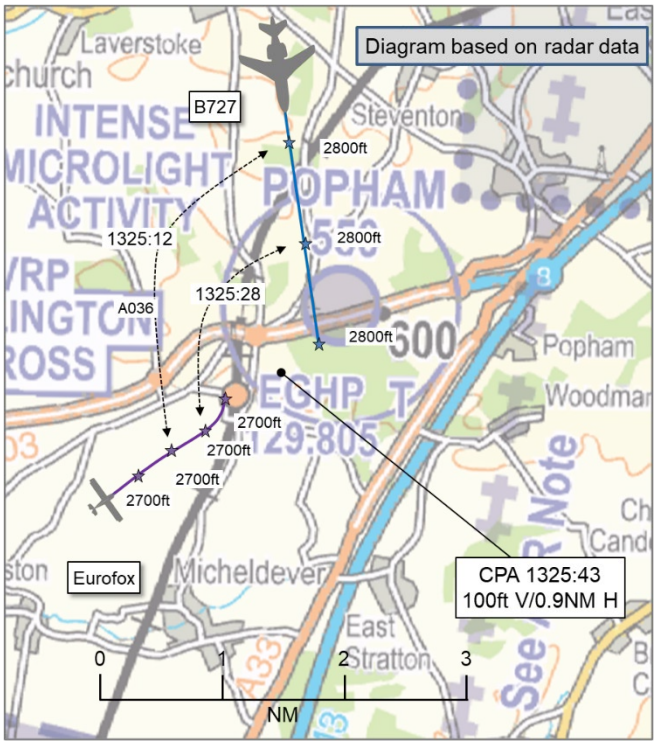
AIRPROX REPORT No 2024137

Date: 20 Jun 2024 Time: 1326Z Position: 5111N 0115W Location: Popham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	B727	Eurofox
Operator	Civ Comm	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Traffic	Basic
Provider	Farnboro' Radar	Boscombe Zone
Altitude/FL	2800ft	2700ft
Transponder	A, C, S+	A, C, S
Reported		
Colours	Red and White	Orange
Lighting	Strobes	Strobes, other
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	3000ft	1800ft
Altimeter	QNH (1019hPa)	QNH (1015hPa)
Heading	180°	049°
Speed	180kt	80kt
ACAS/TAS	TCAS II	Not fitted
Alert	RA	N/A
Separation at CPA		
Reported	300ft V/~1NM H	0ft V/1NM H
Recorded	100ft V/0.9NM H	



THE B727 PILOT reports that, whilst heading south on a base-leg to intercept the visual approach to [destination airfield], multiple light-aircraft were seen on the TCAS. The other [Airprox] aircraft was seen initially on TCAS approximately 300ft below [and was] acquired visually by all 3 crew members and observed to pass approximately 300ft low and 1NM to the right. A TCAS RA was heard and instruction to climb - this had lasted less than 1sec before 'clear of conflict' audio was heard. [There had been] no time to react.

The pilot assessed the risk of collision as 'Low'.

THE EUROFOX PILOT reports that, at approximately 1325, they had been flying a northeasterly leg before returning to [destination airfield] on a north-westerly heading. Having already initiated a left-hand turn to the northwest, they and their passenger had seen a large jet on a southerly heading at a similar height and roughly a mile away. The Eurofox pilot had been flying in Class G airspace and receiving a Basic Service from Boscombe Zone throughout the flight. The risk of collision was zero [they opined] as the two aircraft weren't on convergent courses.

The pilot assessed the risk of collision as 'None'.

