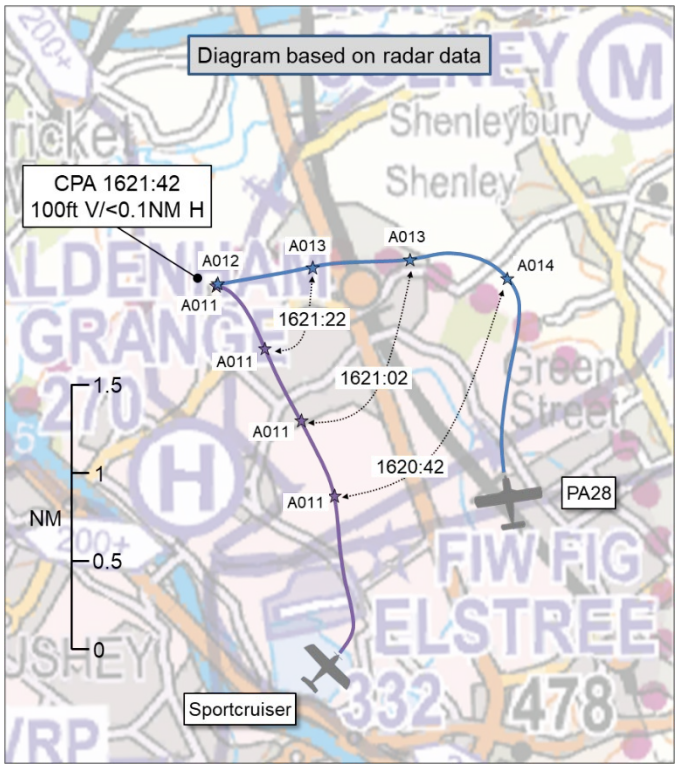
AIRPROX REPORT No 2025043

Date: 20 Mar 2025 Time: 1622Z Position: 5141N 00020W Location: Elstree

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	Sportcruiser
Operator	Civ FW	Civ FW
Airspace	Elstree ATZ	Elstree ATZ
Class	G	G
Rules	VFR	VFR
Service	AFIS	AFIS
Provider	Elstree Information	Elstree Information
Altitude/FL	1200ft	1100ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, red	Silver, blue
Lighting	Beacon, ldg, nav	Strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1000ft	1000ft
Altimeter	QFE (1006hPa)	QFE (1006hPa)
Heading	225°	360°
Speed	100kt	70kt
ACAS/TAS	SkyEcho	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	0ft V/<0.5NM H	Not seen
Recorded	100ft V/<0.1NM H	



THE PA28 PILOT reports that, following an exercise to practise stalling (Ex.10B-2), they returned to Elstree with their student and confirmed that their earlier request for three circuits was still acceptable. They joined overhead and joined the circuit pattern downwind. Following a touch-and-go, they then commenced the first of three full circuits.

During the touch-and-go, [the Sportcruiser] joined overhead. By the time that [the Sportcruiser pilot] had descended deadside, and had approached the upwind end of the runway (RW26 threshold), [the pilot of the PA28] was climbing crosswind, about to turn downwind. Following a request from the 'controller' at Elstree Information, the pilot of [the Sportcruiser] confirmed that they had the PA28 in the circuit in sight. By that message, it was understood that they had sighted their PA28 (the only PA28 in the circuit at the time). Based on [the Sportcruiser pilot's] initial trajectory, they were going to join downwind overhead Radlett resulting in [the Sportcruiser] passing behind [the PA28].

However, [the pilot of the PA28] then noticed that [the pilot of the Sportcruiser] had changed trajectory to the left slightly and was now converging on their position late downwind/base. The 'controller' was talking on frequency at the time so they [(the PA28 pilot)] could not convey their position. They considered their options with an aircraft on a collision path to their left. Turning right or climbing would have hidden the traffic from view. Therefore, they immediately descended approximately 200ft so that they could maintain visual contact and allow [the pilot of the Sportcruiser] to see them when [the Sportcruiser] descended from circuit altitude.

