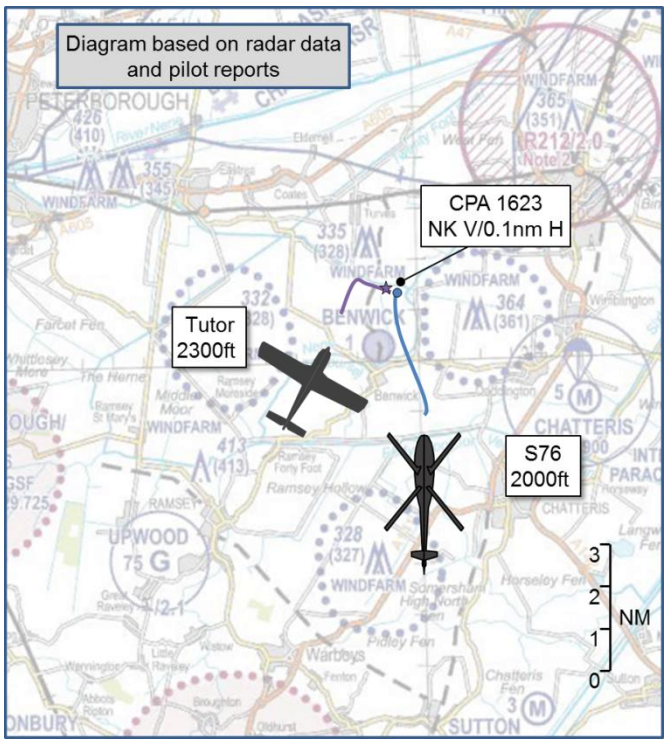
AIRPROX REPORT No 2014137

Date/Time:	7 Aug 2014 1620Z	
Position:	5231N 00001W (IVO Benwick)	
Airspace:	London FIR	(*Class*: G)
	Aircraft 1	*Aircraft 2*
Type:	Tutor	S76
Operator:	HQ Air (Trg)	Civ Comm
Alt/FL:	2300ft RPS (1010hPa)	2000ft QNH (1004hPa)
Conditions:	VMC	VMC
Visibility:	30km	>10km
Reported Separation:	100ft V/20m H	300ft V/0.5nm H
Recorded Separation:	NK V/0.1nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE TUTOR PILOT reports flying a white aircraft with strobes and navigation lights illuminated and SSR transponder Mode A, C and S selected. The aircraft was fitted with a TAS. He was receiving a Traffic Service from Lakenheath and conducting a PFL to a field, initially on a northerly heading. On descending through 2300ft and turning crosswind, he saw a dark-blue coloured rotary aircraft transiting directly below on a northerly heading. The traffic had not appeared on the TAS[1], and there had been no warning from Lakenheath ATC. The Captain took avoiding action by conducting an emergency break up and left. He reported the Airprox to ATC over the radio and elected to return to Wyton to continue the PFL exercise there.

He assessed the risk of collision as 'Very High'.

THE S76 PILOT reports flying a blue aircraft with silver stripes. He did not report which lights were illuminated. He reported that his transponder had Modes A, C and S selected, and the aircraft was fitted with TCAS I. He was receiving a Basic Service from Cambridge, and first received a TCAS warning at 2nm. He saw the aircraft approaching from his left at about the same altitude; because it was approaching from the left he expected it to turn to go behind him but it appeared to do nothing, so he initiated a descent. He thought there was no risk of collision, and opined that as a professional pilot he was used to seeing aircraft close by.

He assessed the risk of collision as 'None'.

THE LAKENHEATH CONTROLLER reports that he has no recollection of the incident.

THE LAKENHEATH SENIOR CONTROLLER reports that, unfortunately, Lakenheath were notified 46 days after the event[2] and recordings are automatically deleted after 45 days. An investigation into the event found that the controllers involved could not remember the incident, and no record of a reported Airprox was in the Daily Record of Facility Operations. A flight strip was found with the

[1] Traffic Advisory System

[2] Lakenheath had become aware of the Airprox only when the UKAB staff had followed up the initial Aiprox notification procedure. It appeared that there had been a disconnect in formally notifying Lakenheath of the event, and UKAB staff are pursuing a more formalised process for notification of USAFE units and others through RAC, ATSI and BM investigative stakeholders.

details of the Tutor aircraft, but the flights strips do not indicate the Lakenheath controllers were speaking to a helicopter at that time.

Factual Background

The weather at Cambridge was reported as:

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EGSC 071620Z VRB02KT 9999 SCT046 23/10 Q1014
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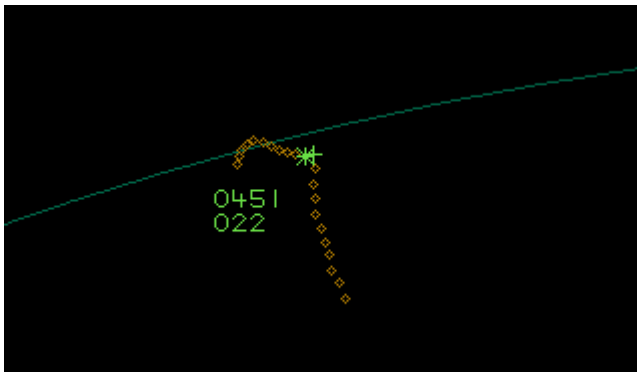
Analysis and Investigation

CAA ATSI

The S76 departed from Cambridge and was in receipt of a Basic Service from Cambridge Approach who were providing the service without the aid of Surveillance Equipment. At 1621:47 the S76 reported that he was happy to "*QSY en-route*" and did not state the onward frequency he was going to. The S76 was not displaying an SSR code so it was not possible to determine his onward frequency from the transponder indication. The Airprox occurred just under 2 minutes after the S76 left the Cambridge frequency. The tracks of the S76 and Tutor crossed and the S76 reported the vertical distance between the two aircraft as 300ft with the Tutor reporting it as 100ft.



