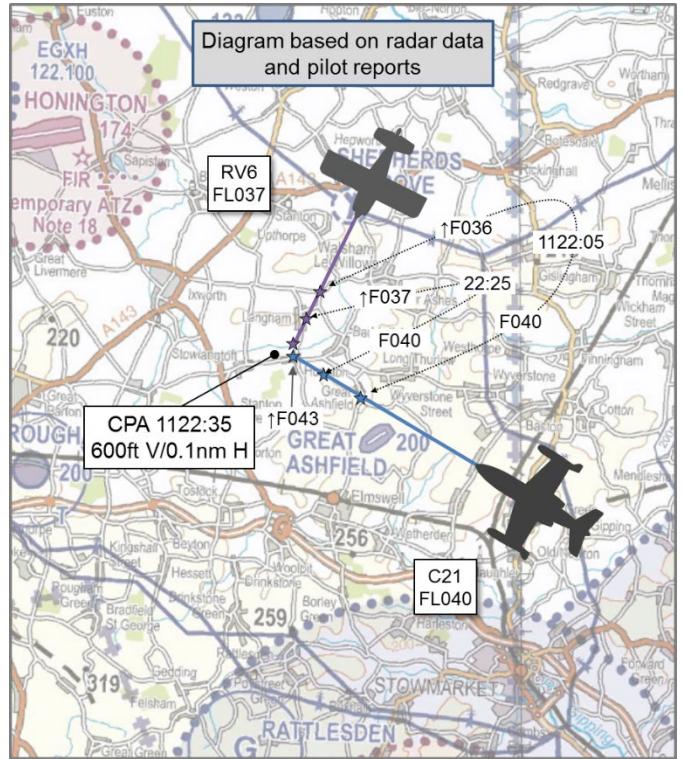


AIRPROX REPORT No 2018026

Date: 25 Jan 2018 Time: 1122Z Position: 5216N 00053E Location: Mildenhall

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C21	RV6
Operator	Foreign Mil	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Traffic	None
Provider	Lakenheath	
Altitude/FL	FL043	FL037
Transponder	A, C, S	A, C, S
Reported		
Colours	Grey	Black, Gold
Lighting	Strobes, Nav	Not fitted
Conditions	VMC	VMC
Visibility	10km	
Altitude/FL	4000ft	3800ft
Altimeter	1013hPa	QNH
Heading	270°	NK
Speed	180kt	130kt
ACAS/TAS	TCAS II	Not fitted
Alert	RA	N/A
Separation		
Reported	500ft V/<0.1nm H	NK
Recorded	600ft V/0.1nm H	



THE C21 PILOT reports that he was receiving vectors to Mildenhall ILS RW29. Lakenheath App called traffic which they became visual with and could see on TCAS. It was 700ft below and they were perpendicular to it and closing. The other aircraft began to climb and they received an RA. The TCAS indicated the other aircraft was 400ft below and climbing; they responded to the RA climb and began to climb to 4500ft, the other aircraft passed approx. 500ft below and 500ft laterally.

He assessed the risk of collision as 'High'.

THE RV6 PILOT reports that he has no recollection of the incident. It was a normal winter's day local flight and the weather must have been acceptable or he would not have flown. He maintained VFR at all times up to a maximum altitude of 4400ft. His Skydemon log for the day indicated that he was in the area around the reported time of the Airprox, but he did not recall seeing the C21.

THE LAKENHEATH CONTROLLER reports that the C21 pilot was receiving a Traffic Service and initially called at FL100, requesting an ILS approach to Mildenhall. He was given descent to FL50 and direct flight to TUSMO; at his request he held at TUSMO and descended to FL40. Traffic Information was given on unidentified traffic 6nm from his position which was indicating 3000ft. The C21 pilot was not visual and the Traffic Information was updated when the unknown traffic was in his 1 o'clock, 5nm and climbing. The C21 pilot then reported the traffic in sight. Shortly afterwards the pilot reported responding to an RA and climbing to FL45, he then reported clear and descended back to FL40.

Factual Background

The weather at Mildenhall was recorded as follows:

METAR EGUN 251056Z 21010KT 9999 CLR 09/09 A2973 RMK A02 SLP071 T00860086 SLP ESTMD ALSTG ESTMD WND DATA ESTMD=

UKAB Secretariat

Radar screen shots are taken from the NATS radars and are not representative of the radar available to the Lakenheath controller. At Figure 1 (1121:34), the C21, squawking 0436, can be seen on a northeasterly heading and the controller has already given Traffic Information on the RV6 (squawking 7000) by this stage; the C21 pilot has replied with 'searching'. The C21 pilot calls visual after the controller calls the traffic a second time at 1121:56. At 1122:31 (Figure 2) the C21 pilot reports climbing due to a TCAS RA, at this stage the vertical separation is 300ft. CPA takes place at 1122:35; lateral separation is 0.1nm but due to the C21's climb, vertical separation is now 600ft.

