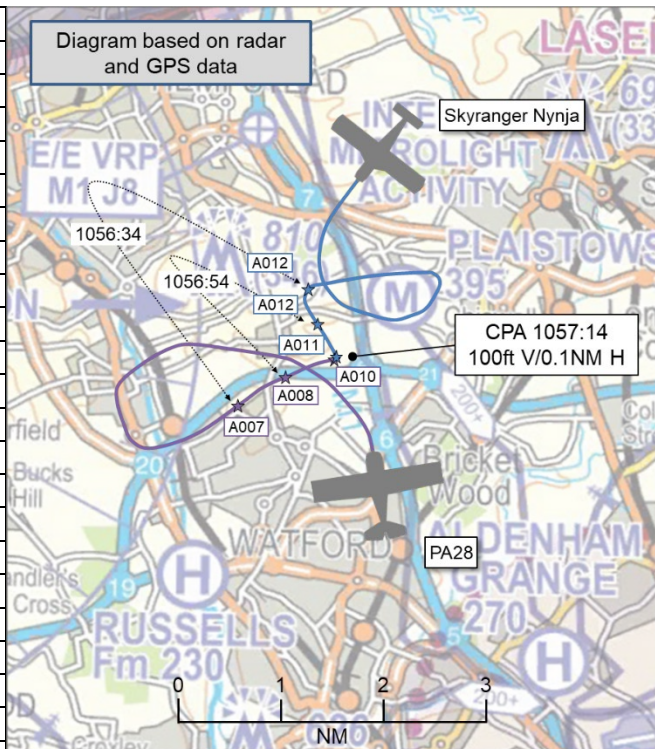


**AIRPROX REPORT No 2022123**

Date: 03 Jul 2022 Time: 1057Z Position: 5143N 00024W Location: 1NM SW Plaistows

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	Skyranger Nynja	PA28
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	Listening Out
Provider	Plaistows Radio	Elstree Info
Altitude/FL	1100ft	1000ft
Transponder	A, C, S	A, C
<b>Reported</b>		
Colours	White	White, blue
Lighting	Landing, strobe	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	800ft	1000ft
Altimeter	QFE (1007hPa)	QNH (1019hPa)
Heading	150°	090°
Speed	60kt	90kt
ACAS/TAS	PilotAware	Not fitted
Alert	None	N/A
<b>Separation at CPA</b>		
Reported	100ft V/0m H	30ft V/100m H
Recorded	100ft V/0.1NM H	



**THE SKYRANGER PILOT** reports that they were towards the end of the downwind leg for RW33 at Plaistows at 800ft QFE and 50-60kts. Something, probably a noise, made them turn their head to the right where they saw a white aeroplane 'extremely close' pass directly under them, crossing their track approximately at right angles. The vertical separation was probably less than 100ft but it all happened so quickly that they cannot make an accurate estimation. They then looked out of the left cockpit window and saw an all-white aeroplane heading towards St. Albans, possibly in a descent. This all happened very quickly and they were unable to identify the aircraft type, or read its registration and they cannot recall if it was a high or low wing, only that it was predominantly white in colour. Later that evening they spent a lot of time trying to identify the other aeroplane on FlightRadar 24 but there was nothing there.

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

**THE PA28 PILOT** reports that they were practising PFLs and Engine Failure After Take-Off (EFATO) and had identified a long field which would allow them to land in an easterly direction. On recovering from the PFL, they reached a safe altitude of 1000ft and [the instructor] pulled the power back and asked [the student pilot] to do an EFATO. As the nose attitude pitched down following power reduction, they noticed an aircraft to their left going left-to-right at about 100m distance. [The instructor] took over and rapidly pitched the aircraft down to avoid the other aircraft. Any other form of avoidance may have resulted in a collision. The other aircraft did not seem to take any avoiding action.

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

**THE ELSTREE FISO** stated that they were aware of the incident, but it occurred outside the ATZ and not on their frequency.

## Factual Background

The weather at Luton was recorded as follows:

METAR EGGW 031050Z AUTO 24007KT 210V290 9999 SCT025 18/11 Q1019

## Analysis and Investigation

An analysis of the NATS area radar replay was undertaken. The Skyranger and PA28 were detected by the NATS area radars approximately 1NM southwest of Plaistows (see Figure 1) and CPA was measured at 1057:14 with altitudes of 1100ft and 1000ft respectively (see Figure 2).

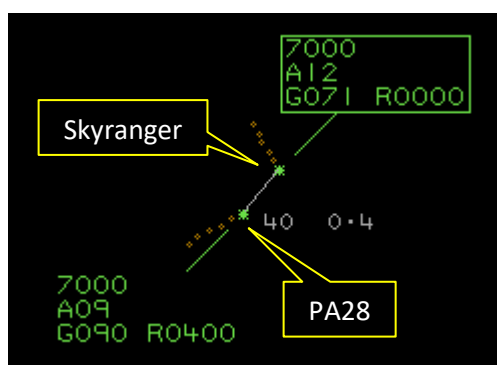


Figure 1 - 1057:03

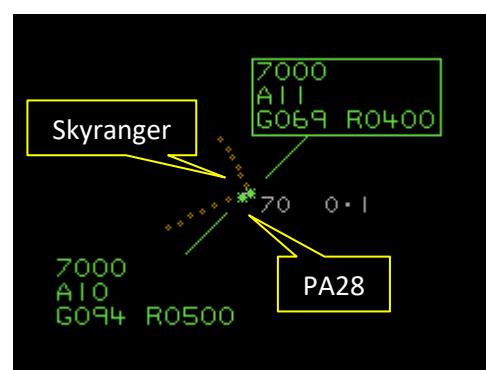


Figure 2 - CPA at 1057:14

## UKAB Secretariat

The Skyranger and PA28 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.<sup>1</sup> 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.<sup>2</sup>

