

## AIRPROX REPORT No 2022072

Date: 05 May 2022 Time: 1301Z Position: 5143N 00022W Location: 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	Listening Out	Listening Out
Provider	Plaistows	Elstree
Altitude/FL	2000ft	1900ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White	White, Blue
Lighting	Landing, Strobe	Strobe, Beacon
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	1700ft	1600-2000ft
Altimeter	QFE (1013hPa)	QNH
Heading	NE	360°
Speed	60kt	95kt
ACAS/TAS	PilotAware	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	0ft V/50m H	Not Seen
Recorded	100ft V/0.1NM H	



**THE SKYRANGER NYNJA PILOT** reports that they were returning to Plaistows airfield from the southwest at 1800ft (circuit height +1000ft). They announced over the radio their intention to carry out an overhead join. As they crossed over the downwind end of RW33 they announced over the radio that they were "overhead and descending deadside for Runway 33". Shortly after making the call, the PA28 passed in front of them from right to left at the same height at an estimated distance of less than 50m, there was no time to take any avoiding action. Approximately 2sec later they flew through the turbulent wake of the PA28. The PA28 then turned right towards St. Albans and they continued on with the overhead join procedure followed by a left-hand circuit and landing on RW33.

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

**THE PA28 PILOT** reports that the flight in question was a training flight tracking 3 VORs in the Elstree area. They proceeded north climbing to 2000ft QNH with the intention of intercepting BKY VOR on a heading of 090°. They then headed east towards the VOR to continue the lesson. The track on SkyDemon shows that they were just to the east of Plaistows airfield but well above the circuit height. They were talking to Elstree airfield at the time and did not switch to LARS until they made the turn to the east. Neither the instructor nor the student remembered seeing any other aircraft. It could be that they were concentrating on identifying the VOR and that they were 'heads-in' the cockpit for a few seconds. The instructor noted that in future, if a similar situation occurs, they will make sure that one person maintains a lookout.

**THE ELSTREE AFISO** reports that the incident occurred outside the Elstree ATZ after the [PA28 C/S] had departed on a local flight, the pilot was listening out on the Elstree frequency but not receiving a service from the AFISO.

## Factual Background

The weather at Luton was recorded as follows:

METAR EGGW 051250Z AUTO 34008KT 9999 BKN032 17/09 Q1024=

## Analysis and Investigation

### UKAB Secretariat

Although neither pilot was receiving an ATS, the incident could be seen on the NATS radars. Both aircraft were squawking 7000. At 1300:10 the Skyranger Nynja was on a north-easterly heading and indicating 2000ft. The PA28 was indicating 2100ft (Figure 1). The two aircraft continued to close until CPA at 1300:58 when the PA28, indicating 1900ft, crossed 0.1NM ahead of the Skyranger.

