

AIRPROX REPORT No 2012080

Date/Time: 14 June 2012 1035Z

Position: 5248N 00246W
(3nm W RAF Shawbury)

Airspace: Shawbury MATZ (Class: G)

Reporting Ac Reported Ac

Type: Squirrel Untraced ac

Operator: HQ Air (Trg) NK

Alt/FL: 1000ft NK
QFE (1007hPa)

Weather: VMC CLBC NK

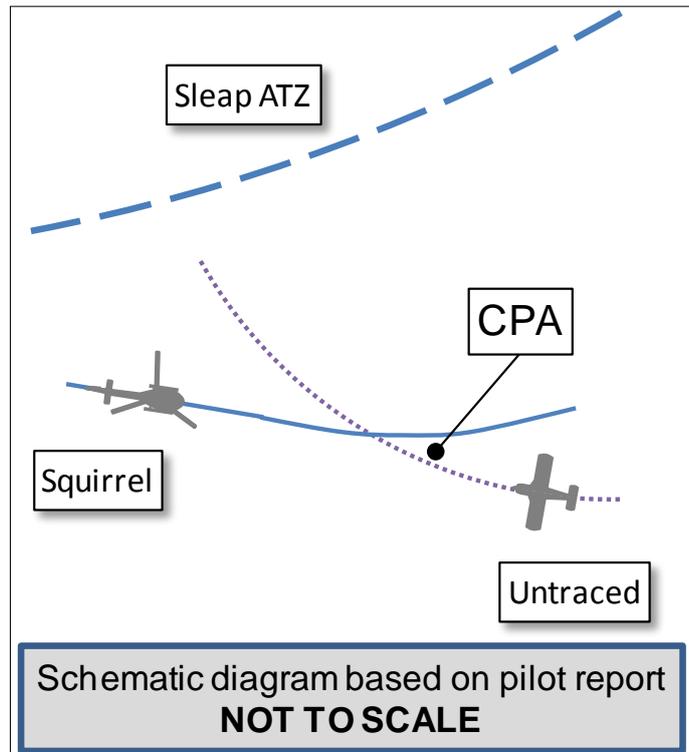
Visibility: 10km NK

Reported Separation:

350ft V/100m H NK

Recorded Separation:

NK



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE SQUIRREL PILOT reports recovering to RAF Shawbury under VFR in a black and yellow helicopter with upper and lower strobes and navigation lights on. The SSR transponder was selected on with a discrete squawk and Modes 3/A and C. TCAS was not fitted. Passing Harmer Hill gate at height 1000ft, heading 090° at 100kts, he saw a low-wing, single piston-engine, blue and white ac 400m away heading directly towards him in a shallow R turn at the same level. He told the HP to initiate a descent and bank the ac L, away from the oncoming traffic. The other ac passed overhead and did not appear to take any avoiding action but maintained its shallow right bank. He reported that the HP had said he had not seen the other ac due to the aspect of the helicopter airframe and had wondered why they were initiating a descent. However, when told why he was manoeuvring, he then also saw the other ac. The Squirrel pilot noted that the crew were in agreement that the other ac had passed within 100m.

He assessed the risk as 'Very High'.

THE SHAWBURY AERODROME CONTROLLER reports that the Squirrel pilot called for a visual join from the western gate (Harmer Hill). A joining clearance was issued, after which the pilot stated he was avoiding an ac on his nose. He asked if the Controller had any details on the ac. On looking at the Hi-Brite radar slave the Controller saw a 7000 squawk without Mode C in the vicinity of the Squirrel helicopter. He passed this information to the Squirrel pilot and then observed the 7000 squawk track into the Sleep ATZ. He advised the Squirrel pilot that the other ac was within the confines of the Sleep ATZ and appeared to be in the cct pattern. He noted the Squirrel pilot informed him that the other ac was FW, that he did not believe the pilot of the other ac had seen him at any stage and that the 2 ac came within 100m of each other. He passed this information to the ATC Supervisor.

THE SHAWBURY ATC SUPERVISOR reports that the Squirrel pilot transferred to the ADC RT frequency at the appropriate VFR gate. He then heard on the ADC frequency that the pilot was avoiding a FW aircraft. The ac had left the Sleep ATZ and was not in RT contact with any Shawbury controllers. He contacted the Shropshire Aero Club at Sleep and was informed that the Sleep cct was too busy to identify the aircraft that had strayed out of the ATZ and that there were a number of visitors at Sleep who 'may not know the procedures'.

