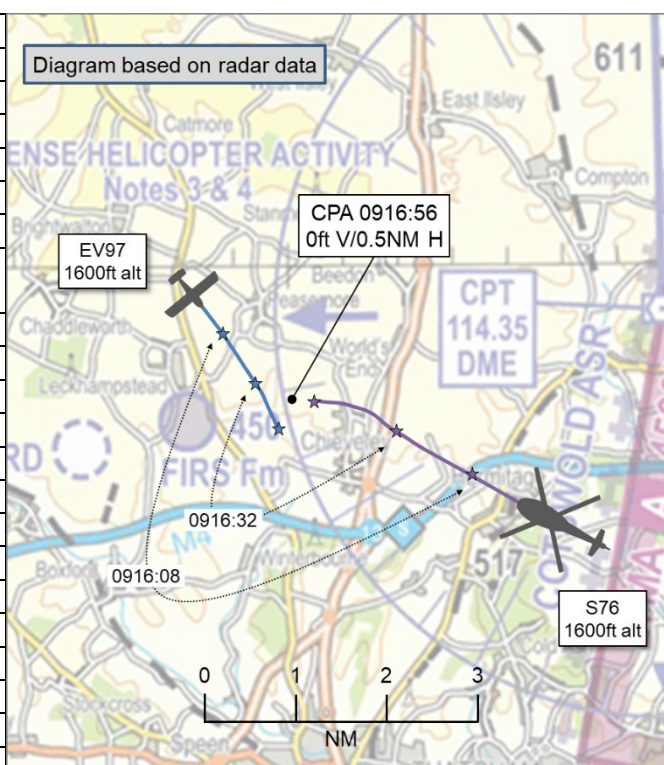


AIRPROX REPORT No 2022127

Date: 03 Jul 2022 Time: 0917Z Position: 5128N 00119W Location: 4NM N Newbury

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	EV97	S76
Operator	Civ FW	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Traffic
Provider	Popham radio	Farnborough LARS West
Altitude/FL	1600ft	1600ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Silver	Burgundy
Lighting	None	Landing, strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1300 to 1500ft	1600ft
Altimeter	NK (1019hPa)	QNH (NR hPa)
Heading	180°	315°
Speed	75kt	151kt
ACAS/TAS	Not fitted	TCAS I
Alert	N/A	Unknown
Separation at CPA		
Reported	50ft V/100m H	50ft V/0.5NM H
Recorded	0ft V/0.5NM H	



THE EV97 PILOT reports completing a zone transit through Brize Norton, and heading to [destination airfield] from VRP Grove. They were cruising to [destination airfield] between 1300ft-1500ft on 1019hPa. (1019hPa was given by Brize). They were about 5NM north of Newbury at approximately 0915 and saw a helicopter pass their 7 o'clock at a similar height heading roughly north-northwest as they headed south. The helicopter passed behind and did a wide left turn around the [EV97] position, appearing on their right hand side, overtaking, and heading south remaining at a similar height. It looked like a VIP business-type helicopter.

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

THE S76 PILOT reports that they were under a Traffic Service from Farnborough who had called numerous GA aircraft in the proximity of Compton VOR. They cannot recall if [the EV97] aircraft was called, however, just before they turned left onto a southerly heading, they caught sight of this aircraft in the right 1 o'clock position, same level and flying right-to-left. As it had priority, they turned slightly right (north-westerly) to fly behind the aircraft. They kept the aircraft in sight from initial acquisition, passing behind it, during the subsequent left turn onto south behind the aircraft, and then finally during a turn onto a south-easterly direction. The other aircraft appeared to be maintaining a south-easterly track towards the Popham direction. [The S76 pilot] manoeuvred to maintain sufficient distance from the aircraft and did not perceive this to be an Airprox at any stage.