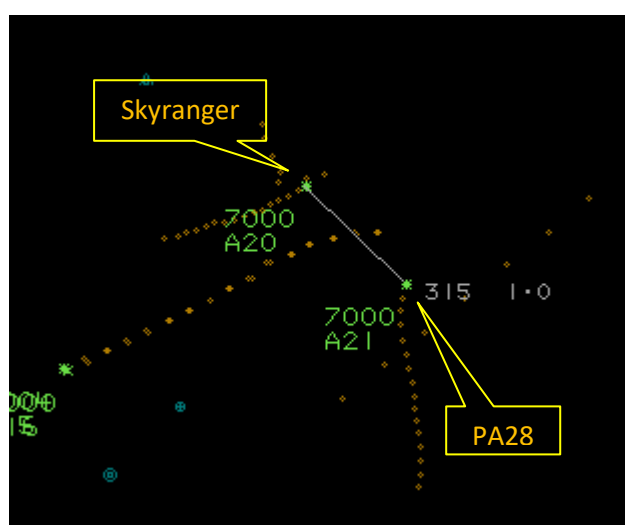


Figure 1 - 1300:10

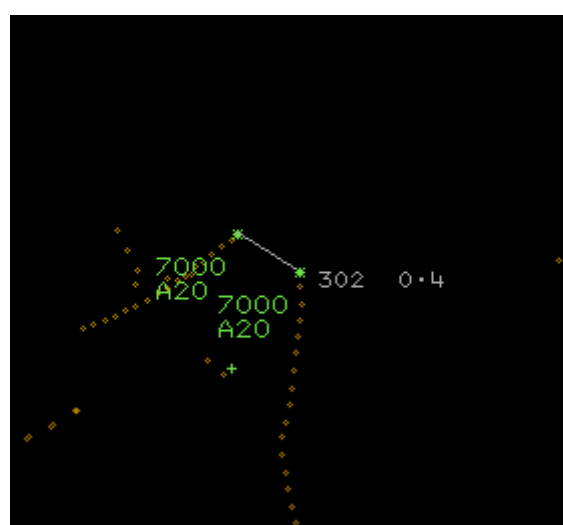


Figure 2 -1300:38

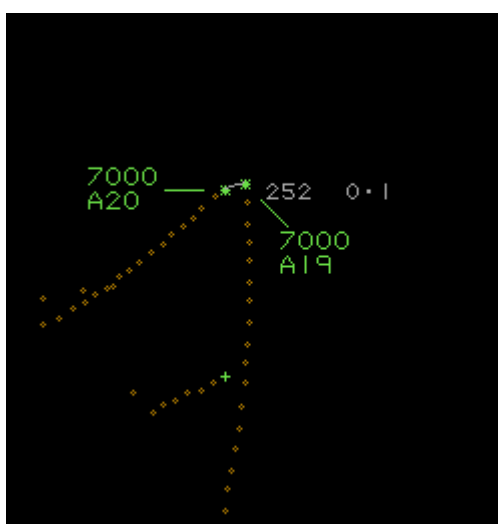


Figure 3 - CPA 1300:58

The Skyranger Nynja 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>

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

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

## Summary

An Airprox was reported when a Skyranger Nynja and a PA28 flew into proximity at Plaistows at 1301Z on Thursday 5<sup>th</sup> May 2022. Both pilots were operating under VFR in VMC, neither in receipt of an ATS.

### **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 Elstree AFISO. 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 looked at the actions of the Skyranger Nynja pilot. They had been returning to Plaistows for an overhead join, the airfield does not operate with ATC or AGO and so they had been making the appropriate calls on the frequency. The CWS on the aircraft could not detect the PA28, which had not been carrying any form of EC (**CF3**), and consequently the pilot had not had any prior situational awareness that the PA28 had been transiting through the area (**CF2**). The pilot had first seen the other aircraft as it had crossed ahead of them at a similar altitude, by which time it had been too late to take any avoiding action (**CF4**).

Turning to the PA28 pilot, members first discussed the routing overhead Plaistows. Noting that the Skyway Code advocated that the preferred method of joining an airfield was an overhead join,<sup>3</sup> members thought that pilots should bear this in mind when planning to route in the immediate vicinity of an airfield. Although the PA28 pilot had been above the circuit height, at 2000ft they had been at the same height as aircraft joining overhead and members thought that the pilot should have identified this potential hazard at the planning stage and may have been better served planning to avoid Plaistows by a greater margin (**CF1**) or at the very least call on their frequency to let other pilots know they were close by. Members noted that although a microlight site, many microlights (including the Skyranger) were in fact light-aircraft and were flown as such, therefore pilots should not imagine flex-wing vehicles, but instead expect normal circuit patterns and procedures. The PA28 pilot had chosen to remain on the Elstree frequency, but an AFISO was not likely to be able to provide any Traffic Information outside the immediate vicinity of their own airfield, and so members thought that a better option would have been to call an ATC unit capable of providing a radar service. The PA28 had not been fitted with any form of CWS and so the pilot had not had any prior situational awareness that the Skyranger would be in the vicinity (**CF2**). Without an ATS or any CWS, the final barrier to mitigate against MAC for the PA28 pilot had been see and avoid. The Skyranger had been on a constant relative bearing to the PA28 and so would have been difficult to see. Furthermore, members wondered whether, when at range, if the pilot's view in the direction of the Skyranger had been blocked by the low-wing of their aircraft. To compound the problem the pilot themselves noted in their report that they had spent some time looking into the cockpit as they tried to identify the VOR. The Board agreed that, whatever the reason, neither the instructor, nor the student in the PA28 had seen the Skyranger (**CF4**).

When determining the risk, members considered the reports from both pilots and the NATS radar data. They quickly agreed that there had been a risk of collision but, given the lateral separation shown on the radar, a discussion followed about whether safety had been much reduced (Risk Category B) or whether the situation had been more critical and there had been a serious risk of collision. Members discussed that neither pilot had taken any avoiding action to increase the separation, and that the Skyranger pilot reported flying through wake turbulence only a few seconds after seeing the PA28 cross ahead. The Chairman called a vote and by a large majority it was agreed that providence had played a major part in events; Risk Category A (**CF5**).

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<sup>3</sup> CAA Skyway Code, Aerodrome Operations, Procedures for Arriving Traffic, page 103 available [here](#).

**PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK****Contributory Factors:**

	2022072			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Flight Elements</b>				
<b>• Tactical Planning and Execution</b>				
1	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
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
<b>• Electronic Warning System Operation and Compliance</b>				
3	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>				
4	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>				
5	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:** A.

**Safety Barrier Assessment<sup>4</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 **partially effective** because the PA28 pilot had not considered overhead joining traffic at Plaistows when planning their route.

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

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the EC device on the Skyranger Nynja could not detect the PA28.

**See and Avoid** were assessed as **ineffective** because neither pilot had seen the other aircraft in time to take effective avoiding action.

<sup>4</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

<b>Airprox Barrier Assessment: 2022072</b>		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 Confliction & 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	⊗	⊗				
<b>Key:</b>			Full	Partial	None	Not Present/Not Assessable	Not Used
Provision	●	●	⊗	○	○	○	○
Application	●	●	⊗	○	○	○	○
Effectiveness	■	■	■	■	■	■	■