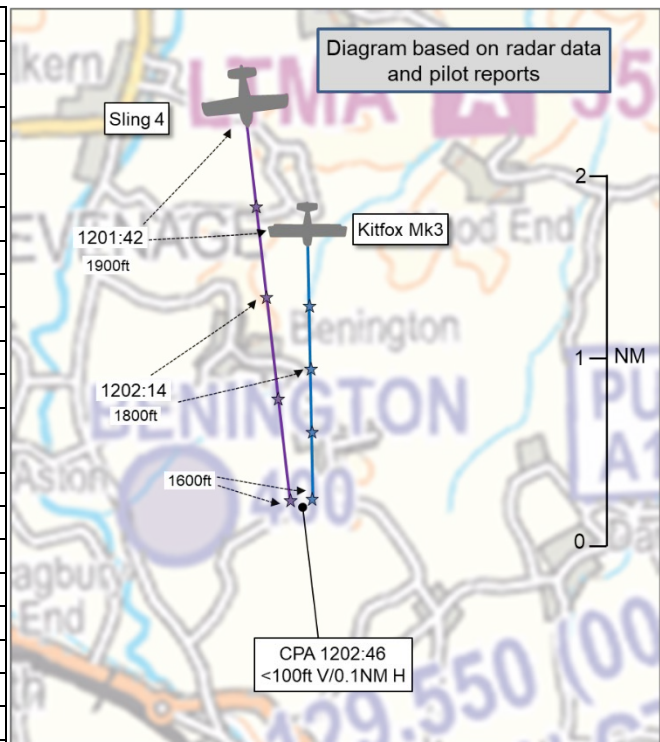


AIRPROX REPORT No 2023204

Date: 03 Sep 2023 Time: 1203Z Position: 5152N 00006W Location: IVO Hebing End, Stevenage

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Kitfox Mk3	Sling 4 TSI
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	None
Provider	London Info	N/A
Altitude/FL	1600ft	1600ft
Transponder	A, C, S	A, C, S+
Reported		
Colours	Yellow	Red
Lighting	Strobes, Navigation	Strobes, Beacon, Navigation.
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1469ft	1500ft
Altimeter	QNH (1024hPa)	QNH (1027hPa)
Heading	182°	180°
Speed	76kt	120kt
ACAS/TAS	PilotAware	PilotAware
Alert	TA	Information
Separation at CPA		
Reported	100ft V/0.05NM H	50ft V/0.5NM H
Recorded	<100ft V/0.1NM H	



THE KITFOX PILOT reports that they had been travelling from [departure airfield] to [destination airfield]. They had been in receipt of a Basic Service from London Information on 124.600MHz then moved to Farnborough North on 132.800MHz, then quickly moved to Farnborough East on 123.225MHz. They had noticed an aircraft approaching from behind on SkyDemon at about 1201; it appeared to be tracking towards their aircraft closing at ~50mph. SkyDemon had been alerting and showing 100ft above on an intercept course and, as they had not been able to see the other aircraft due to poor rear visibility and harnesses, the pilot initiated a slow descent. Their concern had been that without any visual clue they ran the risk of countering any evasive action the following plane would make based on uncertified SkyDemon/electronic conspicuity equipment. A slow descent should have decreased the risk but had also not been erratic as the chasing plane should have them dead ahead in their screen. The aircraft then passed to their right and above [by] ~200ft. The Kitfox pilot estimates that without taking corrective action there had been a high risk that there would have been a collision. The aircraft made no sudden corrections as they passed so they do not believe they had visual until having actually passed. The Kitfox pilot notes that they had not reported to Air Traffic Control (they report that they had been unsure of the radio reporting procedure and had still been stressed from the incident so had focused on flying the aircraft back [to their destination airfield]). They recorded the aircraft ID on their scratch pad and subsequently contacted [...] and confirmed that the aircraft was based there. The Kitfox pilot gave their contact numbers and advised them of the incident stating that they would prefer to discuss the incident with that pilot to understand any mitigations. Further contact the following day had advised that they had spoken to that pilot and they felt that it had been 300ft vertical separation. The Kitfox pilot felt that that 300ft is an Airprox and that in their view the separation had been less. Given that the other pilot had not wanted to call to discuss, the Kitfox pilot felt that the best course was to raise an Airprox report to have it reviewed in the interest of safety.