BM SAFETY MANAGEMENT reports that the Airprox occurred on 14 Jun 12 between a Squirrel HT2 operating VFR, recovering to RAF Shawbury through the Harmer Hill gate and in communication with Shawbury (SHY) TWR, and an untraced low-wing, single-engine, light ac.

Given the height at which the Airprox took place and the range from the closest NATS radar head, no radar replay was available with which to conduct the investigation.

The Squirrel pilot reported VMC with unlimited visibility and SCT cloud at 2000ft. He was conducting a visual recovery to SHY, routing east through the Harmer Hill gate (W of SHY), illustrated at Figure 1. Sleep airfield is NW of Shawbury and SW of Wem.



Figure 1. RAF Shawbury Local Area.

Given that the Airprox occurred on TWR freq, the unit did not perceive a requirement to complete a DASOR; consequently, their occurrence report was not completed until a significant time had elapsed after the incident and their recollection has suffered accordingly. Specifically, they were unable to provide an assessment of their workload or task complexity at the time of the occurrence. Furthermore, since submitting their DASOR the controller has been absent from work, so BM SM has been unable to obtain additional material. Consequently, the investigation has been based wholly on the reports of the Squirrel pilot and the ADC, the TWR and Low-Level R/T and landline transcripts.

The Squirrel pilot contacted Low-Level at 1022:55, “*east abeam Wrexham*”, was provided with a BS and instructed to “*report at Harmer Hill*”, which he acknowledged. Low-Level is a distinct control position operated by Shawbury ATC that provides a BS to all ac operating within LFA 9, Shawbury’s Dedicated User Area. Analysis of the transcript has shown that, in the lead-up to the Airprox, Low-Level had at least 3 speaking units on freq; however, it has not been possible to determine the exact number. Moreover, it has not proved possible to determine whether the Low-Level position was band-boxed with another control position.

At 1031:41 Low-Level requested the Squirrel’s position and was informed that it was, “*currently west abeam Sleep and just heading down towards the gate.*” Low-Level replied to the Squirrel pilot, “*That’s a known area of poor radar performance, [unintelligible] that explains it*” which he

acknowledged. Based upon this exchange, it is reasonable to suggest that the Squirrel helicopter PSR or SSR returns were not visible on Low-Level's surveillance display at that time. The RAF Shawbury FOB 2309 (F12) states that radar services are limited between 7-15 miles on the 300-350 radials, up to 3000ft, due to poor radar performance or ground masking.

At 1033:26 the Squirrel pilot reported that he was, "*approaching Harmer Hill, stud 2*", which was acknowledged by Low-Level. At 1033:52 the Squirrel pilot first contacted TWR, requesting to join via Harmer Hill, which was acknowledged by the ADC and the airfield details were passed. The ADC described their workload as low with 3 ac on freq and routine task complexity. Immediately after this transmission, the Squirrel pilot transmitted that he was, "*descending, traffic avoidance on the nose*" which was acknowledged by the ADC. Based upon the Squirrel pilot's reported speed, he had flown approximately 1¼nm between leaving the Low-Level freq and reporting taking avoiding action. The ADC looked at the Hi-Brite VCR Radar Display (VRD), observed a '7000 squawk in [the Squirrel's] vicinity' and 'watched the 7000 squawk track into the Sleaf ATZ'. The Supervisor subsequently spoke to an individual from the Shropshire Aero Club, which operates from Sleaf, and was informed that there was a number of visiting ac who 'may not know the procedures.'

Based upon the ADC's report, the untraced GA aircraft was believed to have been conducting ccts at Sleaf at the time of the Airprox and had flown outside the ATZ. The Supervisor stated that the untraced GA ac was not in communication with any Shawbury controller.

The Letter of Agreement between RAF Shawbury and the Shropshire Aero Club states that 'during the normal operating hours of the RAF Shawbury CMATZ, civil aircraft **will** contact Shawbury Zone before leaving the Sleaf ATZ. In contrast, the AIP entry for Sleaf states that 'Aircraft intending to penetrate Shawbury MATZ **should** contact Shawbury Zone...prior to leaving Sleaf ATZ' and that 'PPR and a briefing by telephone from Sleaf is essential'.

The MMATM Chapter 18 Para 7 states that 'provided that appropriate training objectives have been defined and met...and aircraft have been identified' the Hi-Brite VRD may, exceptionally, be used to pass TI 'when the controller considers that doing so would aid the integration of traffic'. Notwithstanding the controller's Duty of Care, the Regulator has confirmed that this provision of TI is related solely to the integration of participating traffic and not to provide TI on non-participating, conflicting traffic.

