

AIRPROX REPORT No 2011040

Date/Time: 11 May 2011 2128Z

Position: 5137N 00133W
(2nm SE Faringdon)

Airspace: UKNLFS (Class: G)

Reporting Ac Reported Ac

Type: Puma Puma

Operator: HQ JHC HQ JHC

Alt/FL: 250ft agl 300ft
(RPS 1017mb) (RPS 1017mb)

Weather: VMC CLBC VMC CLBC

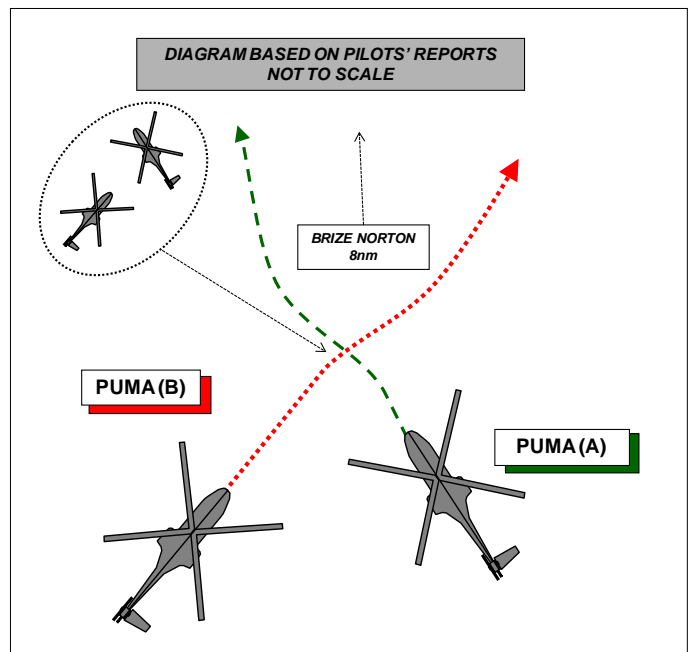
Visibility: 10km 20km

Reported Separation:

0 V/200m H 50ft V/300m H

Recorded Separation:

NR



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

PUMA (A) PILOT reports that during a night tactical training sortie, while operating on NVDs in Night LFA 1, displaying standard nav and red strobe lights, IR formation lights, and in receipt of a BS from Brize, they unexpectedly came within 200m of another Puma (Puma B) in flight.

Both sorties were due to lift at the same time, were de-conflicted during Night Brief and out-briefed at the Joint Ops Desk; however, they (Puma (A)) departed 15min late.

While in LFA 1, S of BZN CTZ, the other Puma lifted from Field 4 to Field 8 and called changing frequencies from Benson App to Brize Zone. He saw it an estimated 8km away and continued to call Brize Zone for a zone crossing while heading 330° at 120kt. The other ac was already working Brize Zone and its crew had not identified them.

They were in a medium workload situation and the Brize frequency was busy but eventually he gave a position report and requested clearance to cross the CTZ. At that point they thought the other Puma was 2km away in their 9 o'clock and he thought that it would cross behind them but on his second glance the captain realised that it was only 200m away and took avoiding action by breaking [presumably left].

After consultation on the ground, the other Puma pilot was only aware of them crossing through his 12 o'clock position, 200m away, when the position call was made and they [the reporting Puma] took avoiding action. He assessed the risk as being Medium.

Both crews then continued their flight without further incident.

PUMA (B) PILOT reports that he was flying a Night Competence to Instruct (C21) sortie in the RAF Benson local area. They were displaying red HISLs, nav lights and NVG formation lights and were in receipt of a BS from Brize Zone. They had a comprehensive deconfliction brief before takeoff and the initial part of the sortie was flown without incident. On lifting from the second training field, the crew was aware of another Puma operating at another Benson training field nearby but noted that they were still orbiting the field and not a confliction.

They then transited towards a training field close to the edge of Brize Norton CTZ and changed to the Brize Zone frequency in accordance with local procedures. Bearing in mind the previously noted location of the other Puma and that it still had to carry out an approach and landing at the field, it was assessed that it would be well ahead, although they were not visual with it at that stage. Shortly after initial contact with Brize, while heading 040° at 100kt, in a moderate workload situation, they heard the other Puma call up for a transit from the training field to a Brize VRP to the W of the CTZ earlier than expected, which caused the HP/Captain to look for the ac. Shortly after this, he saw the Puma almost directly ahead of them at a distance that was assessed to be 200-300m.