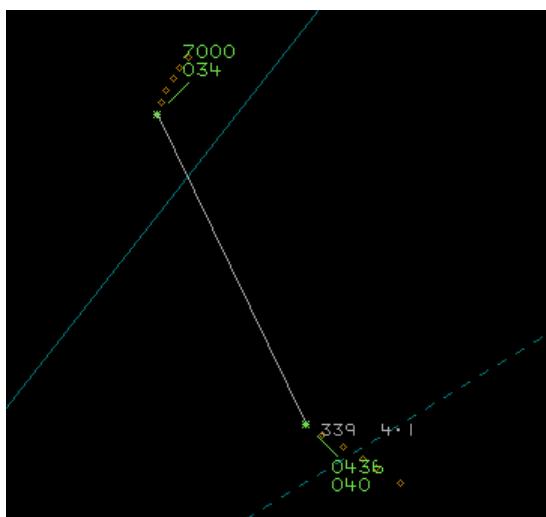


Figure 1: 1121:34

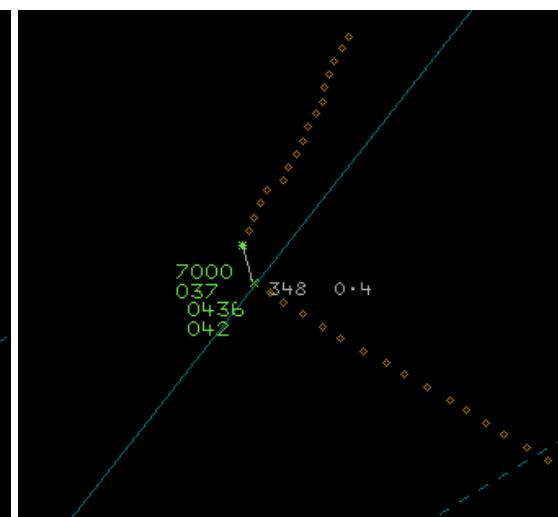


Figure 2: 1122:31

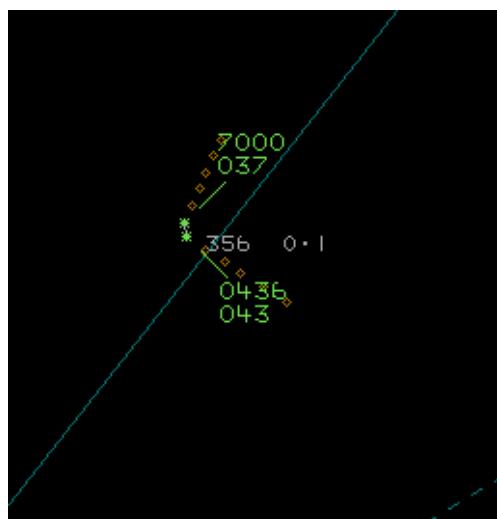


Figure 3: 1122:35

The C21 and RV6 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as converging then the C21 pilot was required to give way to the RV6².

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(2) Converging.

Comments

USAFE

The design of the RV6 canopy must make for excellent visibility horizontally and above. The controller, who was reasonably busy, provided an effective Traffic Service to the C21 pilot who, seeing the conflictor on his TCAS, reacted promptly to the subsequent RA, allowing the climbing RV6 to proceed on its way unhindered.

Summary

An Airprox was reported when a C21 and a RV6 flew into proximity at 1122hrs on Thursday 25th January 2018. Both pilots were operating under VFR in VMC, the C21 pilot in receipt of a Traffic Service from Lakenheath and the RV6 pilot not in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RT frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate operating authorities.

The Board first discussed the actions of the C21 pilot. Some members wondered whether, even though he was receiving vectors for his IFR approach, he was fully aware that under a Traffic Service he remained responsible for his own separation, and for giving way to other traffic converging on his right, with ATC only there to assist with Traffic Information. If he had wanted ATC to provide him with separation vectors then he would have been better served by asking for a Deconfliction Service (many commercial operators mandate that their pilots ask for a Deconfliction Service when under IFR in Class G airspace). Notwithstanding, members noted that the controller had given Traffic Information on the RV6 when it was 6.5nm away, at that stage 600ft below, and the C21 pilot was probably content with the separation. However, when the controller updated the Traffic Information at 5nm warning the C21 pilot that the traffic was now climbing, the C21 pilot called visual but didn't take any action to resolve the conflict until he received the TCAS RA. Although after the RA manoeuvre the separation was 600ft, it had been as close as 300ft as they approached each other. The Board thought that the C21 pilot would have been wise to have taken action before he did so by either turning to avoid the climbing RV6 or by climbing himself.

