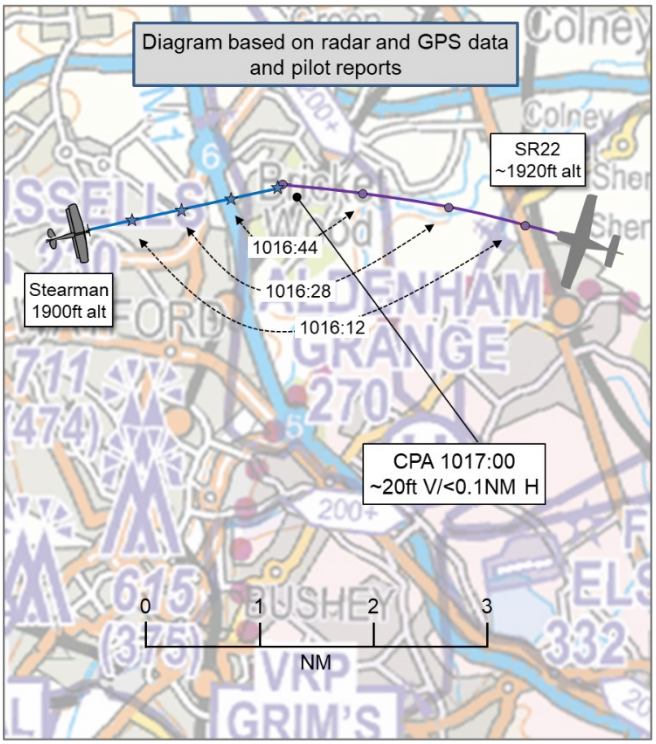
AIRPROX REPORT No 2025057

Date: 22 Apr 2025 Time: 1017Z Position: 5142N 00022W Location: 3.5NM NW of Elstree Airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Stearman	SR22
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	None
Provider	Elstree Radio	N/A
Altitude/FL	1900ft	~1920ft
Transponder	A, C	None
Reported		
Colours	Yellow	White
Lighting	None	None
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	1700ft	1940ft
Altimeter	QNH	QNH (1018hPa)
Heading	060°	280°
Speed	75kt	145kt
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	'metres' V/ 'metres' H	0ft V/200ft H
Recorded	~20ft V/<0.1NM H	



THE STEARMAN PILOT reports that they had been on a transit flight to [destination airfield] in a fairly large bright yellow bi-plane. They were equipped with a basic mode A/C transponder and 'a radio of dubious quality' in a loud open cockpit and had tried to call a few agencies but readability had been very poor. Lookout had consisted of occasional left/right manoeuvres [they add that the forward visibility is very restricted by the aircraft design]. They add that they would like to thank the other pilot for avoiding a collision as they had no idea they were there and imagine that [the other aircraft pilot] must have only seen them at the last second. [They add that] they had taken no avoiding action as they had only seen [the other aircraft] momentarily in a steep bank to its right in [what the Stearman pilot believes may have been] an avoiding action manoeuvre. [They offered] many thanks to its pilot as the Stearman pilot had not seen it up to that point.

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

THE SR22 PILOT reports that an earlier electrical burning smell on start-up, on the 14th April, had cancelled their flight to [destination airfield]. After 3 lengthy ground runs and consultation with their engineers over the next 7 days, a decision was made to make a ferry flight to [destination airfield] for remedial work and its annual [service]. This [flight] was undertaken with their number 1 alternator being u/s, so it was decided the flight would be conducted with the minimal electrical load possible. Rochester AFIS and Turweston Air/Ground were prewarned of the circumstances, and the flight was undertaken with no problem other than the Airprox enroute. The SR22 pilot reports that they had a fellow pilot with them and, because of the [aircraft] circumstances, had a concentrated lookout. Their fellow pilot had shouted when the other aircraft was spotted and immediate avoiding action was taken. The other aircraft appeared not to see them and did not deviate from its course.

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

THE ELSTREE AIR/GROUND OPERATOR reports that they have no knowledge of this incident. Nothing was reported to them either on the day or subsequently. They hold no recordings from the event.

Factual Background

The weather at Northolt Airfield was recorded as follows:

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METAR EGWU 220950Z 24008KT 9999 FEW024 SCT300 13/07 Q1017 NOSIG=
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Analysis and Investigation