[The PA28] was then ahead and below [the Sportcruiser] and they confirmed their understanding to the Elstree Information 'controller'. [The pilot of the Sportcruiser] returned to the overhead to try again and [the pilot of the PA28] continued in the circuit.

They subsequently obtained the telephone number of the pilot of [the Sportcruiser] and spoke to them about the event and the learning points that could be taken from this.

[The pilot of the PA28 commented that,] had they not taken the action to maintain separation in this situation, the two aircraft would have collided. A solo student-pilot or a pilot with less currency/ experience may not have had the situational awareness, capacity or timely response to have reacted as they did. As per their understanding, pilots joining at Elstree should give way to circuit traffic. In addition, they believe that SERA states that: When two aircraft are converging at approximately the same level, the aircraft that has the other on its right shall give way. [The PA28] was to the right of [the Sportcruiser].

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

THE SPORTCRUISER PILOT reports that they were recovering the aircraft from [a maintenance base] where it had been for two days. It was the end of the afternoon's flying. The 'ATC officer' had warned on air that there were several aircraft in the circuit and several joining and remarked to another pilot that everyone seemed to be returning at the same time. In touch with 'ATC', they had already completed an overhead join and a normal left-hand circuit for RW08 [they recalled] and were following the published circuit pattern. The visibility to the west, when downwind, was difficult as the sun was low in the sky. Turning onto base leg, they saw a PA28 already established on base leg ahead of them and advised 'ATC' of this, and that, to maintain separation, they would climb, go-around overhead the runway and re-join the circuit to land, which they then did, landing normally.

Two days later, the pilot of a PA28 called them and said that they were an instructor in a PA28, doing circuits with a student pilot and that when [the Sportcruiser pilot] had turned downwind on that second occasion, it had cut in front of the [PA28] in the circuit causing them to descend. [The pilot of the Sportcruiser] apologised, explained the situation as above and that, unfortunately, with the high workload, they simply hadn't seen [the PA28].

THE ELSTREE AFISO reports that the [pilot of the PA28] was established in the circuit for several touch-and-goes. The [pilot of the Sportcruiser] was inbound to Elstree.

At 1615, an initial radio call was made by [the pilot of the Sportcruiser] over Potters Bar, requesting a join. They were told by the AFISO that RW08LH was in use with QFE 1006hPa. They were also given Traffic Information that there was one PA28 in the circuit. [The pilot of the Sportcruiser] replied that they would make a standard overhead join and was asked to make their next report when overhead.

At 1617, [the pilot of the PA28] reported on final for touch-and-go.

At 1618, [the pilot of the Sportcruiser] reported overhead and descending deadside for RW08LH. The AFISO requested that they report downwind. They were also advised that the PA28 was on climbout. [The pilot of the Sportcruiser] replied that they had the traffic in sight.

At 1620, the AFISO asked [the pilot of the Sportcruiser] if they were visual with the PA28 believed to be on their right-hand side in the downwind position. [The pilot of the Sportcruiser] replied that they had the PA28 in sight and were approaching their own downwind turn.

The AFISO asked [the pilot of the PA28] if they were visual with the Sportcruiser on their left-hand side joining the circuit from the overhead. [The pilot of the PA28] replied that they had the Sportcruiser in sight and that "*we're sort of converging at the moment. He's just about to turn*". The AFISO replied, "*That was my concern*".

At 1621, [the pilot of the PA28] transmitted to say that they believed the Sportcruiser was now behind them and that they (the PA28 pilot) were late downwind to land. The AFISO replied, "*That's my belief as well*" and asked [the pilot of the PA28] to report final whilst advising that there was also traffic approaching 2NM straight-in. [The pilot of the PA28] replied that they had sighted that traffic.

