

AIRPROX REPORT No 2013010

Date/Time: 5 Feb 2013 1632Z

Position: 5645N 00100E (110nm
ESE ADN)

Airspace: HMR 110 (Class: G)
Reporting Ac Reported Ac

Type: SK92 NH90

Operator: CAT Foreign Mil

Alt/FL: 2000ft NK
RPS (980hPa) (NK)

Weather: IMC KLWD NK

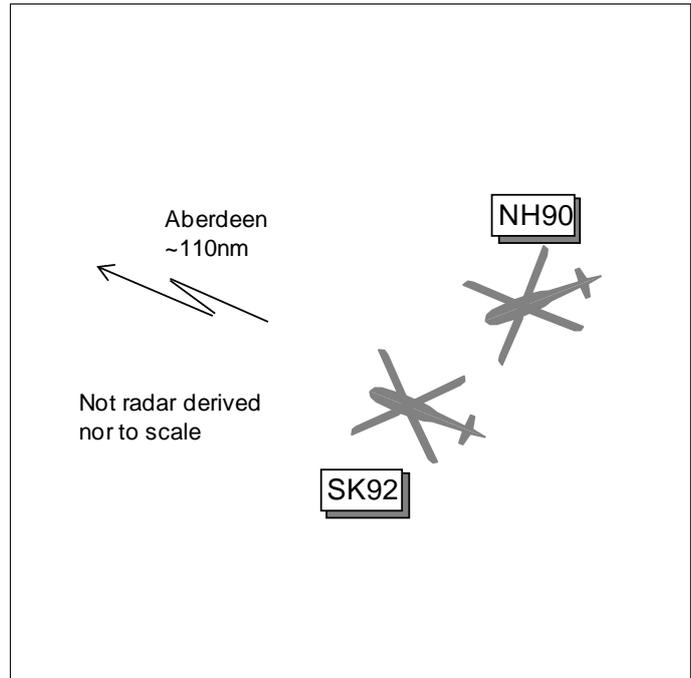
Visibility: NK

Reported Separation:

500ft V/Nil H Not seen

Recorded Separation:

NR



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE SK92 PILOT reports en-route from an oil rig to Aberdeen, IFR heading 290° at 140kt and in receipt of an Offshore TS from Aberdeen on 132.55MHz, squawking 7052 with Modes S and C; TCAS 2 was fitted. In the cruise at 2000ft McCabe QNH 980hPa on the 110HMR at 130nm both he and the co-pilot noticed a contact on both TCAS displays straight ahead by 10nm. This contact was showing no height information which was strange as ac operating in the area always show Mode C. He asked Aberdeen Radar if there was any traffic to affect them on their track and the controller said he had nothing on radar. At the same time another helicopter crew confirmed that they had the same contact on TCAS also with NMC. Flying in VMC they tried to identify the ac and when just E of the Mearsk Curlew oil rig he saw some strobe lights which appeared to be on a heading of 040° and below, about 200-300ft amsl. The SK92 then went IMC in cloud about 2nm from the Curlew rig and shortly thereafter they received a TCAS TA; no RA would be received from traffic with NMC. He became visual with a grey coloured Merlin helicopter, he thought, through a hole in the clouds as it passed almost underneath from about the 4 o'clock position to their 11 o'clock with about 500ft vertical separation. They informed ATC and in turn ATC passed on the information to the crew of another helicopter which was en-route to the Mearsk Curlew. The other helicopter's crew advised ATC that there was a Navy ship in the area that the Merlin appeared to be routing to. He had checked the NOTAMs that morning and D613A, D613B and D613C were active from FL110 up to FL550 so should not have affected them. He assessed the risk as medium. He expressed concern that traffic was operating in the area of intense helicopter operations at the same height as CAT; if this is essential the traffic should squawk Mode C to maximise the protection afforded by TCAS II.

