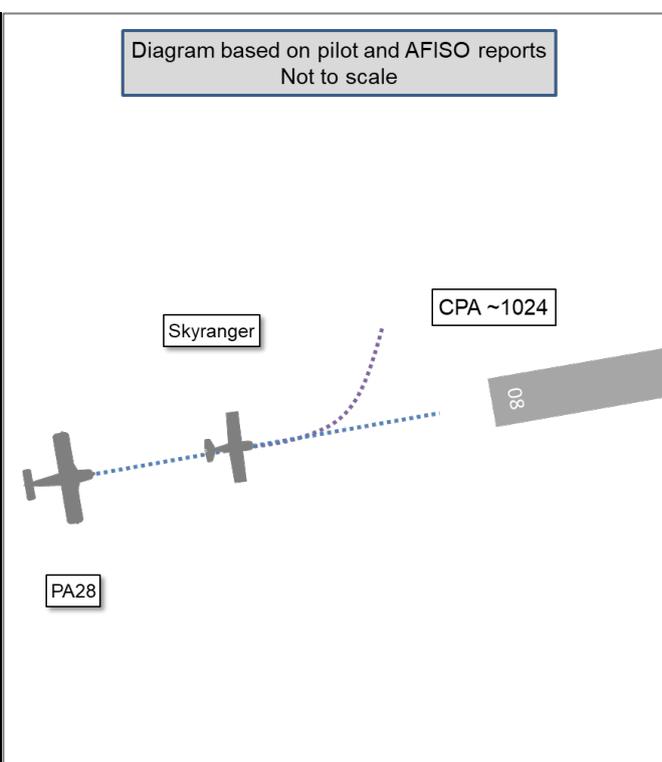


## AIRPROX REPORT No 2022210

Date: 14 Sep 2022 Time: 1024Z Position: 5140N 00204W Location: Kemble aerodrome

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	Skyranger
Operator	Civ FW	Civ FW
Airspace	Kemble ATZ	Kemble ATZ
Class	G	G
Rules	VFR	VFR
Service	AFIS	AFIS
Provider	Kemble	Kemble
Altitude/FL	NK	NK
Transponder	A, C, S	A, C, S
Reported		
Colours	Blue/white	White
Lighting	Beacon	Not fitted
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	400ft	NK
Altimeter	QFE (992hPa)	QFE (NK hPa)
Heading	080°	080°
Speed	65kt	55kt
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	Not seen	Not seen
Recorded	NK	



**THE KEMBLE AIRFIELD FLIGHT INFORMATION SERVICE OFFICER** reports that there was a busy circuit [on RW08 right hand] with 3 aircraft conducting touch-and-goes, an aircraft to depart and a gyrocopter joining crosswind from the north. The PA28 pilot got too close in the circuit to the S kyranger, which was on a high glide approach on short final to RW08. The PA28 pilot was asked if they were visual with the microlight ahead to which they confirmed they were. Information was then passed to the PA28 pilot, using plain English, as to the intentions of the S kyranger pilot and a go-around suggested. The PA28 pilot continued and the S kyranger pilot started descending rapidly, offering to take the grass runway. The PA28 pilot was asked to confirm visual as they closed on the S kyranger and a go-around was suggested. The PA28 pilot confirmed visual, they recalled, and 'going around' which they did, although climbing straight ahead, at which point the S kyranger pilot started to climb and announced 'going around', bringing the aircraft within approximately 150ft. The S kyranger pilot turned left towards the north and the PA28 pilot continued climbing on runway track.

The AFISO stated that, on AFISO watch handover, the only information passed regarding the PA28 was that the instructor had got out and the aircraft was going back into the circuit. No student prefix was given when the pilot called and although it was stated in the instructor report that 'The instructor telephoned Kemble operations to clarify that this was a first solo, and this was communicated to the FISO', no information was communicated to the AFISO, who was alone in the VCR. The S kyranger pilot performed a non-standard circuit, climbing on downwind to 1500ft to perform a glide approach and then, due to the glide, was very high on final. On climbing away, the S kyranger pilot initiated the go-around before making their intention known on the radio. The PA28 pilot did not manage spacing adequately and confirmed that the aircraft ahead was in view but continued anyway. It was the AFISO's opinion that the PA28 pilot was not adequately experienced to maintain separation from other aircraft ahead in the circuit. This was not helped by the unusual flight path and approach by the S kyranger pilot and the subsequent climb into the path of the other aircraft which had called 'going around', prior to their 'going around' radio call.