While continuing without manoeuvring would not have resulted in a collision, the HP elected to carry out a gentle level right-hand turn to increase the separation between the ac. Once both ac were well clear, contact was established on the FM radio to confirm that both crews were aware of what had just occurred and to confirm that it would be discussed further on the ground. He assessed the risk as being low and the sortie was continued without further incident.

The crew commented that both crews had been operating with poor-quality 3rd-generation NVG. The deconfliction plan was robust and both crews were aware of the rough location of the other ac. The issue arose because the crew of the other Puma assessed that the distance between ac was considerably greater than it actually was due to the difficulty of judging distance on NVG. This was compounded because the crew were operating on a different frequency and did not hear the call that the other ac was lifting from the field site, having conducted their approach considerably quicker than had been anticipated. Both crews believed that the incident had been caused by the single U/VHF radio in the Puma HC1; had the crew of Puma (B) been aware that Puma (A) had lifted from the field site earlier than expected, they would have had much better SA.

HQ 1GP BM SM reports that at the CPA both Pumas were in receipt of a BS from Brize Zone.

Due to the low alt of the ac, the Airprox was not visible on the radar recording, although both ac did paint intermittently both before and after the incident. That being the case, this report is based on the pilots' reports and the RT transcript.

Both Pumas called Zone within a short period of each other between 2126:45 and 2126:53, with Zone answering Puma (B) first, placing it on a BS. On their initial call, Puma (B) stated that they would be, "*operating to the south of the Zone into a er Benson field eight, just up against the edge of the Zone*" and Puma (A) stated on the initial call at 2127:52 that they were, "*two miles south of Faringdon, visual with the other traffic, request Faringdon Burford crossing at er low level*".

Based upon the pilot's reports, it is reasonable to assume that the Airprox occurred shortly after 2127:52 and that Puma (A) crew was visual with Puma (B). This is supported by the statement in Puma (A) pilot's report that he thought that they sighted Puma (B) at a range of 2km but quickly realised that the separation was far less. From an ATM perspective, Zone was not in a position to affect the outcome of this occurrence.

UKAB Note (1): The very intermittent radar data from the Clee Hill recording broadly supports the diagram above.

HQ JHC comments that this incident occurred when all reasonable measures for deconfliction had been taken on the ground prior to launch. A combination of events – the late launch of one ac, the misjudging of distance on NVG and the early completion of a serial, resulted in the two ac unexpectedly coming into close proximity with each other. It is recognised that the preference would be to conduct essential low flying training elsewhere in the UK in areas of lower density airspace, but the current bounds of the NRR make this difficult. This HQ has already articulated the mitigation measures in place in NRR1 in recent Airprox discussed at the UK Airprox Board.

It is clear that the fitting of TCAS, which is being actively pursued by this HQ, would have significantly helped to prevent this incident. The CO of 230 Sqn is, in addition, investigating the use of the VHF-FM radio for deconfliction between Benson based squadrons.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

Procedural deconfliction is precisely that, it is only accurate at a specific time and is dependent on there being no late changes to routes or timings, both of which are often tactically necessary and therefore commonplace; nonetheless such 'deconfliction' is helpful provided that its limitations are clearly understood; further, it can be very difficult in multi-aircraft situations. It was not clear to the Board whether this particular deconfliction plan contained contingencies for delays or rerouting but in this situation where only 2 ac were involved, Members considered that, despite the difficulty, the delay of Puma (A) should have been relayed to Puma (B) and the effect of that delay assimilated by both crews.

Notwithstanding any deconfliction plan and that it was night, the incident took place in the 'see and avoid' environment of a multi-user night low flying area. Although the crew of Puma (A) 'saw' Puma (B) they initially misinterpreted its range and therefore underestimated the threat it posed; the crew of Puma (B) on the other hand did not see Puma (A) until it was 'ahead' of them and flying away. The Board interpreted this as being an 'effective non-sighting' by Puma (B) crew. When assessing the part played by Crew (A), there was much more discussion. The Board had no information on the part played by cultural lighting or terrain but assumed that they had not been significant factors since the ac was seen by at least one crewmember; its range, however, was initially overestimated significantly. While accepting the difficulty of estimating range at night, a Member familiar with NVG operations expressed surprise, as in his experience the opposite (i.e. an underestimate) is more usual.

Although the flight paths of the two ac were such that they were not going to collide, Members considered that there had been a compromise of normally accepted safety margins.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Effectively a non-sighting by Puma (B) crew and a late appreciation of Puma (B)'s range by Puma (A) crew.

Degree of Risk: B.