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

THE SLING 4 PILOT reports that they had been on a VFR flight from [departure airfield] to [destination airfield] through the uncontrolled airspace between the Luton and Stansted CTRs. Visibility was great and there had been no clouds in sight. They had the route planned on SkyDemon and also programmed into the Garmin G3x panel of their aircraft. That system displays all ADS-B traffic and gives audible alerts. They also have an electronic conspicuity unit providing Traffic Information overlay. At the time of the incident, they had been hand flying the aircraft and navigating using SkyDemon coupled with outside references. They saw an aircraft well ahead of them at around the 11 o'clock position on a similar track. They note that they had also seen the aircraft on their SkyDemon screen. The pilot realised that they had seemed to be catching up the other aircraft quickly, it had looked like a yellow high wing tail dragger aircraft like a piper cub with large tyres. The aircraft had [remained] in an 11 o'clock position so they had good visual contact as they had gone past. Looking back at GPS data, the pilot noted that they had descended with the other aircraft so as not to lose visual contact. As [the Sling 4] is a low wing aircraft and the other aircraft at their 11 o'clock position being a high wing they hadn't wanted to climb and have the aircraft disappear under their wing. The Sling 4 pilot says that they hadn't been willing to descend to maintain vertical separation as they had already been quite low. They hadn't increased horizontal separation by much due to controlled airspace either side of them. The Sling 4 pilot believes that the horizontal separation was at its minimum just as they had gone past. As they had been relatively faster than the aircraft on their left flying on a similar heading, they hadn't thought that there had been a risk of collision if the other aircraft suddenly decided to turn to the right. The Sling 4 pilot noted that they had rocked their wings gently and waved at the other aircraft after they went past. The forwards, sideways and rearward visibility from their cockpit is very good and the pilot had kept their eyes on the aircraft at all times so hadn't felt that there had been a risk of collision until the incident had been reported as an Airprox by the other pilot.

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

THE FARNBOROUGH CONTROLLER reports that the Kitfox pilot did not contact Farnborough until 1209Z.

Factual Background

The weather at Luton was recorded as follows:

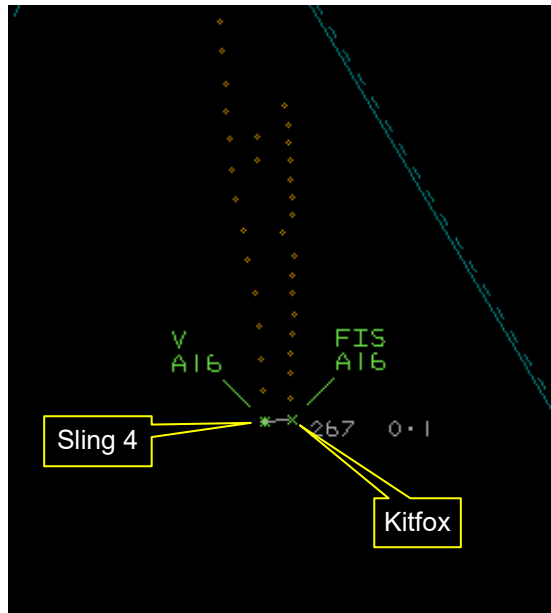
METAR EGGW 031150Z AUTO VRB03KT 9999 NCD 22/14 Q1028=