UKAB Secretariat

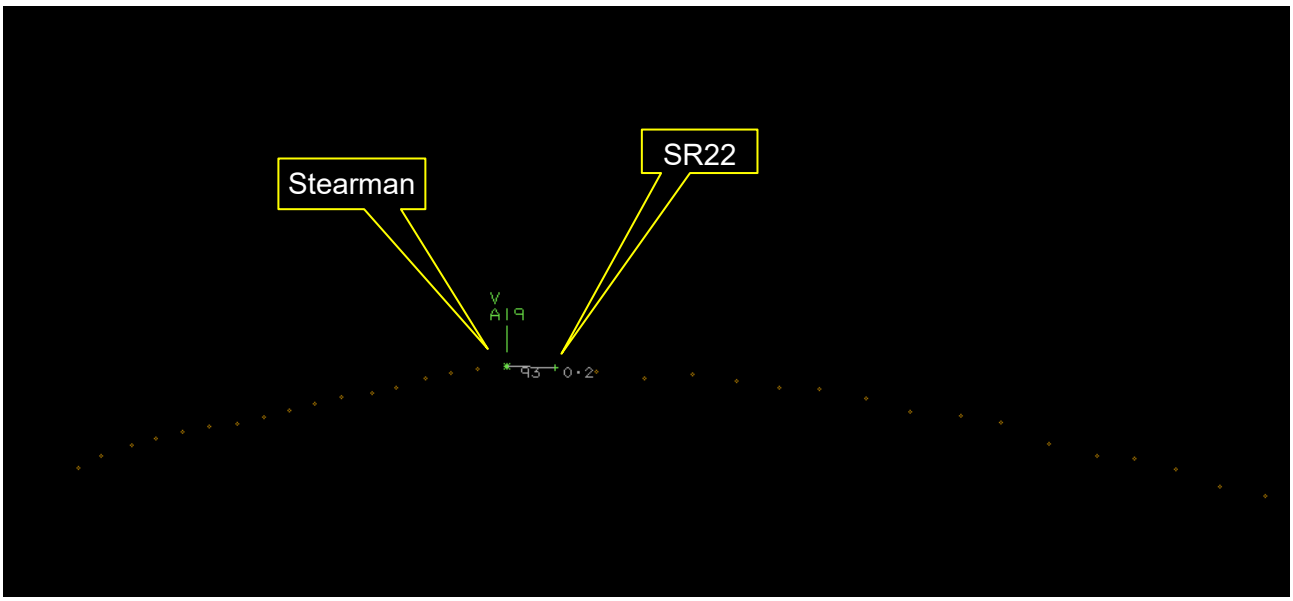


Figure 1: At 1016:58

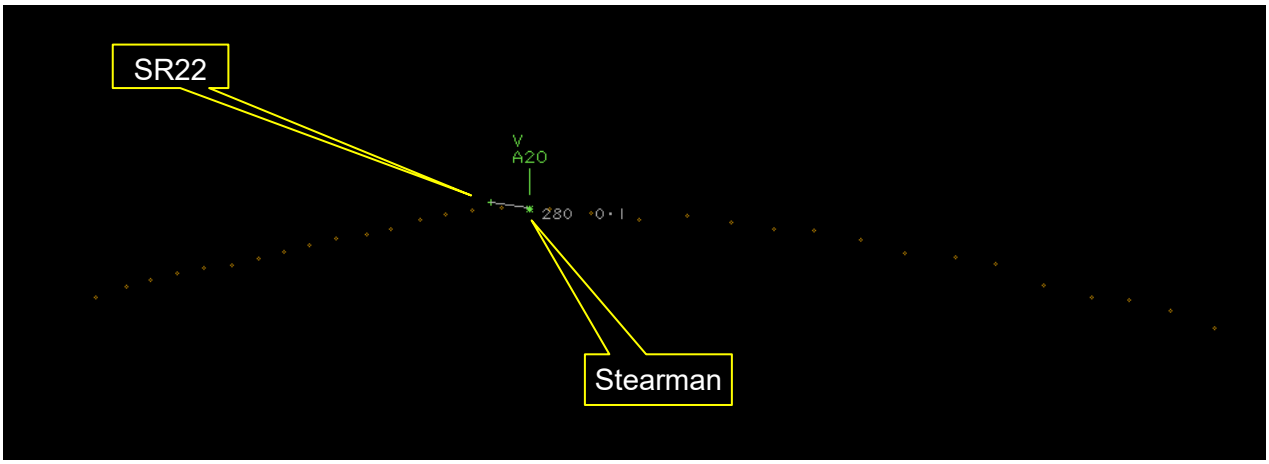


Figure 2: At 1017:02

The Stearman was tracked via Mode A and C radar. The SR22 had been operating with limited electrical power and its pilot had elected not to utilise the transponder. However, a primary-only track, which cannot be confirmed as the SR22 was recorded to and beyond CPA. Neither aircraft was shown on ADS-B and other aircraft tracking tools. The diagram at page 1 was created utilising a combination of NATS-provided radar data and a pilot-provided SkyDemon snapshot of the SR22 flight. The altitude reference at CPA for the SR22 is therefore approximate.

The Stearman and SR22 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 head-on or nearly so then both pilots were required to turn to the right.[2]

Summary

An Airprox was reported when a Stearman and an SR22 flew into proximity 3.5NM northwest of Elstree airfield at 1017Z on Tuesday 22nd April 2025. The Stearman pilot was operating under VFR in VMC and had been Listening Out on the Elstree A/G frequency, and the SR22 pilot was operating under VFR in VMC and not in receipt of a Flight Information Service.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and radar photographs/video recordings. 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 discussed the actions of the Stearman pilot, noting the conditions as described. Members accepted that forward visibility is quite restricted in that aircraft and that the pilot had compensated for that through occasional manoeuvres to offer the best opportunity to see other aircraft. However, the Board agreed that, despite this effort, the pilot had visually acquired the SR22 only at CPA and too late to have offered any avoidance action (**CF5**). The Board noted the poor radio quality and the limitations it can present and considered that a call to a LARS provider, such as Farnborough, may have resulted in a squawk and the possibility of some situational awareness building through an active service. As the Stearman pilot had not carried an EC unit, when combined with a lack of an active FIS, this had meant that the pilot had not had any situational awareness of the presence of the SR22 (**CF3**).