CAP774 Chapter 2 Para 5 states that pilots in receipt of a BS 'should not expect any form of traffic information from a controller... and the pilot remains responsible for collision avoidance at all times'.

Notwithstanding the fact that the Squirrel crew were in receipt of an ATS, they were operating VFR and as such were required to discharge their responsibilities to 'see and avoid' without ATC assistance; this they did, albeit with reduced safety margins.

From Low-Level's perspective, at the point at which the Squirrel pilot left Low-Level's freq, it is likely that the untraced GA was within the Sleaf ATZ and could be deemed to be no threat. More so given that no ac departing Sleaf were in communication with Shawbury Zone at that point. Therefore, there was no imperative, nor requirement, for Low-Level to have passed a traffic warning to the Squirrel.

From the ADC's perspective, the Regulation for the use of the Hi-Brite VRD is explicit in excluding the provision of TI on conflicting traffic and focuses on its use in integrating circuit traffic. Whilst the controller's Duty of Care towards the Squirrel's crew remains, this requires the controller to perceive a potential confliction and given that the ADC was not required to integrate traffic, their focus would have been on visual scan, specifically toward the other ac established within the visual circuit, not the Hi-Brite VRD. Thus the controller was unable to perceive the confliction which, in this case, came about through the flight of the untraced GA ac outwith the agreement between RAF Shawbury and Shropshire Aero Club.

Whilst the statement made by the individual at the Shropshire Aero Club to the Shawbury Supervisor is not necessarily representative of the Club's policy, it is of concern nonetheless. More so, given that the safe operation of these neighbouring aerodromes is based upon compliance with the procedures laid down in the Letter of Agreement and the AIP. BM SM contends that Shropshire Aero Club must be able to assure RAF Shawbury that their briefing process for visiting ac operators is robust, in order that the associated operating risks are tolerable and ALARP. Moreover, whilst compliance with the Sleaf AIP entry may have prevented this Airprox, it does differ from the Letter of Agreement; a difference which should be researched. RAF Shawbury remains engaged with Shropshire Aero Club to ensure that their common operating practices permit continued safe operations.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included a report from the Squirrel pilot, transcripts of the RAF Shawbury RT frequencies, a report from the RAF Shawbury air traffic controllers involved and reports from the appropriate ATC and operating authorities.

Board Members discussed the geometry of the Airprox and questioned whether the untraced light ac was in fact outside the Sleaf ATZ. The Military Advisor amplified on the location of the Harmer Hill VFR Gate and the Board Members accepted that the Squirrel pilot would be used to transiting past the geographical location of the VFR Gate and that his route took him clear of the Sleaf ATZ. Consequently, the light ac was operating outside the Sleaf ATZ. Notwithstanding this, the GA Member pointed out that the light ac was operating in Class G airspace, albeit within the RAF Shawbury MATZ, and that the principle of see and avoid applied. He also opined that the Squirrel pilot saw the light ac at sufficient range that he took appropriate action and was able to attain an estimated miss-distance of 350ft vertically and 100m horizontally.

The issue of the explicit exclusion on passing TI of conflicting traffic using the Hi-Brite display was also discussed. The Military ATC Member stated that the Hi-Brite display was not taken as a primary feed from the radar head, but rather as a 'feed from a feed' of another display in ATC and as such could be subject to latency and display of erroneous information. It was therefore not reliable or safe to use for TI on conflicting traffic. Other members opined that this was an undesirable state of affairs but also that it was not germane to this Airprox.

The Military Training Member questioned whether the Letter of Agreement (LoA) had been complied with. The Board agreed that it had not, but were of the view that a Letter of Agreement was established between units, not individuals. It was therefore the responsibility of Shropshire Aero Club to ensure that its members and visiting pilots conformed to the LoA. The GA Member also expressed his concern at the apparent lack of co-operation from the Shropshire Aero Club described by the Shawbury ATC Supervisor and commented on in the BM SM Report. The Board questioned whether the LoA applied just to members and visitors to the Shropshire Aero Club or to all visitors to Sleaf A/D.

[UKAB Post-meeting Note: UK AIP AD 2-EGCV-1-1 refers. The Shropshire Aero Club is the A/D administrator and as such is responsible for the operation of ac from the A/D iaw local regulations.]

Members accepted that the Squirrel pilot would not have expected to meet another ac at that position in the MATZ and that his sighting of it was late. However, given the miss-distance he achieved, it was clear that his avoiding action was effective in removing the risk of a collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by the Squirrel crew of the untraced light ac operating outside the Sleaf ATZ.

Degree of Risk: C.