Analysis and Investigation

NATS

NATS Safety Investigations reports that the UK Airprox Board notified Safety Investigations of the potential involvement of London FIS in this event on 21st March 2024. At this time, no RT recordings had been available of the event and this investigation was based on pilot reports and radar data. A Kitfox had been in receipt of a Basic Service from London FIS, routing southbound to the east of the Luton CTR, VFR. The Sling 4 had been operating VFR on the VFR conspicuity squawk 7000, potentially not in receipt of any ATC service. Both aircraft had been in Class G airspace in a 'see and avoid' environment. The Sling 4 had been behind the Kitfox; both aircraft had been tracking southbound with the Sling 4 faster and catching the Kitfox. The pilot of the Sling 4 had stated that visibility had been good, with no clouds and had reported seeing the Kitfox ahead of them and maintained visual contact with it as they had flown past, reporting to have been above and to the right of it. The pilot of the Sling 4 had not perceived any risk of collision throughout the event. The pilot of the Kitfox noted that they had been aware of an aircraft approaching from behind based on information from aircraft software on board but they had not obtained visual contact with the Sling 4 until the aircraft had passed to the right and above the level of the Kitfox. London FIS provided a Basic Service with no radar-based information. The pilot of the Kitfox reported that they had made no reference to the Airprox on frequency and therefore no controller/FISO report had been made relating to this event.

UKAB Secretariat



1202:46 CPA <100ft V/0.1NM H

The Kitfox and Sling 4 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 overtaking then the Kitfox pilot had right of way and the Sling 4 pilot was required to keep out of the way of the other aircraft by altering course to the right.²

Summary

An Airprox was reported when a Kitfox and a Sling 4 flew into proximity IVO Hebing End near Stevenage at 1203Z on Sunday 3rd September 2023. Both pilots were operating under VFR in VMC, the Kitfox pilot in receipt of a Basic Service from London Information and the Sling 4 pilot in not in receipt of an Air Traffic Service.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from NATS Safety Investigations. Relevant contributory factors are listed below with the numbers referring to the Contributory Factors table displayed in Part C.

The Board first discussed the actions of the Kitfox pilot, noting the use of a Basic Service from London Information combined with a Mode S transponder and active electronic conspicuity (EC) equipment giving themselves the best possible opportunities to be detected. They recognised the pilot's high alert state when triggered by their SkyDemon/EC and their desire to generate additional separation without risking a counter-effect to manoeuvres potentially in train by the Sling 4 pilot.

Moving to the Sling 4 pilot, members equally positively noted their robust equipage level and that, operating in good VMC, they had offered a relatively sound opportunity to be detected by others operating in the area. Members did voice the additional value that an ATS can add even in such conditions, recognising the limitations of a Basic Service – in that the FISO is not required to monitor aircraft in receipt of such a service.

In approaching the Kitfox from the offset-stern, the Board recognised that the Sling 4 pilot had been conscious that they had been in a low wing aircraft whilst they had been overtaking a high wing aircraft and had eased down as the Kitfox pilot had done so to ensure the best opportunity for acquiring visually

¹ (UK) SERA.3205 Proximity.

² (UK) SERA.3210 Right-of-way (c)(3) Overtaking.

when able. The Sling 4 pilot had passed to the right but within a relatively narrow window of airspace constraints, aiming to maintain the 'Take 2' principle whilst giving a reasonable berth to the overtaken Kitfox. Members accepted the conditions that had led to this thought process but felt that 0.1NM of lateral separation had perhaps not fully considered the notion that the Kitfox pilot had been unaware of the Sling 4 and might, at any point, have turned towards it. However, members were satisfied that, because the Sling 4 pilot had been visual with the Kitfox throughout the overtaking manoeuvre, there had been no risk of collision and safety had not been degraded; as such, the Board assigned Risk Category E to this event. Members agreed that the following factors had contributed to this Airprox:

- CF1:** The Kitfox pilot had been in receipt of a Basic Service from London Information in which the FISO is not required to monitor the flight.
- CF2:** The Kitfox pilot had been concerned by the proximity of the passing Sling 4.
- CF3:** Both the Kitfox and Sling 4 pilots had received alerts from the other's electronic conspicuity equipment.
- CF4:** The Sling 4 pilot had passed the Kitfox close enough to cause concern to the Kitfox pilot.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2023204				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Ground Elements				
• Situational Awareness and Action				
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
2	Human Factors	• Unnecessary Action	Events involving flight crew performing an action that was not required	Pilot was concerned by the proximity of the other aircraft
• Electronic Warning System Operation and Compliance				
3	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
• See and Avoid				
4	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern

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:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **not used** because although the Kitfox had been in receipt of a Basic Service, there is no requirement for the FISO to monitor the flight.

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: 2023204		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:		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>	
Provision							
Application							
Effectiveness							