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

THE FARNBOROUGH LARS WEST CONTROLLER reports that they were made aware, retrospectively, of the pilot of [the S76] having filed an Airprox involving [the EV97] - an aircraft not on their frequency. Their report is based on a vague recollection of the session (although they do remember that [the S76] having been on an air-test) and a brief look at the radar/RT recording authorised by their

Watch Manager (WM). The WM told them what the callsign of the reported aircraft was, but they do not know which aircraft it was on the radar display. They were working as bandboxed LARS West and Zone at the reported time of the incident. They had had a telephone conversation previously with the pilot of [the S76] who had made them aware of their intention to fly an air-test that morning from [departure airfield], so they were aware that they would be getting airborne at some point. The pilot came on frequency and requested, and was given, a Traffic Service. The service was given with reduced Traffic Information due to controller workload (they were working two sectors bandboxed which, although relatively quiet at the time, has a habit of suddenly and unexpectedly increasing significantly in workload). [The S76] commenced their air-test and they were aware of their manoeuvring whilst dealing with other traffic but at no time did the pilot offer an update on their level, level band or route to assist in monitoring. There were up to half a dozen aircraft operating in the same general vicinity as [the S76] and they believe that they passed Traffic Information to [the S76] on any traffic seen to affect them. They do not recall seeing any incidence of an aircraft posing a significant risk of collision. They worked the aircraft as it finished its air-test and returned to [destination airfield]. There was no mention of an Airprox on frequency nor in any subsequent landline conversation.

Factual Background

The weather at Benson was recorded as follows:

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METAR EGUB 030850Z AUTO 27006KT 9999 -RA FEW015/// SCT024/// 16/11 Q1019
METAR EGUB 030950Z AUTO 24006KT 9999 SCT024/// 17/11 Q1019 RERA
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Analysis and Investigation

NATS Farnborough Unit Investigation

Farnborough LARS West and Zone were being operated bandboxed. It was daylight hours and RW24 was in use. [S76 callsign] was on frequency squawking 0430 under a Traffic Service.

[UKAB note: Information was passed on Traffic (1), (see Figures 1 and 2)]



Figure 1 – 0910:53



Figure 2 – 0911:28

0910:54 '[S76 callsign] traffic [(1)] 12 o'clock 3 miles reciprocal track indicating 400ft above you.'

0910:56 'Looking out [S76 callsign].'

0911:22 'Farnbo.. err.. correction [S76 callsign] request traffic update?'

0911:25 '[S76 callsign] 12 o'clock now 1 mile reciprocal heading 400ft above.'

0911:28 'Traffic in sight [S76 callsign].'

[UKAB note : Information was then passed on Traffic (2) and Traffic (3), (see Figures 3 and 4)]



Figure 3 - 0913:45



Figure 4 – 0914:40

0913:54 '[S76 callsign] traffic [(2)] 12 o'clock range of 3 miles manoeuvring indicating 2000ft. Further traffic [(3)] left 11 o'clock 4 miles reciprocal track no altitude information.'

0913:54 'Looking out [S76 callsign].'

0914:43 '[S76 callsign] traffic in sight.'

0914:44 '[S76 callsign] roger the other previously called traffic is now left 11 o'clock 2 miles eastbound no altitude.'

0914:49 'Traffic in sight [S76 callsign].'

[UKAB note: The next Traffic Information to be passed was that of the EV97 involved in the Airprox (see Figure 5)]



Figure 5 – 0916:49

0915:51 '[S76 callsign] traffic 12 o'clock range 4 miles right-to-left indicating similar altitude.'

0915:56 'Looking out [S76 callsign].'

Investigation: Controller and initial investigation reports were reviewed in conjunction with the RT and radar replays. The Airprox was not reported on the RT, and the ATCO involved reported that they only had a brief recollection of the event which had occurred a couple of weeks previously.

The ATCO called Traffic Information on all contacts visible on the radar replay. It was not possible to identify [EV97 callsign].

Conclusions: It was not possible to identify the aircraft/conflict that [S76 callsign] reported the Airprox with, but the pilot believed they came into conflict with another aircraft outside CAS.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be positively identified (see Figure 6). It was seen that the S76 began a left turn and passed behind the EV97 (see Figure

7). CPA occurred at 0916:56 with no vertical separation and 0.5NM horizontal separation (see Figure 8).

