



Civil Aviation Authority
SAFETY DIRECTIVE
Number: SD-2022/001



Issued: 01 June 2022

Offshore Helicopter Helideck Operations

At Annex 1 to this Safety Directive is an Operational Directive mandating action that is required to restore an acceptable level of safety. The Operational Directive is issued in accordance with Article 248 of the Air Navigation Order 2016.

Recipients must ensure that this Directive is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any 'in-house' or contracted maintenance organisation and relevant outside contractors).

Applicability:	
Aerodromes:	Not primarily affected
Air Traffic:	Not primarily affected
Airspace:	Not primarily affected
Airworthiness:	Not primarily affected
Flight Operations:	All AOC Helicopter Operators Conducting Offshore Operations
Licensed Personnel:	Not primarily affected

1 Introduction

- 1.1 This Safety Directive (SD) promulgates the Operational Directive (OD) (see [Annex 1](#)) issued by the Civil Aviation Authority (CAA) on 01 June 2022 and which replaces and revokes SD/OD-2020/003 issued on 17 December 2020. It is applicable to operators conducting offshore Commercial Air Transport (CAT) helicopter operations in support of offshore oil, gas and mineral exploration, production, storage and transport, and the offshore renewable energy industry.
- 1.2 Following concerns raised by helicopter accidents in the seas around the UK, the CAA conducted a Safety Review of Offshore Public Transport Helicopter Operations ("the review") in association with the Norwegian CAA and the European Aviation Safety Agency (EASA) in 2013. The report of the review was published in [CAP 1145](#) (Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas) and progress and final reports on actions and recommendations arising were published at CAP 1243, CAP 1386 and [CAP 1877](#).
- 1.3 This SD introduces several editorial changes to SD-2020/003 and provides additional clarity on its applicability to UK registered helicopters.

2 Reason and Explanation

- 2.1 This SD is made in the interests of safety of operations to offshore locations (helidecks) for the reasons set out in Chapters 10 and 14 of the review published in CAP 1145. Additionally, it is made in further response to the Air Accidents Investigation Branch (AAIB) Safety Recommendations 2003-133 and 135 issued following the accident to Eurocopter AS332L Super Puma G-BKZE at the West Navion drillship on 10 November 2001, and Safety

Recommendation (SR) 2011-053 issued following the accident to Eurocopter EC225 LP Super Puma, G-REDU, when approaching the ETAP Central Production Facility platform on 18 February 2009.

- 2.2 The review identified a lack of adequate helideck fire-fighting provisions at Normally Unattended Installations (NUIs) to address all likely and reasonably foreseeable fire situations that may be encountered during routine helicopter operations to offshore locations.
- 2.3 The review also identified inadequacies in the visual cueing environments at NUIs for operations at night. This position reinforces the previously mentioned SR published in [Aircraft Accident Report 1/2011](#). Here the AAIB recommended that the CAA should: “*amend CAP 437, Offshore Helicopter Landing Areas - Guidance on Standards, to encourage operators of vessels and offshore installations, equipped with helidecks, to adopt the new lighting standard, for which a draft specification has been published in Appendix E of CAP 437, once the specification has been finalised.*” This amendment has been carried out and the revised [CAP 437](#), now titled ‘Standards for Offshore Helicopter Landing Areas’, published.
- 2.4 The review noted the ongoing research into operations to moving helidecks and, under Action A32, the CAA committed to promote and support the results of the research which address two Safety Recommendations in [Aircraft Accident Report 3/2004](#). The research has been completed and, following extended trials on two vessels operating on the UK Continental Shelf (UKCS), the existing joint industry Helideck Monitoring Systems (HMS) standard has been upgraded to the Standard Helideck Monitoring Systems published by the Helideck Certification Agency (HCA) on their [website](#).