For his part, the RV6 pilot was operating in Class G airspace and entitled to be there. Although he did not know it, as the aircraft on the right he could reasonably have expected the C21 to give way to him. GA members commented that it was disappointing that he had not seen the C21 on a closing geometry but that that was sometimes the nature of the imperfect see-and-avoid barrier; if he was not looking in the appropriate place at the time then it was unlikely that he would detect the other aircraft. Members noted that his aircraft was not fitted with any form of electronic conspicuity equipment which would likely have alerted him to the presence of the C21; given the increasingly affordable systems that were now available, they urged all pilots to review whether now was the time to consider investing in such relatively low-cost safety systems.

The Board agreed that the Lakenheath controller had executed his duties as required. He had called the RV6 to the C21 pilot at a range of 6.5nm and updated this information when he saw that it was climbing. Having received the call that the C21 pilot was visual, the controller members agreed that he would then assume the pilot would ensure his own separation, or would ask for vectors if unable to.

The Board then looked at the cause and risk of the Airprox. It was quickly agreed that, because he was required to give way to the aircraft on his right, the cause had been that the C21 pilot had flown into conflict with the RV6 despite receiving Traffic Information. However, when assessing the risk, they quickly agreed that there had been no risk of collision because the C21 pilot had been visual with the RV6 at an early stage and that the subsequent TCAS RA manoeuvre had further ensured separation; risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The C21 pilot flew into conflict with the RV6 despite Traffic Information being passed.

Degree of Risk: C.

Safety Barrier Assessment³

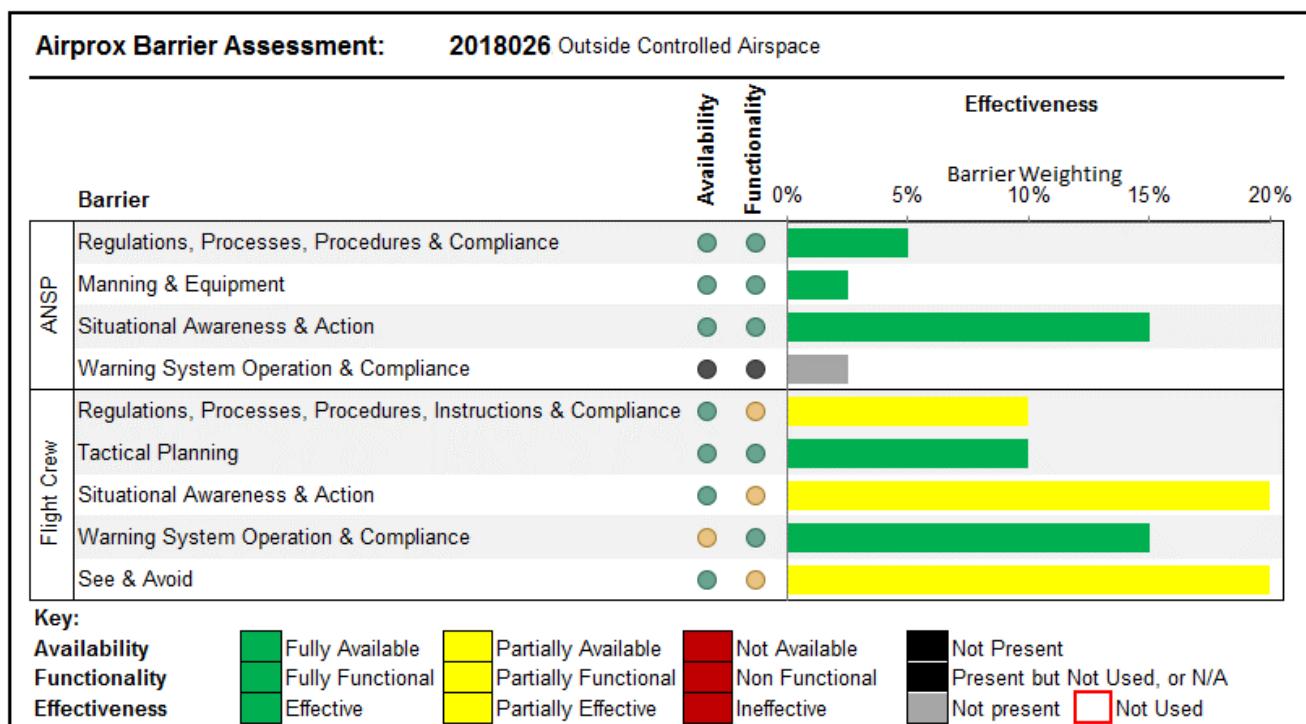
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Crew:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **partially effective** because the C21 pilot did not give way to the RV6 who was converging from the right.

Situational Awareness and Action were assessed as **partially effective** because although the C21 pilot had been given Traffic information, he didn't take positive early action to resolve the situation.

See and Avoid were assessed as **partially effective** due to the late avoiding action taken by the C21, and the non-sighting by the RV6 pilot.



³ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).