## Summary

An Airprox was reported when a Skyranger and a PA28 flew into proximity at 1NM southwest of Plaistows at 1057Z on the 3<sup>rd</sup> July 2022. Both pilots were operating under VFR in VMC, the Skyranger pilot in receipt of an AGCS from Plaistows Radio and the PA28 pilot listening-out on the Elstree Information frequency.

## 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 Skyranger pilot and noted that they had been in receipt of an AGCS whilst flying a circuit at Plaistows. However, there had been no specific or generic situational awareness available to the pilot to indicate the presence of the PA28 (**CF3**). The Board agreed that the Skyranger pilot had not seen the PA28 until it had been passing underneath them, effectively making this a non-sighting (**CF6**). Having considered how the geometry of the two flightpaths may or may not have had an influence on the conspicuity of each aircraft, it was concluded that the relative positions of the 2 aircraft in this encounter emphasises the importance of an effective lookout.

<sup>1</sup> (UK) SERA.3205 Proximity.

<sup>2</sup> (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

Both aircraft had been fitted with a transponder and the Skyranger had been fitted with an additional EC device. The Board agreed that, due to incompatibilities with the equipment carried in each aircraft, neither pilot would have received any indication that the other aircraft had been in the vicinity (CF4).

The Board's attention then turned to the actions of the PA28 pilot. It was acknowledged that it would be difficult to find a suitable area for practising emergencies in this busy airspace but the Board questioned the appropriateness of the particular area chosen in this instance (CF1). The Board considered whether the search to find a suitable area, whilst presumably trying to make the most of the training time available to the pilot, may have led to being 'task-focused' on the PFL and EFATO elements of the sortie to the detriment of an effective tactical plan and lookout. One member of the Board with knowledge of this particular area stated that Plaistows can be hard to see from the air. However, it was suggested by the members that if the PA28 pilot had the intention of practising emergency procedures close to a published microlight site, that a pre-flight call to give notice of that intention might have meant that some generic situational awareness would have been available for the benefit of any traffic in the area. The Board noted that there appeared to be no manoeuvring to indicate integration with, or avoidance of, the circuit pattern being flown by the Skyranger (CF2) and concluded that the PA28 pilot had not been aware of the Skyranger until the very last moment (CF5). Notwithstanding the very late sighting of the Skyranger, it was acknowledged that the PA28 pilot had reacted quickly to prevent a collision.

When determining the risk of collision, the Board agreed that safety margins had been much reduced below the norm through the non-sighting and effective non-sighting of the pilot of each aircraft respectively, and that there had been emergency avoiding action which materially increased separation at the last minute (CF7). As such, the Board assigned a Risk Category B to this Airprox.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### Contributory Factors:

	2022123			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Flight Elements</b>				
<b>• Tactical Planning and Execution</b>				
1	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
2	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
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
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
<b>• Electronic Warning System Operation and Compliance</b>				
4	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
<b>• See and Avoid</b>				
5	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
6	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
<b>• Outcome Events</b>				
7	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<sup>3</sup>

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 **ineffective** because the area chosen by the PA28 pilot for PFL and EFATO training was coincident with the circuit pattern for Plaistows.

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

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the EC device in the Skyranger aircraft would not have been expected to detect the presence of the PA28.

**See and Avoid** were assessed as **partially effective** because, although the PA28 pilot saw the Skyranger in time to take avoiding action, the Skyranger pilot did not see the PA28 in time to materially affect the separation.

Airprox Barrier Assessment: 2022123		Outside Controlled Airspace		Effectiveness					
Barrier		Provision	Application	0%	5%	10%	15%	20%	
Ground Element	Regulations, Processes, Procedures and Compliance	●	●	[Bar chart: 5% effectiveness]					
	Manning & Equipment	●	●	[Bar chart: 5% effectiveness]					
	Situational Awareness of the Conflicting Aircraft & Action	●	●	[Bar chart: 15% effectiveness]					
	Electronic Warning System Operation and Compliance	●	●	[Bar chart: 5% effectiveness]					
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Bar chart: 10% effectiveness]					
	Tactical Planning and Execution	✓	✗	[Bar chart: 10% effectiveness]					
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓	[Bar chart: 20% effectiveness]					
	Electronic Warning System Operation and Compliance	✗	✓	[Bar chart: 15% effectiveness]					
	See & Avoid	!	!	[Bar chart: 20% effectiveness]					
<b>Key:</b>		Full	Partial	None	Not Present/Not Assessable	Not Used			
Provision	✓	!	✗	●					
Application	✓	!	✗	●		○			
Effectiveness	■	■	■	■		□			

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