RAC reports that extensive tracing action was carried out and the identity of the reported helicopter was eventually established. Radar analysis covering the period 1500-1730 and the area from N of Orkney Islands to the Wash and well to the E of the reported position did not reveal any radar tracks that could be correlated to the reported helicopter. RN Fleet Ops were contacted and were able to confirm that no RN ships or ac were in the area at the time. Foreign Embassy Air Attachés of nations that operate Merlins or similar types NH90s (Norway, Denmark, Netherlands, Italy, France and Germany) were contacted to ascertain if any of their assets were operating in the area, albeit 2 of the Air Attachés were contacted 4 months post incident owing to late identification by the UKAB of Merlin/NH90 helicopter operators. Four Air Attaches responded with negative activity, 1 was still awaiting feedback from their naval command however, almost 5 months post incident, the final Air

Attaché confirmed that their Navy had an NH90 helicopter operating from a frigate in the area. The NH90 crew reported not being aware of any other helicopter activity in the area so were unaware of the Airprox.

UKAB Note (1): Sunset was 1633Z.

ATSI reports that the Airprox was reported by the pilot of a Sikorsky SK92 at 2000ft on the 110 HMR at approximately 110nm from Aberdeen in Class G airspace when it came into proximity with a helicopter, believed to be a Merlin, possibly operating from a Navy ship.

The SK92 was operating IFR from the Trans Ocean Galaxy II oil rig to Aberdeen and was in receipt of an Offshore TS from Aberdeen Offshore (REBROS sector) on frequency 126.7MHz, using Wide Area Multilateration (WAM) surveillance.

CAA ATSI had access to the written report from the pilot of the SK92, the written report from the duty watch manager, Aberdeen radar recordings and RT recordings of the REBROS sector frequency.

The Aberdeen METARs are provided for 1620 and 1650:

EGPD 051620Z 31013KT 9999 SCT017 SCT030 05/03 Q0983 NOSIG= and EGPD 051650Z 31013KT 8000 -SHRA FEW020 BKN028 05/03 Q0983 TEMPO 4000 SHRA=

The pilot of the SK92 had previously contacted the REBROS sector when lifting from the Trans Ocean Galaxy II rig and was given climb to altitude 2000ft; an Offshore TS, using SSR only, was agreed with the REBROS sector controller.

At 1628:35 the pilot of the SK92 contacted the REBROS controller to advise that their TCAS, *"...showed a contact on the nose about er ten miles on the nose with no height information"*. The controller advised that the only contact, another helicopter (HELI2), was slightly R of the SK92's 12 o'clock at about 15nm opposite direction 2000ft above. The pilot of the SK92 advised the controller that they were aware of that traffic but that they had another contact on the nose with no height information about 5nm away moving, *"...quite quick"*. No other contacts could be seen on the WAM display.

The pilot of the SK92 speculated that there was a ship in the area. The controller advised that the Curlew oil rig was about 6nm ahead of the SK92 and the pilot agreed that it appeared to be coming from there.

The pilot of the HELI2 stated that they were showing the same contact with no height information and that it was to their SSE by approximately 8nm. The REBROS controller stated, *"...that'll be the Curlew"*.

At 1631:47 the SK92 reported to the REBROS controller that they were visual with the contact which was fast moving approximately 1nm to the N of the Curlew with strobes on which looked like a helicopter.

[UKAB Note (1): The REBROS controller then transmitted, *"...certainly not aware of anything out there sir we'll have a look on the other radar..."*. At 1632:10 the SK92 pilot replied, *"Okay well it it's coming up as er traffic on our TCAS now anyway"* to which the REBROS controller answered, *"Definitely nothing showing to me"*.

There was no indication on the WAM display of any traffic in the described area.

At 1633:19 the pilot of the SK92 reported, *"...there's a Merlin operating er one mile er North of the er Curlew believe he's about er two to three hundred feet at the moment"*. The REBROS controller acknowledged the information stating that Aberdeen had not been notified of anyone operating in that area and passed the information to other traffic in the vicinity.

At 1639:15 the REBROS controller asked the pilot of the SK92 if they had received a TCAS alert on the unknown traffic. The pilot replied that they had received a traffic alert with nothing showing height wise. The REBROS controller stated that the traffic must have been too low for the WAMS system to pick up and the pilot of the SK92 confirmed that the traffic was operating at approximately 3-400ft above the water, 2-3nm from the Curlew.