THE FARNBOROUGH APPROACH CONTROLLER reports that they had been Farnborough Approach Radar controller [at the time of the reported Airprox]; they did not recall the traffic levels. They had been working the B727 inbound [destination airfield] outside CAS from the north on a Traffic Service under vectors. They had initially given them a vector for a 5-mile final into [destination airfield] but the pilot had requested a wider pattern. The controller had then given them an appropriate turn and advised them this would position them directly overhead Popham airfield and that there had been traffic operating there, including some that were not transponding altitude information. The B727 pilot informed the controller that they could accept this as they had been at 3000ft in good VMC. The controller called Traffic Information. At a point north of Popham the B727 pilot advised that they had been visual with

[destination airfield] and so the controller released them under their own navigation, with further descent at their discretion. They left frequency in due course inbound for [destination airfield].

THE BOSCOMBE ZONE CONTROLLER SUPERVISOR reports that they had been the LARS controller and, due to this Airprox having been submitted weeks after the event had occurred, they do not have any recollection of the specifics of the event.

The controller perceived the severity of the incident as 'Low'

Factual Background

The weather at Odiham was recorded as follows:

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METAR EGVO 201320Z 09006KT CAVOK 20/03 Q1019 NOSIG RMK BLU BLU=
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Analysis and Investigation

NATS

The UK Airprox Board notified Safety Investigations of a pilot-reported Airprox from the pilot of a B727 whilst receiving a service from Farnborough ATC. The B727 pilot had previously been operating IFR and required descent to position outside controlled airspace for an inbound approach to [destination airfield]. Multiple aircraft had been operating outside controlled airspace with Traffic Information passed to the pilot, however the B727 came into proximity with the Eurofox, operating VFR. The pilot of the B727 did not report an Airprox on the frequency.

Description of the event

London Control had co-ordinated with the Farnborough Approach Controller (LF APP) at 1319:38 for the B727 to be transferred on a heading of 170°, in the descent to altitude 4000ft to vacate controlled airspace. The LF APP controller had then telephoned [destination airfield] A/G to co-ordinate the approach into [destination airfield]. The […] A/G had requested "left base to join zero nine what about six miles or so, five, six miles or so?" This had been agreed by the LF APP controller with a comment "there's not much traffic out by Kingsclere at the moment, hopefully they will be with me shortly." The […] A/G then provided information on the B727 that the aircraft was "flying very slowly because [they have] got a flap problem….. and we hope it will be a normal approach."

The pilot of the B727 had then contacted the LF APP frequency at 1321:50 and reported "heading one seven zero, through six thousand four hundred for four thousand feet [QNH] 1019." The LF APP controller responded that the "present heading will put you on an approximately four to five mile final with one five track miles, is that sufficient?" The pilot responded, "ideally it will be ten miles at three thousand feet." The LF APP controller then issued at 1322:11, "turn right heading one nine zero degrees descend to altitude three thousand feet, cleared to leave controlled airspace" which had been read back correctly.

The LF APP controller had then requested confirmation if the aircraft had any issues with turning due to the previously advised flap issues. The pilot responded, "negative we are good to turn, speed will be not above one eighty knots approximately". At 1322:33, the pilot had been informed "it will be a Traffic Service outside controlled airspace, ten mile final taking you roughly overhead Popham airfield, there is traffic there at the moment, [there is] one indicating two thousand two hundred feet [uninvolved aircraft] and one altitude not indicating." The pilot responded, "we are not below three thousand over Popham and we are good Victor Mike."

The LF APP controller had then provided further Traffic Information regarding [uninvolved aircraft] at 1322:57 of "that first traffic is in your twelve o'clock, left-to-right eight miles indicating two thousand two hundred feet", which had been acknowledged. The LF APP controller had then offered a wider approach with a heading of 210° which had been accepted by the pilot and instructed to position for a visual approach to [destination airfield], RW09 which had been acknowledged.

Further Traffic Information was passed on [uninvolved aircraft] at 1323:39 of "that traffic now one o'clock three miles, still left-to-right, indicating two thousand three hundred feet, climbing." The B727 pilot reported visual.