The AFISO advised the pilot of the 'straight-in' traffic to look out for two aircraft in close proximity, shortly turning left base.

At 1622, [the pilot of the Sportcruiser] transmitted that they had just seen the PA28 to their right and "*if I'm causing him any difficulty, I'll go around again and give him plenty of room*". This was acknowledged by the AFISO after which [the pilot of the Sportcruiser] transmitted that they would "*cut now*" and do a go-around via the runway.

The AFISO advised [the pilot of the Sportcruiser] that there was also helicopter traffic approaching from the north to which [the pilot of the Sportcruiser] responded that they would keep a good lookout.

At 1623, The pilot of the helicopter approaching from the north-side transmitted to say that the pilot of the second fixed-wing aircraft in the downwind circuit, [the Sportcruiser,] was above and behind the first and might not have been visual through the engine. This was acknowledged by the AFISO and the pilot was thanked for the information.

At 1630, [the pilot of the Sportcruiser] landed without further incident.

At 1631, [the pilot of the PA28] landed without further incident.

The controller perceived the severity of the incident as 'Medium'.

Factual Background

The entry for Elstree in the UK AIP provides the following information:

Flight procedures.
1 Circuits: Standard overhead join. Variable circuits. Fixed wing circuit height 1000 FT QFE.

The website for Elstree aerodrome provides the following circuit diagram for pilots of fixed-wing aircraft:

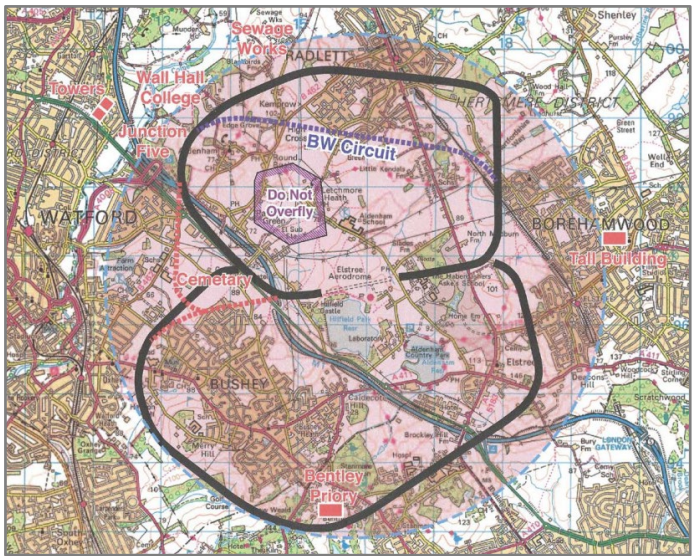


Figure 1 – Elstree fixed-wing circuit diagram

The weather at RAF Northolt was recorded as follows:

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METAR EGWU 201620Z 15008KT CAVOK 20/07 Q1017 NOSIG RMK BLU BLU
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be positively identified from Mode S data (Figure 2). The PA28 was observed by reference to ADS-B data sources. The diagram was constructed and the separation determined from the radar data.