3 Implementation

- 3.1 Following a benchmarking exercise with other North Sea States, which led to a comprehensive review of fire-fighting arrangements at NUIs operating on the UK Continental Shelf, the CAA issued a letter to the oil and gas industry on the 01 July 2011 seeking improvements to the basic fire-fighting arrangements on 117 NUI helidecks. This was promulgated with the full support of the offshore helicopter operators and the Helideck Certification Agency (HCA). The aim was that equipment regarded as inadequate should be replaced with fully automated systems capable of addressing a worst case post-crash fire scenario, including when the platform was unattended (e.g. during the first landing of the day). The scheme, where fully implemented, will allow unrestricted movements to the helideck regardless of the attendance model in use
- 3.2 On 01 July 2016, the CAA agreed a new scheme with the industry aimed at addressing deficiencies in the fire-fighting provisions at the same 117 NUIs, in a way that provides platform owners/operators with a higher degree of flexibility for meeting CAA minimum requirements. The new scheme introduces an alternative means of compliance (AltMoC) from the options disseminated in the industry letter (see paragraph 3.1). The alternative scheme (H1/H2 compliant) proposes manually operated fire-fighting systems to adequately address the worst case post-crash fire scenario following landings on NUIs but only during periods when they are attended (i.e. there are personnel present to operate the fire-fighting equipment). However, the scheme is not intended to address the same risks for landings on NUIs when they are unattended. As a consequence, and to mitigate the risks, a cap is imposed on the number of unattended landings when the alternative scheme is utilised in lieu of a fully automated fire-fighting system. Both schemes are described in detail in appendices to CAP 437 Standards for Offshore Landing Areas, from the 8th Edition, published in December 2016.
- 3.3 As a result of concerns within the industry that were further highlighted in an independent offshore helicopter pilot opinion survey reported in CAA Paper 97009 (summarised at Appendix E to [CAA Paper 2004/01](#)), the CAA has conducted a programme of research which culminated in the production of a specification for an improved lighting scheme for operations to offshore helidecks at night. The research and the initial specification are summarised and presented respectively, in [CAP 1077](#). The specification was incorporated into CAP 437 at 7th Edition published in May 2012. An updated and refined version based on early experience with installing the new lighting, was published in CAP 437 8th Edition. The industry has agreed to a

five-year voluntary retrofit programme of the new lighting with a compliance date of 31 March 2018; however, progress has been slower than expected or desired. The formal mandate provided by this SD will ensure that the acknowledged safety benefits of the new lighting are realised as originally agreed with the industry.

- 3.4 Helideck motion limits are presently specified in terms of a maximum pitch, roll and heave rate. Whereas these parameters may be appropriate for the landing itself, in-service experience and analysis of the associated mechanics indicate that they are poor predictors of whether the helicopter will tip or slide once landed on the helideck. Furthermore, the present limits take no account of wind (speed, relative direction and gusting), which can significantly affect on-deck stability. In addition, review of related Mandatory Occurrence Reports (MOR) highlights significant issues with misreporting of vessel motion to flight crews and changes in wind speed and direction after landing that need to be addressed. The new HMS standard that addresses all of these issues was added to CAP 437 at 8th Edition Amendment 1, published in September 2018. The industry agreed to a three-year voluntary retrofit programme of the new HMS with a compliance date of 31 March 2021; however, progress has been slower than expected or desired. The formal mandate provided by this SD will ensure that the acknowledged safety benefits of the new HMS are realised.

4 Applicability

- 4.1 The helideck fire-fighting scheme applies to the 72 NUIs listed in the Annex to Appendix D to CAP 437, 8th Edition Amendment 2 published in July 2021 but subject to any changes due to further decommissioning.
- 4.2 The helideck lighting scheme specified in Appendix C of CAP 437 8th Edition Amendment 2 applies to all offshore helidecks on the UK Continental Shelf to which offshore operations are conducted at night unless an earlier version is in use and has been approved by the CAA. "Night", as defined in the Air Navigation Order 2016, means the time from half an hour after sunset until half an hour before sunrise (both times inclusive), sunset and sunrise being determined at surface level.
- 4.3 The HMS standard referenced in CAP 437 8th Edition Amendment 2 applies to all moving offshore helidecks while operating on the UK Continental Shelf.

