

## **AIRPROX REPORT No 2010109**

Date/Time: 18 Aug 2010 (Wednesday) 1920Z

Position: 5140N 00104W (4nm  
N Benson)

Airspace: Benson MATZ (Class: G)

Reporting Ac      Reported Ac

Type: Puma              NK

Operator: HQ JHC              NK              Due to the dynamic situation and the light ac frequently dropping below radar cover, a diagram is not possible

Alt/FL: 1200ft              NK  
(QFE 1000mb)

Weather: VMC CLBC              NK

Visibility: 30km              NK

Reported Separation:

300ft V/0m H              NK

Recorded Separation:

NR

### **PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

**THE PUMA PILOT** reports that he was conducting an instrument recovery to RAF Benson following a local-area training sortie and was squawking 3617 with Mode C. They had climbed to above the Safety Alt, were remaining VMC below the cloud base due to the absence of an IF option since there were CBs reported. During the hold for the VOR-ILS/DME procedure for RW19 at Benson, the crew had been given a TS [by APP] and were visual with an ac, reported by ATC, conducting aerobatics about 1000ft below and 3nm away, but clear of the approach lane.

Following the hold the crew continued outbound with the procedure then turned onto the final approach for RW19 heading 190° at 100kt. When established on the localiser established the pilot began a descent on the glideslope and agreed a TS from Talkdown (PAR). Although VMC, the handling pilot was simulated IF and 'eyes in' flying the ILS. At 4nm on the approach, the Talkdown Controller warned the crew of traffic in their 1 o'clock at ½nm in a rapid climb and on looking up, the HP immediately saw the ac as it climbed vertically from below to above them. Both pilots were by then visual with the ac, which was conducting aerobatics, but the HP elected to hold course until after the ac's manoeuvre so that he could determine the direction that the ac would fly. Following what appeared to be a stall-turn or flick manoeuvre (the ac appeared to have zero velocity at the top of the climb), it began a rapid descent, moving right to left, towards them [still on the approach]. The HP called evasive action to the crew and initially banked left but as it became clear that the two ac were on converging tracks, he reversed the manoeuvre by breaking right, to pass beneath the other ac.

The crew estimated that the ac came within 300ft on a converging track while it was conducting high-energy manoeuvres before climbing away and departing to the E.

The crew then resumed the approach, landing at Benson without further incident.

They assessed the risk as being high.

The other ac was reported as being a low-wing dark coloured monoplane.

The PAR Controller provided a report but for brevity has not been included as it is summarised well below.

**MIL ACC** reports that while the radar replay does not start early enough to verify that the TI provided by Benson APP to the Puma referred to the reported ac, in a subsequent conversation APP has stated that this was the case. Furthermore, while the submitted tape transcript does not extend to cover the end sequence of the occurrence as the Puma avoided the reported ac, RAF Benson has confirmed after listening to the tape, that there are no further transmissions on the PAR frequency, other than those normal for ILS monitoring.

Although it does not appear on the tape transcript, given that the tapes were only originally impounded to cover the period immediately before the Airprox, APP reported in a subsequent conversation that what he believed to have been the pilot of the reported ac, called on the RT around an hour before the occurrence to request a service and to conduct aerobatics at Benson. Since Benson was busy at the time, this request was declined and the pilot replied that they would conduct the aerobatics elsewhere also turning down the offer of an ATS.

As the Puma manoeuvred in the hold and then commenced the procedure, APP provided TI on a manoeuvring primary radar contact on four occasions, with the pilot reporting visual on the first, third and fourth occasions. Although the radar replay does not cover this period, it is clear from the transcript that the TI is related to a single ac and, based upon the controller's report, that APP believed it to be the same ac that had called him previously.

At 1819:43, the Puma pilot established contact with Benson PAR who was using the PAR to monitor the ILS approach. At 1821:15, PAR passed accurate TI to the Puma and the pilot responded that they were visual around 3sec later.

The CPA occurred at about 1821:45 with the radar returns merging, as the reported ac apparently completed a stall-turn manoeuvre and descended back through the level of the Puma.

Benson APP and PAR showed a sound appreciation of the situation and provided timely and relevant TI to the Puma crew, which enabled them to develop their SA, which in turn allowed them to avoid the reported ac.

Although understandably, the light ac pilot's request to conduct aerobatics at Benson was denied, he declined the further offer of an ATS and proceeding to conduct high energy manoeuvres, without an operative transponder, in the approach lane to a busy airfield. Whilst the CPA was in Class G airspace, and it is understood that there is no requirement for civil pilots to recognise MATZs, HQ Air BM SM considers that the pilot of the reported ac demonstrated a poor level of airmanship and decision-making.

UKAB Note (1): The Puma shows throughout the recordings of all nearby radar heads, squawking 3617, in the hold and subsequent instrument approach as described by its pilot. The light ac can be seen on the recording of the Heathrow 10cm radar as a primary only contact, first appearing in the region of Long Crendon, Bucks at 1813:30. It also shows intermittently on other radar heads. It flew aerobatics in approximately that position until 1816:40 before drifting to the S onto the Benson instrument approach lane and into the MATZ (but just outside the ATZ - over the M40 at 1818), before continuing further S and continuing its aerobatics 3nm N of Benson at 1820. The CPA is at 1821:45 but the aerobatic ac has disappeared below radar cover reappearing behind the Puma 4sec later. The ac then continues to fly aerobatics in the general area of the M40 NE of Benson until the end of the recording at 1831:48. Despite extensive procedural tracing action the other ac could not be traced.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available included reports from the Puma pilot, transcripts of the relevant RT frequencies, radar recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authorities.

Members agreed that, although not specifically prohibited, conducting aerobatics near or in the MATZ of a busy airfield during its published operating hours and without the knowledge of ATC, is poor airmanship. Although they could not conclude that the pilot who called about an hour before the incident requesting that he conduct aerobatics over Benson, was the same one as the Puma pilot encountered later, Members considered that this could well have been the case; it was therefore disappointing that the identity of the ac was not captured on the RT recording. Pilot Members observed that, since the radar recording showed that the light ac had conducted what appeared to be several successive aerobatic sequences, it was most likely being flown by a competition (and therefore by implication experienced GA) pilot, so the lapse of airmanship was doubly disappointing.

In this incident, however, the accurate TI passed on several occasions by Benson concerning the manoeuvring ac, enabled the Puma crew to see it and keep a mental plot of its approximate position. At the CPA [by then with the Puma on the ILS localiser], however, and again prompted by TI from Benson at ½nm, they regained visual contact with it but were not able to take effective avoiding action, as they were unable to predict the other ac's flightpath. Even when unhindered by flying simulated IF, Members observed that avoiding an aggressively manoeuvring small ac can be very difficult as the intentions of the pilot are not predictable. That being the case, Members agreed that in this incident there had been a degradation of normally accepted safety standards.

The Board considered whether or not it was reasonable to expect the Puma crew to have seen the light ac earlier and broken off the approach. They reported on 2 earlier occasions that they had seen the ac, but Members thought that maintaining continuous visual contact with it would probably not have been possible due to the restricted vision from the Puma and the turns required by the instrument pattern being flown. That being the case they agreed that this had been a conflict between the 2 ac in Class G airspace.

### **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: A conflict on the Benson instrument approach between a Puma and a light aircraft conducting aerobatics.

Degree of Risk: B