At 1324:05, the LF APP controller repositioned the garbled labels of further tracks to the southwest of Popham which highlighted a 2650 squawk (Boscombe Down Conspicuity), the Eurofox at 3000ft, which was followed by a phone call to Odiham highlighting the B727 inbound to [destination airfield]. A left turn of 170° had been issued coincident with STCA activating between the B727 and the Eurofox at 1324:41. Traffic Information had been immediately passed of "there is traffic as you turn, south of you, very slow moving, right-to-left, five miles indicates similar altitude, your speed should keep you well ahead."

Further unrelated Traffic Information had been passed with the pilot of the B727 then reporting visual with [destination airfield]. This had been acknowledged by the LF APP controller, with instructions of "resume own navigation [destination airfield], further descent at your discretion, report leaving frequency".

The Closest Point of Approach occurred coincident with the Eurofox turning left at 1325:42 and had been recorded as 1.0NM and 100ft. At 1325:43, the pilot of the B727 reported routeing to [destination airfield], where the requirements for a missed approach had been instructed, followed by further Traffic Information on an aircraft receiving a service from Farnborough LARS West with the pilot of this aircraft pre-emptively advised by the LARS West controller of the B727 approaching. The B727 pilot did not report an Airprox on the frequency. The LF APP controller then handed over the sector at 1326:59.

Investigation

The Farnborough Approach function was operating standalone. The B727 had been routeing from [departure airfield] to [destination airfield] on an IFR flight-plan. London Control co-ordinated with the LF APP controller for the B727 to be transferred on a heading of 170°, in the descent to altitude 4000ft to vacate controlled airspace. There had been multiple aircraft operating outside controlled airspace in proximity of the B727 approach track into [destination airfield]. Traffic Information was initially passed on the most significant tracks, predominantly [uninvolved aircraft] and a primary-only track. As the B727 had been positioned for their approach into [destination airfield], abeam Popham, further tracks had become relevant, with the LF APP controller requiring repositioning of the garbling Track Data Blocks on their display. Traffic Information had been passed on further tracks operating outside controlled airspace significantly increasing workload and RT occupancy.

The LF APP controller conducted a phone call to Odiham Approach, highlighting the B727 inbound to [destination airfield] before then providing Traffic Information at 1324:41 on a 2650 squawk, subsequently identified as the Eurofox, inbound to [destination airfield].

CAP774 3.5 stated *'Controllers shall aim to pass information on relevant traffic before the conflicting aircraft is within 5NM, in order to give the pilot sufficient time to meet their collision avoidance responsibilities and to allow for an update in Traffic Information if considered necessary.'*

Farnborough radar data indicated the aircraft were 5NM apart at the time Traffic Information had been passed. The Airprox report from the pilot of the B727 had stated: 'Heading south on a base leg to intercept the visual approach to [destination airfield], multiple light aircraft were seen on the TCAS. The other aircraft had been seen initially on TCAS at approximately 300ft below. The aircraft was acquired visually by all 3 crew members and observed to pass approximately 300ft low and 1NM to the right. TCAS RA heard an instruction to climb – this had lasted less than 1sec before clear of conflict audio was heard. No time to react.'

The report opined that contributing factors to the event included 'very busy airspace with multiple light-aircraft in Popham area due to good weather' and further stated there was no form of avoiding action taken 'as good visual'.

Military ATM

At 1324:38, as the Eurofox had proceeded northeast, the Boscombe Down Lower Airspace Radar Service controller had provided Traffic Information on the B727 "traffic believed to be you has traffic north, 5 miles, tracking south, indicating similar level, fast moving".

At 1325:40, the Eurofox pilot had begun turning northwest as part of their planned route away from the B727.

Local BM Investigation

A local investigation was conducted by Boscombe Down following the event to identify the Air Traffic Services related causal/aggravating factors. As the Airprox had not been declared on frequency, the Boscombe Down controller had no recollection of the event which had limited the investigation effectiveness. No BM factors were identified, nor recommendations made.