5 Queries

- 5.1 Any queries or requests for further guidance from AOC holders as a result of this communication should be addressed to the assigned Flight Operations Inspector in the first instance.
- 5.2 Otherwise, queries should be addressed to the following e-mail address:
SafetyPublicationsTeam@caa.co.uk.

6 Cancellation

- 6.1 This Directive will remain in force unless revoked by the CAA.

Signed: J Hanafin
for the Civil Aviation Authority

Date: 01 June 2022

Annex 1: Operational Directive

Annex 1 Operational Directive

To: Operators conducting commercial air transport offshore helicopter helideck operations.

1. The Civil Aviation Authority (CAA), in exercise of its powers under article 248 of the Air Navigation Order 2016 ('the Order'), directs the operator ('a specified operator') of any helicopter which is:
 - (a) registered in the United Kingdom and operated by a specified operator for whom the CAA is the competent authority; or
 - (b) flying in the United Kingdom or in the neighbourhood of an offshore installation;to comply with the requirements set out in paragraphs 3, 4 and 5.
2. This Directive is made in the interests of safe operations for the reasons set out in Chapters 10 and 14 of CAP 1145, the CAA safety review into offshore helicopter operations. Additionally, it is made in further response to the Air Accidents Investigation Branch (AAIB) Safety Recommendations 2003-133 and 135 issued following the accident to Eurocopter AS332L Super Puma G-BKZE at the West Navion drillship on 10 November 2001, and Safety Recommendation (SR) 2011-053 issued following the accident to Eurocopter EC225 LP Super Puma, G-REDU, when approaching the ETAP Central Production Facility platform on 18 February 2009.

Requirements

3. A specified operator must not conduct commercial air transport offshore operations to an offshore location without fire-fighting provisions that are fully compliant with Chapter 5 of CAP 437 unless doing so in accordance with procedures detailed in CAP 437 (8th Edition Amendment 2 as amended and published by the CAA), Appendix D or equivalent provisions as are approved by the CAA.
4. A specified operator must not conduct commercial air transport offshore operations at night to an offshore location unless that location has lighting comprising lit Touchdown/Positioning Marking and lit Heliport Identification Marking meeting the specification contained in CAP 437 (8th Edition Amendment 2 as amended and published by the CAA), Appendix C or an earlier specification approved by the CAA.
5. From 1 April 2021, a specified operator must not conduct commercial air transport offshore operations to an offshore location if the helideck motion exceeds stable deck conditions unless that location has a Helideck Monitoring System (HMS) meeting Rev.9 or later version of the HMS standard published on the Helideck Certification Agency's web site, or provisions as are approved by the CAA.

Definitions

6. In this Directive:
 - (a) 'Offshore operation' means a helicopter operation that has a substantial proportion of any flight conducted over open sea areas to or from an offshore location for the purpose of:
 - i) the support of offshore oil, gas and mineral exploration, production, storage and transport; or
 - ii) the support of offshore wind turbines and other renewable energy sources.
 - (b) 'Offshore location' means a facility intended to be used for helicopter operations on either:

- i) an offshore installation or a renewable energy installation as defined in the [Civil Aviation Act 1982](#)¹; or
 - ii) a fixed or floating offshore structure or vessel.
- (c) 'Night' has the same meaning as in Schedule 1 of the Order.
- (d) 'Stable deck conditions' means helideck pitch or roll of 1 degree or less, and heave rate of 0.4 metres per second or less (see [HCA Helideck Limitation List](#)).

Revocation and Commencement

7. The Operational Directive promulgated in Safety Directive SD-2020/003 dated 17 December 2020, is revoked.
8. This Directive comes into force on 01 June 2022 and will remain in force until revoked by the CAA.

¹ The Civil Aviation Act further refers to interpretations in:

[Mineral Workings \(Offshore Installations\) Act 1971](#)
[The Offshore Installations and Pipeline Works \(Management and Administration\) Regulations 1995](#)
[Energy Act 2004](#)