

AIRPROX REPORT No 2010042

Date/Time: 03 Mar 2010 1932Z NIGHT

Position: 5109N 00200W (2nm SW of Deptford Down)

Airspace: UKNLFS NRR1 (Class: G)

Reporting Ac Reported Ac

Type: Sea King HC4 Mi-17

Operator: HQ JHC HQ JHC

Alt/FL: 1000ft 1500ft
RPS (1010mb) RPS (1010mb)

Weather: VMC Sleet VMC CLOC

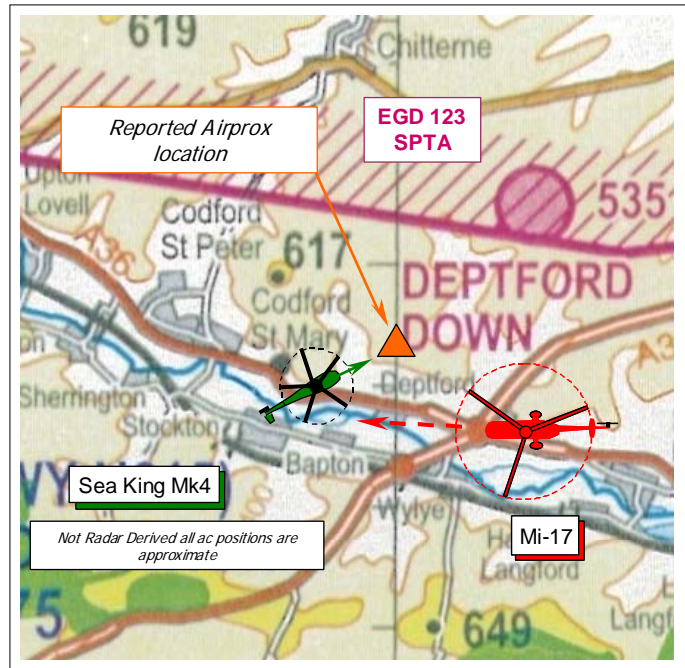
Visibility: >10km 15km

Reported Separation:

Nil V/200m H 200m H

Recorded Separation:

Not recorded



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE WESTLAND SEA KING HC4 PILOT reports that he was conducting a night low-level VFR cct training sortie using Night Vision Devices (NVDs) on Salisbury Plain Training Area (SPTA) and in communication with Salisbury OPS – an A/G Station - on 280.00MHz. The upper red HISL was on with the navigation lights set to steady/dim; the IR lights were 'off' as the flash was putting off the pilot in the RH seat whilst in the hover. A squawk of A7002 [Danger Areas General] was selected with Mode C on.

Whilst setting up for a datum autorotation at Deptford Down, heading 060° at 90kt, flying level at 1000ft PORTLAND RPS (1010mb), the aircrewman reported another ac - the Mi-17 - passing 200m down the starboard side of his helicopter at the same level but flying in the opposite direction. Assessing the Risk as 'medium', no avoiding action was taken as he thought the Mi-17 crew, once visual with his Sea King, had taken avoiding action. In order to set up for the autorotation, his Sea King helicopter was 1nm outside EG D123 when the Airprox occurred.

It would seem that the other crew was operating on a Boscombe Down ATC frequency and were warned of his Sea King's presence.

THE Mi-17 PILOT reports that he was conducting a dual night training sortie without NVDs and was in receipt of a BS from Boscombe APPROACH (APP). His Mi-17 displayed conventional night lighting, including flashing red anti-collision lights. A squawk was selected with Mode C on.

APP provided traffic information about another ac – the Sea King – which he believed he had visually identified so he thought there was no conflict with it. However, it transpired that the Sea King had actually been mis-identified for another light further in the distance. Approaching a position above the A36 between the villages of Deptford and Codford St Mary, about 1½nm S of the southern boundary of EGD123 (SPTA) (at 51°09'N 002°00'W), heading 280° at 100kt at an altitude of 1500ft PORTLAND RPS (1010mb), the Sea King was first seen passing down the starboard side 200m away on a reciprocal heading. There was no time available to take avoiding action and he assessed the Risk as 'high'. His workload was also 'high', which he attributed to the fully instructional reversionary night navigation sortie with a foreign student pilot and flight engineer. Furthermore, both crews were operating on different frequencies due to their position and operating area, but he added that a frequency change to Salisbury OPS was due before the next turning point along their route.