2 Gp BM Analysis

The actions taken by the Boscombe Down controller are deemed suitable and in accordance with UK Flight Information Service provision rules. Traffic provision at 5 miles is surplus to the requirements of a Basic Service, and for this situation including the subsequent manoeuvre by the Eurofox pilot, no further action had been required to fulfil the ATCOs duty of care.

UKAB Secretariat

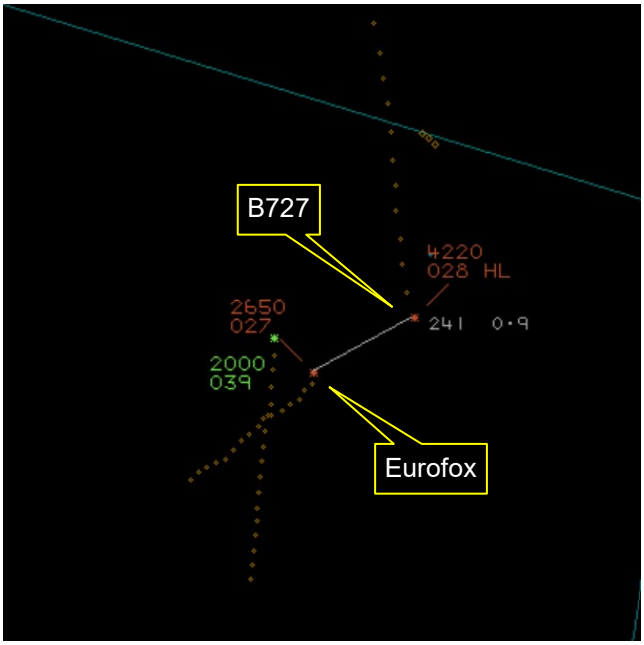


Figure 1: CPA 1325:43 100ft V/0.9NM H

The B727 and Eurofox pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[1] If the incident geometry is considered as converging then the B727 pilot was required to give way to the Eurofox.[2]

Summary

An Airprox was reported when a B727 and a Eurofox flew into proximity at Popham at 1326Z on Thursday 20th June 2024. Both pilots were operating under VFR in VMC, the B727 pilot in receipt of a

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(2) Converging.

Traffic Service from Farnborough Radar and the Eurofox pilot in receipt of a Basic Service from Boscombe Down.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate operating authorities. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board firstly considered the actions of the B727 pilot, noting that they had been on recovery whilst dealing with an onboard emergency, had carried a TCAS unit, and had been in receipt of a Traffic Service to aid their situational awareness. Members noted that the TCAS had alerted the B727 pilot to the presence of the Eurofox and had allowed the crew to gain visual contact. Although the crew had then received a TCAS RA, it had been brief and had cleared before any action could be taken.

Turning to the Eurofox pilot, the Board noted positively the use of an Air Traffic Service, in this case a Basic Service, and that such a service allows for increased situational awareness where other controller commitments allow. Members did wish to note that a higher standard of service, such as a Traffic Service if available, can add to that overall awareness picture. They noted that the Eurofox had not been equipped with an electronic conspicuity unit and wished to remind all users that such equipment can be extremely beneficial in improving situational awareness.

In considering the role played by the Air Traffic Control units, the Board noted that the Boscombe Down Zone Controller had not been aware of the Airprox and had therefore not reported. However, members noted that the subsequent investigation confirmed the passing of timely Traffic Information to the Eurofox pilot. When reviewing the role of the Farnborough Approach controller, members noted the content of the initial report and that of the subsequent investigation, both confirming that valuable Traffic Information had been passed and had been instrumental in enabling greater situational awareness and subsequent visual contact. Members believed there had been little more that either controller could have offered in this event.

In conclusion, members agreed that both pilots had achieved visual contact and had assessed there to be little or no chance of collision and that the separation between the aircraft had been such that normal safety standards and margins had pertained. Members were satisfied that there had not been a risk of collision and assigned Risk Category E to this event.

Members agreed on the following contributory factors:

CF1: The Farnborough Radar controller received a Short Term Conflict Alert .