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

**THE PA28 STUDENT PILOT** reports conducting their first solo flight.

The pilot did not make an assessment of the risk of collision.

**THE PA28 STUDENT PILOT INSTRUCTOR** reports the student had flown 27hr of dual instruction over a period of 11 months and was judged to be competent and ready for first solo. The previous sortie from [another airfield] had involved 8 circuits at Kemble, including 2 EFATOs and a short departure from the circuit to practice and refine final approach configuration and speed. The circuit had been quiet and weather conditions were ideal. The AFISO was informed of the impending first solo when downwind, and they agreed a crew change on the North Apron. Before stepping out, the instructor briefed the student on pre-flight checks and approved them to fly one circuit only but to go-around if in any doubt.

The instructor stood next to a hangar with a clear view of the circuit and monitored R/T with a hand-held radio. On first call – ready departure – the AFISO said they were unaware of the flight and, after some clarification, the student was instructed to taxi and subsequently depart into the circuit. The instructor telephoned Kemble operations to clarify that this was a first solo, and this was communicated to the AFISO. There had been an AFISO handover immediately prior.

The student flew one circuit, which had suddenly become busier, and caught up with landing traffic on final so went around. On the second circuit, with three aircraft now in the circuit, a Skyranger flew a glide approach from 1500ft while the solo student flew the normal pattern at 1000ft. The student was very focussed on the landing fixed-wing traffic ahead and said they never saw the microlight above them. From the instructor's position on the ground, the microlight initially appeared to be much higher and off to the south, then descended so that both aircraft appeared to come within 100ft of each other, both vertically and laterally, but the instructor could not determine the relative distances from the threshold and any resulting horizontal separation. The AFISO suggested that a go-around was advisable and both pilots went around. It is well understood that an AFISO cannot issue instructions to pilots in the air. The student pilot then flew a third circuit followed by a good approach and excellent touchdown.

Subsequently, the microlight pilot walked over and asked who was the pilot in command of the aircraft. They appeared to be quite shaken and upset, and asked quite condescendingly whether the student pilot had seen them, to which the student did not respond well. They were unable to have a calm discussion to clarify which aircraft each other could see (the one on the runway ahead and/or the microlight above), or why the microlight pilot was flying a 1500ft glide approach in a busy circuit and did not give way to circuit traffic below. The microlight pilot promptly said they would file an MOR to make it formal and walked off. This interaction upset the student, who assessed that they were no longer in the right state of mind to fly or be instructed further that day.

**THE SKYRANGER PILOT** reports conducting a routine General Handling flight from which, on return to Kemble, practice circuits including a glide circuit were flown. The plan was to join via a straight-in approach from the west to complete a normal circuit and then a glide circuit. On joining via the straight-in approach, an aircraft was on base leg so a port orbit was flown to give adequate spacing for a touch and go. On climb-out, the intention to fly a glide circuit from 1500ft agl was announced to Kemble Information. Circuit spacing was set by following the aircraft ahead. Whilst downwind, another aircraft [PA28 C/S] was heard on the radio, but could not be seen due to being behind. The PA28 pilot appeared to struggle with R/T communication and did not have good situational awareness of other aircraft in the circuit. The Kemble AFISO did a sterling job of attempting to pass information to the PA28 pilot and make them aware of other aircraft in the circuit. On final, during a sideslip to land, after receiving permission [sic] to 'land at your discretion', it was apparent that the PA28 pilot was catching up and that the Kemble AFISO was attempting to resolve the confliction. The Skyranger pilot initially offered to land on the grass runway to help the aircraft behind, but the decision was quickly made to overshoot, turn through 60° to the left onto the deadside and go-around. This profile was flown to move away from the perceived confliction as soon as possible. Once established on a heading of approximately north, the