The HELI2 crew also reported having the unknown ac (suspected Merlin) displayed as proximate traffic with no height information.

At 1647:40 another helicopter (HELI3) that was inbound to the Curlew subsequently advised the REBROS controller that there appeared to be a Navy ship operating a couple of miles SW of the Curlew and that there also appeared to be a Merlin sitting off the stern of the boat. It was unclear if this was the same helicopter seen by the SK92.

At 1650:40 the SK92 flight was transferred to Aberdeen Radar on frequency 134.1MHz.

The written report from the pilot of the SK92 stated that the unknown ac (suspected Merlin) had passed approximately 500ft below the SK92. The pilot suggested that, as the area is an area of intense helicopter operation, it would be useful if other ac operating in the area squawked Mode C to assist Aberdeen in being aware of the traffic and for TCAS to be able to provide appropriate warnings.

At no point during the incident was there any indication on the WAMS display of the presence of the unknown ac (suspected Merlin) so the REBROS controller was unable to provide assistance in the form of TI to the pilot of the SK92. Based on information provided by the pilots the REBROS controller passed on the limited details available to other ac operating in the area.

The written report from the pilot of the SK92 reported that the unknown traffic passed 500ft below when the SK92 was at 2000ft. This is inconsistent with the report on the RT that the unknown traffic was 3-400ft above the water. Aberdeen ATSU reports that the low-level WAMS coverage in that area is good down to 1000ft, often lower. If the unknown traffic was at 1500ft it is likely that even without Mode C, the WAMS would have picked up the Mode A indication that triggered the TCAS alerts. This would indicate that the pilot's initial estimate that the unknown ac was at 3-400ft above sea level was more accurate.

The pilot of an SK92 helicopter reported an Airprox when it came into proximity with an unknown ac, believed to be a Merlin helicopter operating from a Navy ship in Class G airspace. As there was no indication on radar of the presence of the ac, the REBROS sector controller was unable to provide assistance in the form of TI.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of the SK92, transcripts of the relevant RT frequencies, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

Without any other corroborating information Members could only assess this incident on the limited description provided by the SK92 crew and the ATC investigation report. Members fully understood the crew's concern when, after sighting the NH90 crossing well ahead low-level, they had then entered IMC before the NH90 was seen on TCAS to approach them from their rear R quarter. Members thought that the SK92 crew did have the option of trying to maintain VMC, either by turning or manoeuvring in the vertical plane after seeking approval from Aberdeen Radar; however, it was probably not apparent that the NH90 was going to turn back towards them after it had crossed ahead. As the NH90 was not displaying Mode C, the SK92 crew had no idea as to the NH90's relative level from TCAS and the RA resolution function was inhibited. It appeared the SK92 crew

was under the impression that all ac operating in the area would be squawking with Mode C and that within/on the HMR structure, flights were afforded protection within a 'known traffic' environment. As shown in this case, within this Class G airspace there could be traffic operating autonomously, not known to the ATSU, and where pilots are responsible for maintaining their own separation from other traffic through see and avoid. A Royal Navy Board Member opined that, from previous experience, there was every likelihood that the helicopter operations from a ship would have been conducted at low-level (<500ft) and that the NH90 would have been flying VFR, in VMC, almost certainly below the cloud base whilst in communication with the ship. With the NH90 not showing on the WAMS display in an area with coverage down to 1000ft, on the balance of probability Members thought that the SK92 crew had probably misjudged the separation from the NH90 as it was seen through a hole in the clouds to pass below and it was this perceived proximity that had caused them concern. With the SK92 flying in IMC the NH90 crew had no opportunity to see it so it wasn't surprising that the crew was unaware of the SK92's presence. Taking all of these factors into account the Board believed that normal procedures, safety standards and parameters had pertained and that no risk of collision existed which led to an ERC score of 1, there being no credible accident scenario during this incident.

It is not clear whether the NH90 was fitted with Mode C. However, the Board agreed that this report should be forwarded to the relevant Naval Attaché to ensure awareness of the importance of Mode C, particularly wherever civilian traffic might be encountered.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The SK92 crew was concerned by the perceived proximity of the NH90.

Degree of Risk: E.

ERC Score: 1.