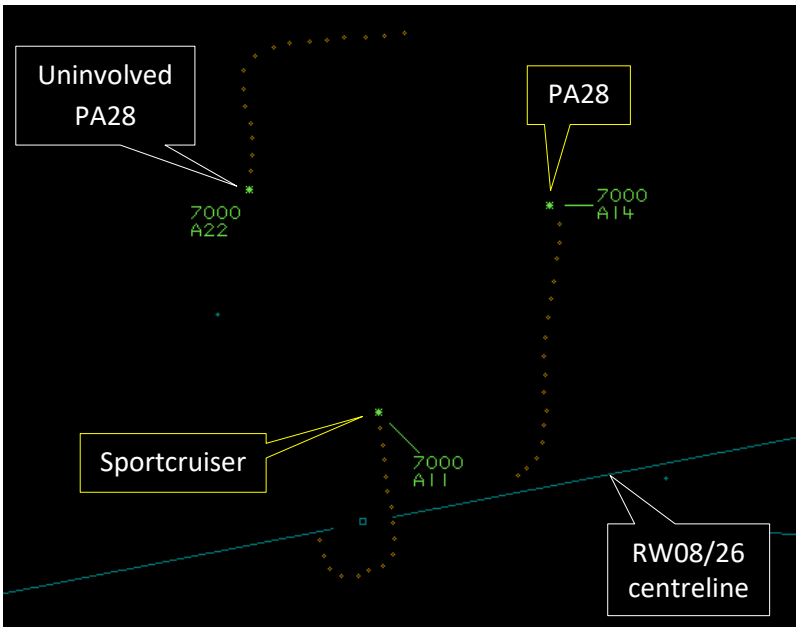

Figure 2 – Aircraft positions at 1620:42

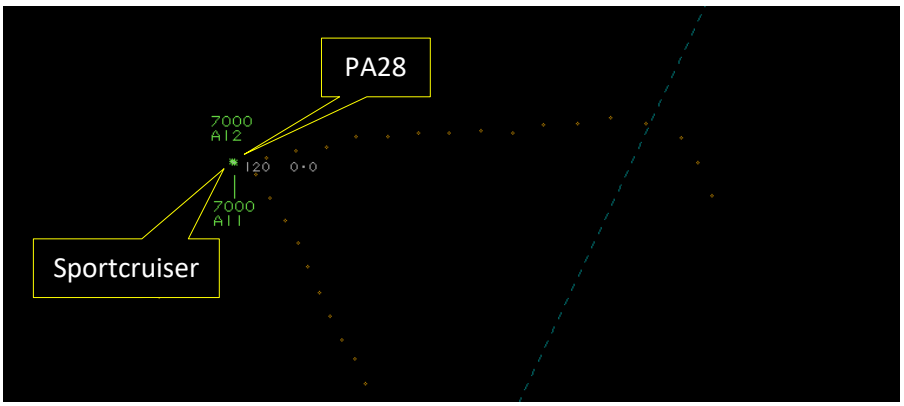

Figure 3 – CPA at 1621:42

The PA28 and Sportcruiser 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] An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.[2]

Summary

An Airprox was reported when a PA28 and a Sportcruiser flew into proximity at Elstree at 1622Z on Thursday 20th March 2025. Both pilots were operating under VFR in VMC in receipt of an AFIS from Elstree Information.

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the AFISO involved. 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 first considered the actions of the pilot of the PA28. Members agreed that the EC device fitted to the PA28 would not have been expected to have detected the Sportcruiser (**CF6**). However, members noted that they had been established in the circuit when the pilot of the Sportcruiser had transmitted that they had intended to join the circuit. It was therefore agreed that the pilot of the PA28 had gathered generic situational awareness of the presence of the Sportcruiser (**CF4**).

From observation of the track of the Sportcruiser, the pilot of the PA28 had initially assessed that its pilot had intended to join the downwind leg at Radlett (due north of the runway). However, the pilot of the PA28 had subsequently observed the Sportcruiser pilot alter their heading and had determined that it had then been on a converging course. Members noted that the Elstree AFISO had asked the pilot of the PA28 if they had sighted the Sportcruiser to their left, to which they replied that they had. Members noted that, with the Sportcruiser having continued to converge from their left, the pilot of the PA28 had considered that the safest course of action had been to initiate a descent.

Members next considered the actions of the pilot of the Sportcruiser and it was noted that, in response to their initial call to request a join, they had been passed Traffic Information on 'one PA28 in the circuit'. Members also noted that, when they had been overhead, and had started to descend on the deadside, they had been advised that the PA28 had been on climbout. The pilot of the Sportcruiser had replied that they had had the PA28 in sight. Then, when the PA28 had been on the downwind leg, the AFISO had asked them if they had been visual with the PA28 "*believed to be on your right-hand side in the downwind position*". Again, the pilot of the Sportcruiser replied that they had been in visual contact.