PA28 could be seen in the 4 o'clock at about 200m, flying down the runway centreline, and it was assessed they had previously been close together on final. Flying the aircraft and ensuring safe separation was the priority and, once the go-around was safely underway and the PA28 could be seen, the go-around was announced over the radio. The circuit was re-joined and the PA28 was seen to fly a tighter downwind leg and turn base sooner than another aircraft that was ahead in the circuit. This led to the PA28 catching up with the other aircraft on final and creating another safety issue. It was as if the PA28 pilot was not listening to R/T transmissions and could not see the aircraft ahead. The Kemble AFISO did another excellent job of managing the situation. At no stage during the flight was the Skyranger pilot aware that the PA28 pilot was flying their student first solo. The Skyranger pilot noted that the student first solo did not appear to have been well coordinated/managed with 'ATC' and other airfield users.

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

## Factual Background

The weather at Brize Norton was recorded as follows:

METAR EGVN 141020Z 03007KT 9999 SCT016 17/13 Q1007 BECMG SCT025 RMK WHT BECMG BLU=

## Analysis and Investigation

### 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 Kemble aerodrome at about 1024Z on Wednesday 14<sup>th</sup> September 2022. Both pilots were operating under VFR in VMC, both in receipt of an AFIS from Kemble Information.

## 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 discussed the circumstances pertaining to the pilots operating in the visual circuit at Kemble and agreed that the oncoming AFISO appeared not to have been briefed on the PA28 student pilot's first solo (**CF1**). Members felt that this was a significant omission that set the scene for a breakdown in communication, in that neither the oncoming AFISO nor the Skyranger pilot were aware of the status of the PA28 student pilot. Members also felt that this situation was not helped by the PA28 student pilot omitting to use the 'Student' callsign prefix (**CF4**) and wondered to what degree they were briefed to do so by their Instructor. The use of the 'Student' callsign prefix is not mandatory but members agreed that its use can enable important consideration by other airspace operators and that in this case it may have afforded the AFISO and Skyranger pilot a better understanding of the PA28 student pilot's predicament. The Skyranger pilot elected to join straight-in (although a GA member pointed out that the UK AIP entry for Kemble states, 'All fixed wing GA traffic to join overhead.'<sup>3</sup> (**CF3**)), orbited for other traffic on final and then joined the visual circuit. The PA28 student pilot took off, entered the visual circuit

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

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

<sup>3</sup> UK AIP EGBP AD 2.22 FLIGHT PROCEDURES 1 CIRCUITS c.