THE BOSCOMBE DOWN APPROACH CONTROLLER (APP) reports some 2 months after the incident [see UKAB Note (1)] that his recollection of the event may not be exact so long afterwards. He was the ATCO i/c and APPROACH controller working a fairly busy rotary radar training circuit (RTC) pattern; in addition he was controlling rotary VFR arrivals and departures and covering the LARS frequency. The Mi-17 departed from Boscombe Down under VFR low-level to the W under a BS for a clockwise NAVEX around SPTA. Even though the flight was under a BS, he called traffic operating in the vicinity of Deptford Down as he assessed it posed a risk of collision and, as such, had a duty of care to do so. The pilot then reported changing to the SPTA frequency. Later, just as he was about to leave the building at the end of night flying, he received a telephone call from Yeovilton asking if he had any rotary traffic flying in the vicinity of Deptford Down that evening as one of his pilots has come into close proximity to what he believed to be a Mi type helicopter. Yeovilton was informed of the ac airborne at the time and the telephone number of the Squadron passed. No mention was made that an Airprox had occurred or would be filed, so he did not file a report at the time, but left a note for the morning Supervisor about the telephone call. No further mention of the incident was received regarding an Airprox until about 2 months later when he was informed by the UKAB that an Airprox had been filed.

UKAB Note (1): This Airprox was first notified to the UKAB on 11 May, in excess of 2 months after the event occurred on 3 Mar. Boscombe Down ATC was contacted direct by UKAB staff on 12 May and controllers reports together with an impound of the relevant RT frequency was requested. The reported Mi-17 pilot was identified on 20 May and his report was received on 14 Jul.

UKAB Note (2): This Airprox occurred outwith recorded radar coverage.

HQ AIR BM ATM SAFETY ANALYSIS reports that this Airprox investigation has been undertaken some time after the event. This has led to a lack of evidence other than the controllers report provided. The aircraft in question was under a BS. The controller passed TI because he thought there was a definite risk. HQ Air ATM SM does not believe that ATC contributed to this Airprox.

UKAB Note (3): Analysis of the APP RT tape transcript reveals that the Mi-17 crew called APP at 1931:50 and was placed under a BS for the low-level departure via Wilton. Later, after APP passed the PORTLAND RPS of 1010mb, the controller queried the Mi-17 crew's operating altitude, which the pilot reported at 1937:52 as, *"..15 hundred on 1-0-1-0"*. Moments later at 1938:10, APP passed TI to the Mi-17 crew, *"[C/S] traffic North-West 2 miles tracking South, indicating 1 thousand feet"*, to which the Mi-17 crew replied *"[C/S] looking"* and then 3 sec later at 1938:18, added *"[C/S] visual"*. Just over 2min later at 1940:30, APP warned the Mi-17 crew *"[C/S] indicating on the southerly edge of D 1-2-3 which is active to 3 thousand feet"*. This was acknowledged by the Mi-17 crew who reported switching to their en-route frequency.

MOD LF OPS comments that military crews operating from Units based in LFA1/NRR1 are NOT required to book into the area for day or night flying. Other aircrew based outside the LFA/NRR are required to book into LFA1/NRR1 with the LFBC at Wittering. The booking is for statistical purposes, no information is passed on to other LFA1/NRR1 users unless they are performing an unusual flight or operating without, or, with reduced lighting, when prior approval must be obtained and an avoidance or NOTAM promulgated. In this context, the Sea King operating with IR lights off did constitute reduced lighting.

THE WESTLAND SEA KING HC4 PILOT'S UNIT, having subsequently identified the second ac as an Mi-17 and discussed this incident with that unit, comments that the Captain of the Mi-17 had mis-identified the Sea King operating at Deptford Down for another ac. He therefore only saw the Sea King when they had closed to a range of about 200m. A contributory factor to the incident was that the two ac were operating on separate frequencies whilst in the same vicinity.

HQ JHC comments that there are a number of scenarios which may have happened but the length of time passing between the incident and the filing of the report and detail of the reports means that the true cause and contributory factors is difficult to establish.