On review of the radar replay, members noticed that, at the time that the Sportcruiser pilot had crossed from the deadside to the live-side of the circuit, the pilot of another PA28 had been approaching from the north to join in the overhead. Members wondered whether the pilot of the Sportcruiser had mistakenly identified that PA28 to have been the PA28 to which the AFISO had referred in their Traffic Information calls. However, members noted that, from the Sportcruiser pilot's narrative of the encounter, "*they simply hadn't seen the PA28*" until they had seen "*a PA28 already established on base leg ahead of them*" which, members agreed, had been well after CPA.

It was clear to members that the pilot of the Sportcruiser had acknowledged having been in visual contact with the Airprox PA28 in the circuit when that had not been the case. Consequently, it was agreed that the pilot of the Sportcruiser had held inaccurate situational awareness of the traffic in the circuit (**CF4**) and had not assimilated the information available to them pertaining to a potential conflict with the PA28 (**CF5**). Members were in agreement that the pilot of the Sportcruiser had not complied with the procedure for joining the circuit (**CF1**) and had not conformed with, nor had avoided, the pattern of traffic in operation (**CF3**). Consequently, it was agreed that they had not executed their join to the circuit correctly (**CF2**).

Members noted that the Sportcruiser pilot had referred to the visibility to the west as having been difficult due to the low sun, but pointed out that the PA28 had been to their north-east, moving from right-to-left, when they had reported having been in visual contact with it. Members were keen to emphasise the imperative of maintaining a very thorough and effective lookout, particularly when joining the visual circuit, and to be certain that all circuit traffic had been identified before attempting to join the pattern. It was agreed that the pilot of the Sportcruiser had not sighted the Airprox PA28 until after CPA and that that effectively constituted a non-sighting (**CF7**).

Members next turned their attention to the actions of the Elstree AFISO and commended them for their awareness of the unfolding situation. Although the AFISO had not been permitted to have provided avoiding actions, they had passed sufficient Traffic Information for both pilots to have been aware of

the other aircraft in the circuit and had continued to pass information until the pilot of the PA28 had taken action to have ensured their safety.

Concluding the discussion, members considered the risk of collision. It was agreed that the pilot of the Sportcruiser had not joined the circuit correctly and had not sighted the PA28 until after CPA. Members concluded that safety margins had been reduced but agreed that the pilot of the PA28 had taken timely and effective avoiding action. Members were satisfied that the risk of collision that had existed had been averted. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025043			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Regulations, Processes, Procedures and Compliance			
1	Human Factors	• Use of policy/Procedures	Events involving the use of the relevant policy or procedures by flight crew	Regulations and/or procedures not complied with
	• Tactical Planning and Execution			
2	Human Factors	• Action Performed Incorrectly	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution
3	Human Factors	• Monitoring of Environment	Events involving flight crew not to appropriately monitoring the environment	Did not avoid/conform with the pattern of traffic already formed
	• Situational Awareness of the Conflicting Aircraft and Action			
4	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
5	Human Factors	• Understanding/ Comprehension	Events involving flight crew that did not understand or comprehend a situation or instruction	Pilot did not assimilate conflict information
	• Electronic Warning System Operation and Compliance			
6	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
	• See and Avoid			
7	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

Degree of Risk: C.

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:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the pilot of the Sportcruiser had not complied with the regulation to have conformed with, or to have avoided, the pattern of traffic in operation.

Tactical Planning and Execution was assessed as **ineffective** because the pilot of the Sportcruiser had not performed their join to the circuit correctly.

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

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the Sportcruiser had incorrect situational awareness of the position of the PA28 in the circuit.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC device fitted to the PA28 would not have been expected to have detected the presence of the Sportcruiser.