norwegian Ocean Industry Authority's risk mapping

Helicopter Operators shall contribute relevant data to the Norwegian Ocean Industry Authority's project to measure the risk level in Norwegian petroleum activities (RNNP) and participate in evaluation processes.

10.5 HeliOffshore - Sharing experience

Each Helicopter Operator's reporting officer shall report relevant incidents to HeliOffshore, as a contribution to sharing experience and lessons learned internationally. Helicopter Operators shall share relevant HeliOffshore InfoShare reports in their own organisation.

10.6 Reporting

Helicopter crews shall report the following incidents:

- Acute pollution on the sea surface: Helicopter crews shall verbally report pollution observed on the sea surface to the unit of the air traffic services the aircraft is in contact with.
- Military air operations: Helicopter Operators shall stay up-to-date on planned military exercises and implement measures to prevent operative conflicts with military aircraft during the implementation of such exercises.
- GPS jamming: Helicopter Operators shall report incidents involving GPS jamming and spoofing with consequences or potential consequences for navigation and communication.
- Drone activity: Helicopter Operators shall report drone activity that is undesirable and has not been reported in advance.

10.7 Operational information

Helicopter Operators shall inform Companies daily about "Daily traffic" for planned flights and their status before starting up the day's flight programme. Helicopter Operators shall inform Companies about delays and planned maintenance of a larger scope with consequences for operations and flight programmes.

11 Reporting key performance indicators – KPIs

Helicopter Operators shall, 4 times per year or as otherwise agreed with the Companies, report key performance indicators to said Companies pursuant to Appendix 1.
This reporting shall include monthly and annual trend overviews for the last 5 years.

Delays, non-conformities and incidents are always on the agenda in monthly operations meetings, and are followed up as agreed with each individual Company.

Appendix 1– Key performance indicators - KPIs

KPI	Description
1	Event indicator 1 - Serious incidents - per 100,000 flights hours & per 1,000,000 - person flight hours (RNNP)
2	Event indicator 2 - Number of incidents per 100,000 flight hours sorted by shuttle and crew change (RNNP)
3	Event indicator 2b - Number of incidents sorted by phase of flight PRR (Preliminary Risk Rating) medium or above (RNNP)
4	Event indicator 3 - Helideck phase, number of incidents by category PRR > 4 (RNNP)
5	Departure reliability (%)
6	Reporting frequency (ASR, FOR/MSR, GOR, etc.) (/1000h)
7	MEL release (/1000h)
8	Robbery (/1000h)
9	Total Reportable Incident rate (TRI) & Lost Time Injury rate (LTI)
10	Sick leave rate (%)
11	Return to base (RTB) including causal factors