Screenshot 1623:32 with S76 tracking north, Tutor displaying transponder code 0451 (Lakenheath) and tracking east.

UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance and for not flying into such proximity as to create a danger of collision[3]. The geometry was a 'converging' situation so the Tutor pilot was required to give way[4].

Comments

HQ Air Command

This incident serves as a reminder that TAS will not always detect another transponding aircraft (though it is not clear in this case why the Tutor's TAS display did not show the helicopter) and also that TI from ATC may not be forthcoming; it is therefore essential to visually clear any intended flight path. The Tutor pilot was clearly surprised by the proximity of the helicopter, though the S76 pilot had received a TCAS contact at 2nm and gained visual with the Tutor co-altitude. However, it seems that the S76 pilot assumed that the Tutor pilot would have been visual and would then turn behind – a flawed assumption that allowed the separation to decrease further. The S76 pilot could perhaps have been more proactive and manoeuvred in more than

[3] Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).
[4] ibid., Rule 9 (Converging).

one plane to increase the miss distance, noting that he states that he was comfortable with the separation generated. Notably, the two pilots had vastly differing assessments of the collision risk in this incident.

USAFE UK

It is regrettable that information on this Airprox reached Lakenheath too late for the production of a tape transcript. Further, had the controller been aware of Airprox immediately after its occurrence then, as is normal, the tapes would have been impounded at the time. That there is no record of the Airprox, either on the FPS or in the Daily Record of Facility Operation (Watch Log), as well as the controller having no memory of the incident, suggests that the airborne report from the Tutor was not received by the Lakenheath controller. That said, the Tutor appeared not to have received any Traffic Information on the S76, a matter which has been addressed by the Unit.

Summary

An Airprox was reported on 7 Aug 2014 at 1620 when a Tutor and a S76 flew into proximity at about 2000ft SW of Peterborough. The Tutor pilot was conducting a PFL instructional sortie and was receiving a Traffic Service from Lakenheath but did not receive any Traffic Information. The S76 was flying VFR and VMC; he received a traffic alert from his TCAS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both aircraft, radar photographs/video recordings, and reports from the appropriate ATC and operating authorities.

The Board first expressed their disappointment that notification had not reached Lakenheath in time for the RT recordings to be saved and for the controller to recall the details. There was some discussion about whether the controller had assimilated the Airprox call because the reporting of the Airprox on the frequency by the Tutor pilot should have been a trigger to start the reporting process and impound the RT tapes.

The Board noted that the Tutor pilot could not recall being given Traffic Information on the helicopter, which, under the terms of a Traffic Service, should have been passed. In looking at his actions, the Board members noted that, prior to conducting a PFL, pilots are required to visually check for a clear flight path. They could only conclude that, having presumably done so, the pilot had not seen the approaching helicopter because it was probably on a constant sightline at that point and presented a dark object against a dark background. Compounded by the lack of Traffic Information and no warning from the TAS, this meant that the Tutor pilot was unaware of the converging S76.

Turning to the S76 pilot, the Board noted that he may have been better served getting a radar service from Lakenheath LARS instead of a Basic Service from Cambridge which had no radar. They were also mystified as to the status of his SSR; the pilot had reported it as on, but it didn't show on any of the NATS radars at the time of the Airprox, and the Tutor's TAS did not alert. The SSR of the S76 did show on radar 6 minutes after the incident (when it appeared with a squawk from another unit), which led the Board to conclude that it may have been turned to standby thus negating an important safety barrier for both ATC and electronic alerting systems. There then followed a discussion about whether the pilot was correct to continue on his track, despite having seen the Tutor on his TCAS reportedly at 2nm. Some Board members wondered whether the Tutor's change in height and direction took him by surprise but, notwithstanding, he had a degree of situational awareness which he should not have assumed was the same with the Tutor pilot. The Board agreed that, although he acted correctly in his interpretation of the Rules of the Air and in eventually taking action to avoid the Tutor, there was a fine line between maintaining course and speed and the benefits of taking action early enough to break the collision geometry before avoiding action became necessary.

In assessing the cause and risk, the Board noted a discrepancy in the reported pressure settings but believed this to be a recall, or typing, error by one of the pilots and therefore not a reliable way of assessing separation. The Board discussed the cause and agreed that the S76 pilot, having been visual with the Tutor from a good distance out, had flown into conflict with the Tutor. They also agreed that there was a contributory factor in that the Lakenheath Radar controller did not pass Traffic Information to the Tutor pilot which may have cued him to the S76's presence. With regard to the risk, the Board agreed that, in the end, effective avoiding action by the S76 pilot had been taken, that he had been visual with the Tutor from a good distance out, and that this event was therefore best classified as a Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The S76 pilot flew into conflict with the Tutor.

Contributory Factor(s): Lack of Traffic Information to the Tutor pilot from the Lakenheath Radar controller.

Degree of Risk: C

ERC Score[5]: 4

[5] Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.