CF2: The B727 pilot received a TCAS Resolution Advisory indication.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

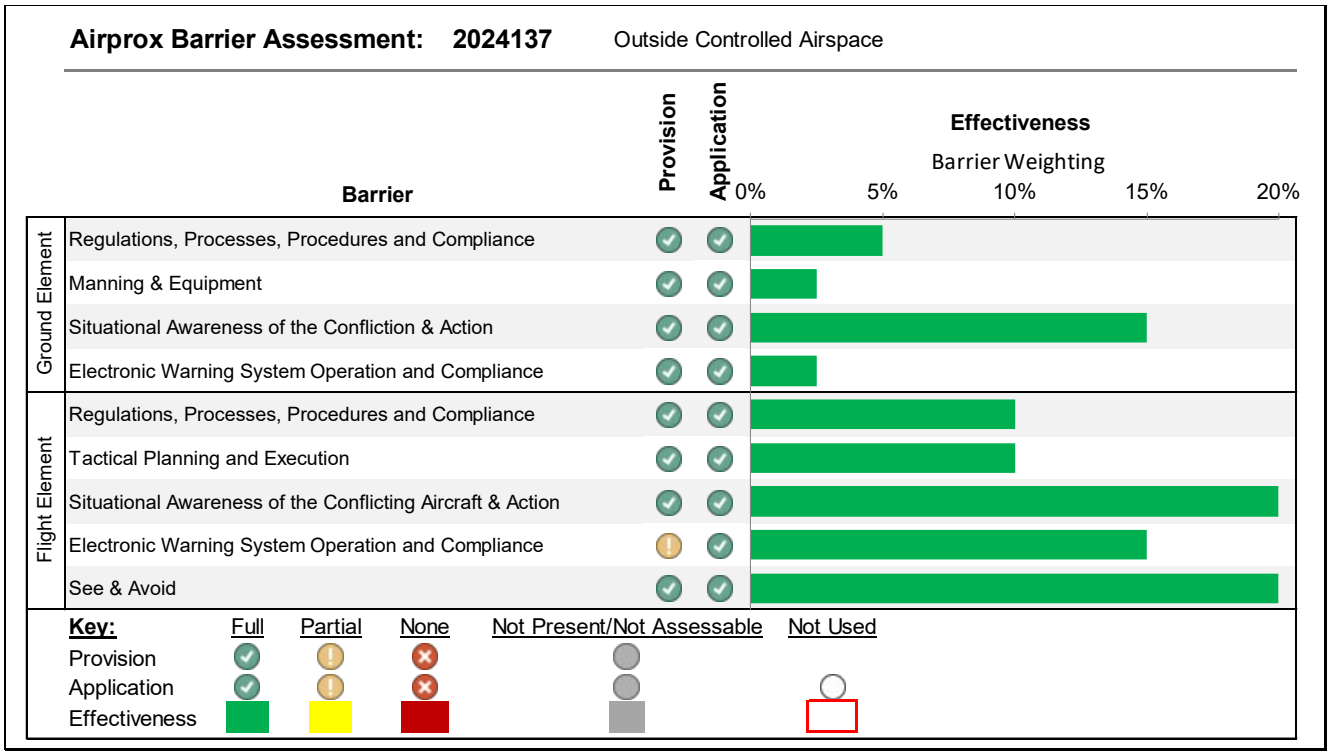
Contributory Factors:

	2024137			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Electronic Warning System Operation and Compliance			
1	Technical	• STCA Warning	An event involving the triggering of a Short Term Conflict Alert (STCA) Warning	
	Flight Elements			
	• Electronic Warning System Operation and Compliance			
2	Contextual	• ACAS/TCAS RA	An event involving a genuine airborne collision avoidance system/traffic alert and collision avoidance system resolution advisory warning triggered	

Degree of Risk: E.

Safety Barrier Assessment[3]

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that all safety barriers had been fully effective:



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