Whilst each ac involved was operating on a different frequency, the controller passed pertinent and timely information which should have prevented an Airprox. It appears that misidentification caused the Mi-17 pilot to feel comfortable that he was not flying towards the Sea King. It might be expected that if they had been operating on the same frequency they would have had more situational awareness and been in a better position to prevent the Airprox, but TI on the possible conflicting ac had been passed by Boscombe Down App. The Mi17 pilot states in his report that a frequency change to Salisbury Ops was due before the next turning point. It may have been prudent and better airmanship to have changed frequency earlier, particularly as they were closer to SPTA than Boscombe MATZ.

It is not clear from the report whether the manoeuvre by the Sea King to set up the datum autorotation (a circuit) contributed to the crew's ability to see the Mi-17. The ac may also have been on reciprocal headings at similar heights for a short period of time making it difficult to see relatively stationary lights against any background lights.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, a transcript of the Boscombe Down APP frequency, radar video recordings, a report from the air traffic controller involved and reports from the appropriate ATC and operating authorities.

The Sea King pilot reported he was flying at 1000ft RPS, whereas the Mi-17 pilot said he was at 1500ft RPS, and confirmed as such on RT before the TI was issued by APP. This TI to the Mi-17 crew quoted the Sea King as southbound indicating 1000ft (probably with the data displayed to APP referenced to 1013mb), suggesting there should have been about 500ft separation between the two helicopters when the Sea King was downwind. However the Sea King might have been climbing to set up for the autorotation when TI was given and, as the Airprox occurred out with recorded radar coverage, there was no independent view of the geometry and separation that pertained here. It seemed clear that the Sea King was somewhat higher than its pilot reported as he said these two ac had passed starboard-to-starboard, at about the same level. Another aspect was, however, that the Sea King crew was using NVDs and the Board was aware of the difficulties of range perception when using these devices. In spite of this, both pilots' accounts agreed that the two helicopters were 200m apart at the closest point and apparently too close for comfort at night.

The debate then centred on the frequencies in use at the time; the Mi-17 crew was about to switch to Salisbury OPS – the frequency used by the Sea King crew – that is normally used within SPTA, but as an A/G Station they cannot provide any form of ATS. Nevertheless, if all ac operating in the vicinity are on the same frequency and making appropriate RT calls, then pilots can form a mental air picture of what is happening around them. This was not possible here because the Airprox occurred just before the Mi-17 crew switched across whilst outside SPTA.

Both helicopters were displaying conventional lighting appropriate to their tasks and were plainly there to be seen. The Mi-17 pilot's frank admission that he had misidentified some lights when he was given TI on the Sea King was clearly an important factor, and thus he was plainly unaware of the other helicopters close proximity as they approached each other. Therefore, the Mi-17 pilot, busy monitoring what the other members of his crew were doing, was unable to engineer any greater separation before the close quarters situation arose. The Members agreed unanimously that their effective non-sighting was part of the Cause.

While it was clear from their report that the Mi-17 crew had not seen the Sea King in time to take avoiding action, it was not clear to the Board whether the Sea King pilot saw the Mi-17 early enough to take avoiding action had he thought it necessary. The Mi-17 should have been in the Sea King crew's field of view as it approached from the E and they should have been able to spot it as they turned inbound towards Deptford Down to set up for their autorotation. Although the Sea King pilot reported that the Mi-17 was first seen passing down their starboard side, he also reported that he took no avoiding action since it appeared that the Mi-17 crew had already done so. The implication,

that the Sea King could have taken avoiding action if necessary, led some Board Members to conclude that this was a late sighting. However the majority view prevailed and it was agreed that the Sea King crew, for whatever reason, did not see the Mi-17 in time to take effective avoiding action, so this was effectively a non-sighting on their part and the other half of the Cause. Furthermore, with neither crew aware of the close proximity of the other helicopter in time to take avoiding action the mutually agreed horizontal separation of 200m existed purely by chance. Some thought this separation sufficient to mitigate any actual Risk of a collision but others disagreed. The Board concluded, by a majority vote, that an actual Risk of collision had existed in the circumstances reported here.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Effectively non-sightings by the crews of both aircraft.

Degree of Risk: A.