Members moved on to discuss the actions of the SR22 pilot, noting the status of the airframe, the aim of the flight and the use of a safety pilot to improve lookout as they had transited to their home base. The Board discussed the decision to transit with minimal electrical load and felt that, despite this restriction, it may have been possible for occasional radio and transponder use to enable an air traffic service to help build their situational awareness. As the aircraft had no fitted EC unit and at CPA had no ATS or active transponder (**CF1**, **CF2**), the pilot had gained no situational awareness of the presence of the Stearman (**CF3**). Members felt it had been fortunate that the safety pilot had gained sight of the Stearman very shortly before CPA, but in time to call for a manoeuvre to avoid it (**CF4**).

Concluding their discussion, members turned their attention to the determination of the risk of collision. They noted that the Stearman pilot had no SA and had not seen the SR22 until at CPA and that the SR22 pilot had reacted well to a call from their safety pilot to manoeuvre away from the oncoming Stearman but that, ultimately the recorded miss distance had been very narrow. Members felt that safety margins had been reduced much below the norm and the Board was in agreement that there had been a risk of collision (**CF6**), assigning a Risk Category B to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025057			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider

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

2	Human Factors	• Transponder Selection and Usage	An event involving the selection and usage of transponders	
	• Situational Awareness of the Conflicting Aircraft and Action			
3	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			
4	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
5	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
	• Outcome Events			
6	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: B.

Safety Barrier Assessment[3]

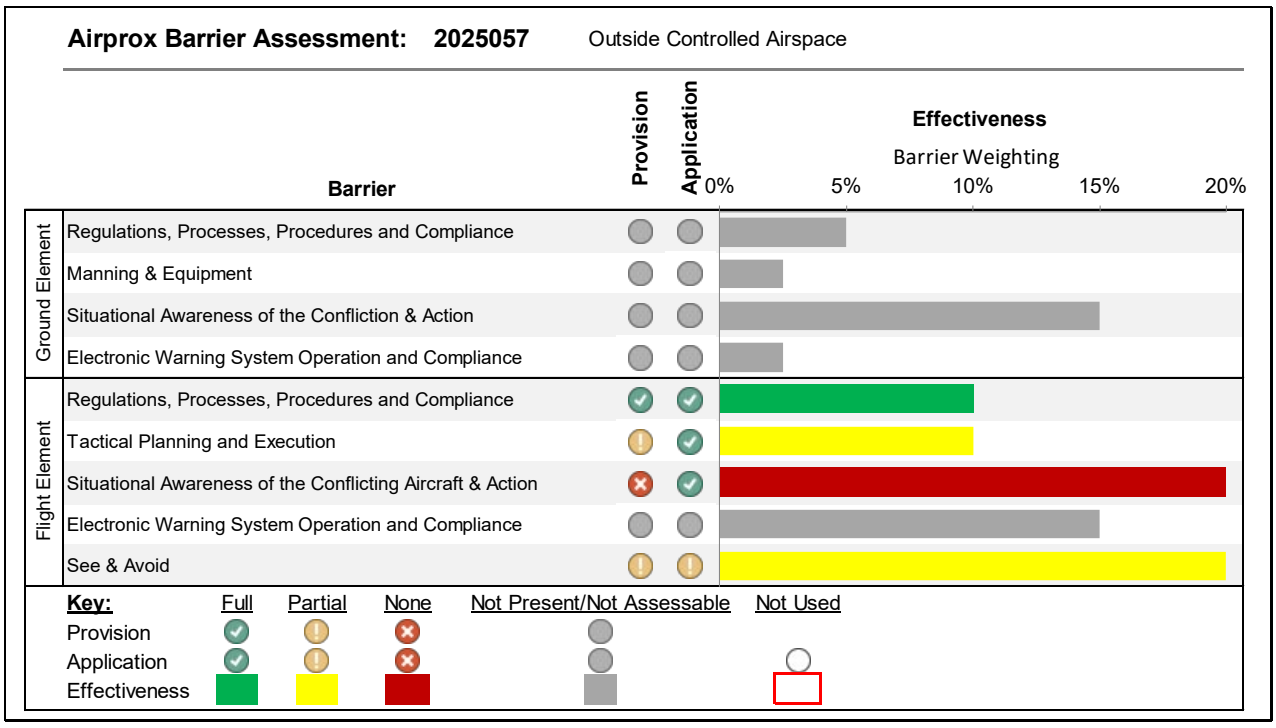
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the SR22 pilot could have considered utilising an Air Traffic Service.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any situational awareness of the presence of the other aircraft.

See and Avoid were assessed as **partially effective** because the SR22 pilot achieved only a late sighting of the Stearman and the Stearman pilot had not seen the SR22 until at or around CPA.



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