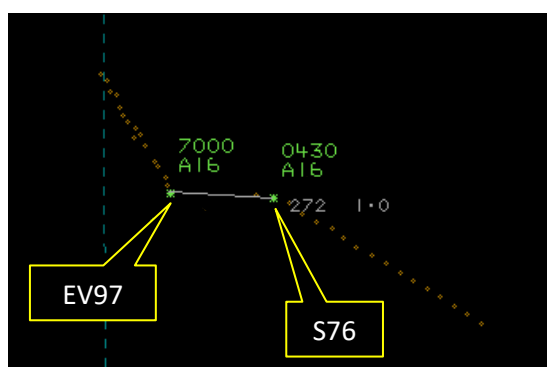


Figure 6 - 0916:44

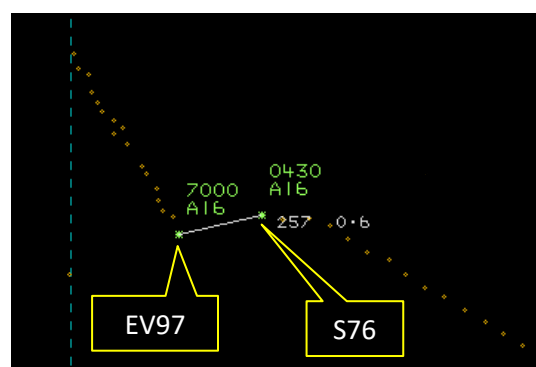


Figure 7 - 0916:51

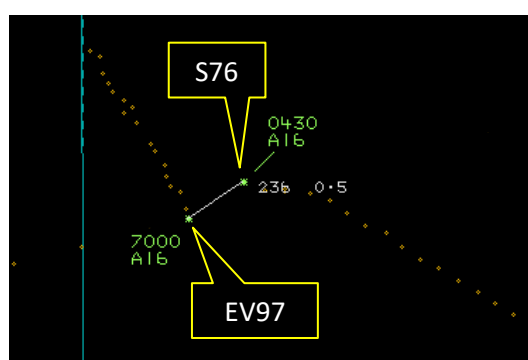


Figure 8 – CPA at 0916:56

The EV97 and S76 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 S76 pilot was required to give way to the EV97.²

Summary

An Airprox was reported when an EV97 and a S76 flew into proximity 4NM north of Newbury at 0917Z on 3rd July 2022. Both pilots were operating under VFR in VMC, the EV97 pilot listening out on the Popham Radio frequency and the S76 pilot in receipt of a Traffic Service from Farnborough LARS West.

PART B: SUMMARY OF THE BOARD'S DELIBERATIONS

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 discussed this event and were satisfied that the separation between the aircraft, and the actions taken by the S76 pilot, had been sufficient to ensure that there had been no risk of collision. In assessing the Flight Elements-Electronic Warning System barrier, it was noted that the S76 was fitted with TCAS which, it would be expected, would have detected the presence of the EV97. It is not known whether it had in this instance. Members were satisfied that normal safety standards and parameters had pertained and, as such, the Board assigned Risk Category E. Members agreed that the following factors (detailed in Part C) had contributed to this Airprox:

¹ (UK) SERA.3205 Proximity.

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

- CF1.** The STCA in use on the Farnborough LARS West position would not have provided an alert to a conflict between the EV97 (displaying a general conspicuity squawk) and the S76.
- CF2.** The pilot of the PA28 had no situational awareness of the S76.
- CF3.** The pilot of the EV97 sighted the S76 late, as it was manoeuvring around their 7 o'clock position.
- CF4.** The pilot of the EV97 had been concerned by the proximity of the S76.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022127			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Ground Elements				
• Electronic Warning System Operation and Compliance				
1	Technical	• Conflict Alert System Failure	Conflict Alert System did not function as expected	The Conflict Alert system did not function or was not utilised in this situation
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
2	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
• See and Avoid				
3	Human Factors	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
4	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: E

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:

Ground Elements:

Electronic Warning System Operation and Compliance were assessed as **not used** because the Airprox took place outside the select frame of the STCA in use on the Farnborough LARS West position.

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

Airprox Barrier Assessment: 2022127

Outside Controlled Airspace

Barrier		Provision	Application	Effectiveness				
				Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Manning & Equipment	✓	✓					
	Situational Awareness of the Conflicition & Action	✓	✓					
	Electronic Warning System Operation and Compliance	✓	○					
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Tactical Planning and Execution	✓	✓					
	Situational Awareness of the Conflicting Aircraft & Action	✓	✓					
	Electronic Warning System Operation and Compliance	⚠	○					
	See & Avoid	✓	✓					
Key:		Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	⚠	✗	●				
Application	✓	⚠	✗	●	○			
Effectiveness								