and caught up with the Skyranger ahead. The Board commended the Kemble AFISO on their efforts to maintain safety, by suggesting an appropriate course of action to the PA28 student pilot on the radio, and which resulted in both pilots taking appropriate action, albeit with the PA28 student pilot making their go-around at a late stage (CF5) and with the AFISO being concerned by the proximity of the 2 aircraft (CF2). The Board then spent some time discussing the use of the visual circuit, particularly for circuits that were not flown to the same parameters as a 'normal circuit'. Some members expressed the opinion that all circuits should be flown at or near the same height and at the same spacing from the runway, whilst others thought that a glide circuit should be flown at a height and spacing that replicated the position of a PFL 'low key', in order to increase the training benefit. The Kemble AIP entry states, 'Circuit Heights: Jet circuit 1500 FT AAL. Fixed-wing 1000 FT AAL.'<sup>4</sup>, which members thought could be construed as applying to all circuits and that the Skyranger pilot should have been at 1000ft aal, thereby affording the PA28 student pilot a better chance of seeing the Skyranger and taking earlier action in order to conform with the pattern of traffic. Other members felt that it was common practice to fly glide circuits to PFL parameters and that the requirement to avoid or conform with the pattern of traffic intending to land did not stipulate where the traffic had to be. The Board thought that previous training and custom would play a large part in pilots' understanding and appreciation of other pilots' likely circuit patterns, for example for glide circuits with some airfields operating at 'normal circuit height' (closing the throttle on base or final for a glide approach) and others operating mixed height circuits (climbing to PFL 'low key' before closing the throttle). In the event, the PA28 student pilot appeared not to be aware of their proximity to the Skyranger (CF7), assimilate the Skyranger pilot's announcement that they would be conducting a glide circuit at 1500ft agl or assimilate the AFISO's conflict information until at a late stage (CF8). Consequently, the Board felt that they had not been able to conform with the pattern of traffic (CF6). The Skyranger pilot had generic situational awareness on the PA28 (CF7), in that it was behind and appeared to be catching up, and considered using the grass runway as an option to increase lateral spacing. Members thought that this may have resulted in simultaneous approaches to runways that are closely spaced, although not expressly forbidden in the AIP entry, but equally that safety was paramount. The Board did not agree that the higher Skyranger pilot was required to give way to the lower PA28 student pilot because the PA28 was behind the Skyranger until at a late stage and, the Board felt, went-around before CPA. The geometry of the interaction likely resulted in the PA28, behind and below the Skyranger, being obscured to the Skyranger pilot and the Skyranger, above and ahead of the PA28, if not obscured to the PA28 student pilot at least outside their normal field of visual scan (CF10). The Skyranger pilot did not see the PA28 until after CPA, effectively a non-sighting, and the PA28 student pilot reported that they did not see the Skyranger (CF9). The Board discussed the risk at length, a consideration that was complicated by the lack of radar or GPS track information and hence an accurate understanding of the separation at CPA. Ultimately, members thought that the sighting by the Skyranger pilot gave an indication of separation at CPA and felt that in this Airprox, risk of collision had been averted, Risk C.

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

### Contributory Factors:

	2022210			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
<b>• Regulations, Processes, Procedures and Compliance</b>				
1	Human Factors	• ATM Regulatory Deviation	An event involving a deviation from an Air Traffic Management Regulation.	Regulations and/or procedures not fully complied with
<b>• Situational Awareness and Action</b>				
2	Human Factors	• Expectation/Assumption	<del>Events involving an individual or a crew/team acting on the basis of expectation or assumptions of a situation that is different from the reality</del>	Concerned by the proximity of the aircraft
<b>Flight Elements</b>				
<b>• Regulations, Processes, Procedures and Compliance</b>				

<sup>4</sup> UK AIP EGBP AD 2.22 FLIGHT PROCEDURES 1 CIRCUITS a.

3	Human Factors	• Use of policy/Procedures	Events involving the use of the relevant policy or procedures by flight crew	Regulations and/or procedures not fully complied with
• Tactical Planning and Execution				
4	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
5	Human Factors	• Late Decision/Plan	Events involving flight crew making a decision too late to meet the needs of the situation	
6	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				
7	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
8	Human Factors	• Understanding/Comprehension	Events involving flight crew that did not understand or comprehend a situation or instruction	Pilot did not assimilate conflict information
• See and Avoid				
9	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
10	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other

Degree of Risk: C.

#### Safety Barrier Assessment<sup>5</sup>

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

#### **Ground Elements:**

**Regulations, Processes, Procedures and Compliance** were assessed as **partially effective** because the oncoming AFISO was not aware of the PA28 student pilot's first solo.

#### **Flight Elements:**

**Regulations, Processes, Procedures and Compliance** were assessed as **partially effective** because the PA28 student pilot did not comply with the requirement to integrate with other traffic in the visual circuit.

**Tactical Planning and Execution** was assessed as **partially effective** because the PA28 student pilot did not use the 'Student' R/T callsign prefix and made a late decision to go-around.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the Skyranger pilot had only generic situational awareness on the PA28 (behind and catching up) and the PA28 pilot had no situational awareness on the Skyranger (ahead and descending).

**See and Avoid** were assessed as **ineffective** because neither pilot saw the other aircraft before CPA.

<sup>5</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: 2022210</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 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	✗	⚠				
<b>Key:</b>							
	Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	⚠	✗	⊙			
Application	✓	⚠	✗	⊙			
Effectiveness							