

Review of Offshore Helicopter Operations Terms of Reference



To Mark Swan, Group Director SARG
cc Bob Jones, Head of Flight Operations

23 September 2013

CAA Strategic Safety Review of UK Offshore Public Transport Helicopter Operations in Support of the Exploitation of Oil and Gas in the North Sea Area

1. Background

1.1 An internal review¹ of all reportable UK offshore public transport helicopter accidents (MOR Grade A or B) during the period 1976 to 2012 has recently been prepared and delivered to the CAA Safety Action Group (SAG) and will subsequently be submitted to the CAA Board. The review established that the main causal factors of these accidents were operational (pilot performance), technical (rotor and transmission failures) and environmental (lightning strikes) factors. In addition, several other international reviews² have been conducted into the safety of offshore operations and these have included similar conclusions. A separate rule making task is also underway by EASA into a specific approval for helicopter offshore operations and the Notice of Proposed Amendment 2013/10³ was published in June 2013 for consultation.

1.2 Set against this background and given the considerable amount of effort that has been invested by both regulatory authorities and operators into minimising the risks to safe operations in the North Sea, nevertheless, a total of five accidents (two of which tragically involved fatalities) have occurred in the last four years. Given that these accidents have involved the main causal factors mentioned above, other than lightning strikes, an urgent review of the overall safety performance levels that currently exist in the North Sea operational context is required. The UK CAA, in conjunction with EASA, Norwegian aviation authority and an independent peer review group, will undertake such a review and prepare a report for the consideration of the CAA Board with a view to gaining its endorsement of recommendations to improve the safety performance of all operations in the North Sea.

2. Objective and Scope

2.1 The objective of the review is to conduct a systematic analysis of safety performance regarding the totality of the helicopter operations in the North Sea; assess the current risks to performance paying particular attention to the causal factors that have contributed to previous accidents; undertake a comprehensive review of all previous accident and incident documentation, including any from similar international environments; review the scope and development of current regulations and emerging technological advancements; give an expert status report to the CAA Board on the overall assessment of current safety performance with recommendations for improvements covering the following specific areas:

- a. The Operational Command and Control arrangements pertaining for each offshore operator.

- Operators organisation with respect to structure, resilience, competence, safety management.
- b. Capabilities for North Sea operating environment.
 - Capability of operators to resource and manage full scope of operational requirements. Suitability of helidecks and associated requirements.
 - c. Protection of passengers and crews
 - Suitability of protection measures for passengers and crews both in terms of their life support and that afforded by the aircraft and its systems taking into consideration any ongoing rule making or research projects. Capability of the SAR/recovery structure for NS operations to respond to an accident.
 - d. Training and pilot performance
 - Training syllabus, pilot requirements and experience levels, use of simulation and additional requirements necessary for the environment.
 - e. Airworthiness (in conjunction with EASA)
 - Overall review of design requirements, continuing airworthiness, emerging technological advances and research development.
 - f. Operational resilience
 - Ability of operators to conduct resilient, secure and sustainable operation given the demands of current and future operational environment.

3. Review Team Composition

3.1 Captain Robert Jones, HFO, working with Mr Geir Hamre of the Norwegian CAA, will lead the review, which will commence on 23 September 2013. Other members are listed at 4.1.1.

3.2 A team of suitably qualified advisers comprising Rear Admiral S Charlier, Mr J Lyons, Mr P Norton, Mr F Nascimento and a member of Scottish Transport Committee will provide independent challenge during the process and will undertake a review of the final report prior to submission to the CAA Board.

4. Methodology

4.1 A two staged approach will be taken to this work comprising the following elements:

4.1.1 Stage 1

- Review all relevant material to inform a baseline assessment of the current performance levels of safety of offshore operations in the UK sector of the Continental Shelf.
- In partnership with Norwegian and EASA (to be confirmed) colleagues, review all relevant material with regard to the safety performance of offshore operations in the North Sea using a gap analysis to capture best practice.
- Identify areas for further consideration.
- Complete review of all subject matter.

- Prepare draft conclusions and recommendations.
- Consolidate interim findings for Stage 2.
- Personnel involved in this phase include:

CAA

- Mr J Clark
- Mr A Eagles
- Captain C Armstrong
- Captain R Newson
- Captain R Greenwood
- Captain M McDougall
- Mr D Howson
- Mr J McColl
- Mr B Pattinson
- Mr K Payne
- Mr J Nicholson
- Mr D Marino
- Mr J Waites
- Miss R Jaeger

External

- Mr G Hamre - CAA Norway
 - Mr Ornulf Lien – CAA Norway
 - EASA representative (tbc)
- A sample of key external stakeholders will also be consulted including:
 - DfT (England and Scotland)
 - Norwegian NAA
 - UK Oil & Gas
 - Norwegian Oil & Gas
 - UK Offshore helicopter operators
 - Norwegian Offshore helicopter operators
 - Step Change in Safety
 - Helicopter Safety Steering Group
 - The Committee for Helicopter Safety on the Norwegian Continental Shelf
 - Statoil
 - BHA
 - UK Military

The output of Stage 1 will be a consolidation of the review work in a draft report..

4.1.2 Stage 2

- Completion of draft final report
- Conduct peer review.
- Consider peer review comments and consolidate final report.
- Complete final report.

The output of Stage 2 will be the Final Report.

5. Deliverables & Milestones

5.1 The key deliverables of the review will be an analysis of safety performance, the associated risks to said performance, a gap analysis evidencing best international practice, and a statement and assessment of interim findings by the end of December 2013. A Final Report, post peer review by an expert challenge team, will then be submitted to the CAA Board in early 2014.

6. Report Distribution

6.1 The Final Report will be distributed to: Mark Swan, Group Director SARG; Bob Jones, Head of Flight Operations; Geir Hamre CAA Norway; Andrew Haines, CAA Chief Executive.

¹ CAA Analysis of Offshore Helicopter Reportable Accidents 1976-2012.
[CAA HSRMC Presentation](#)

² a. HSS-3 Helicopter Safety Study 3. Report by SINTEF Technology and Society, Trondheim, Norway on behalf of BP, ConocoPhillips, Eni, GDF SUEZ, Marathon, Nexen, the Norwegian Civil Aviation Authority, Shell, Statoil and Total.
[SINTEF HSS3 Report](#)

b. UK Offshore Commercial Air Transport Helicopter Safety Record (1981-2010), Oil and Gas UK.
[Oil & Gas UK Helicopter Safety Report](#)

c. IADC/SPE 98672 Helicopter Safety in the Oil and Gas Business. A paper prepared and presented at the IADC/SPE Drilling Conference held in Miami, Florida, USA 21-23 February 2006. Authors: E. Clark and C. Edwards, formerly with Shell Aircraft Intl., P. Perry, Consultant/Shell Aircraft Intl., and G. Campbell and M. Stevens, Shell Aircraft Intl.

d. Research work by Mr Felipe Nascimento Imperial College London.
[Felipe Nascimento papers](#)

³ EASA NPA 2013/10 – Helicopter Offshore Operations
[NPA 2013-10 HOFO](#)