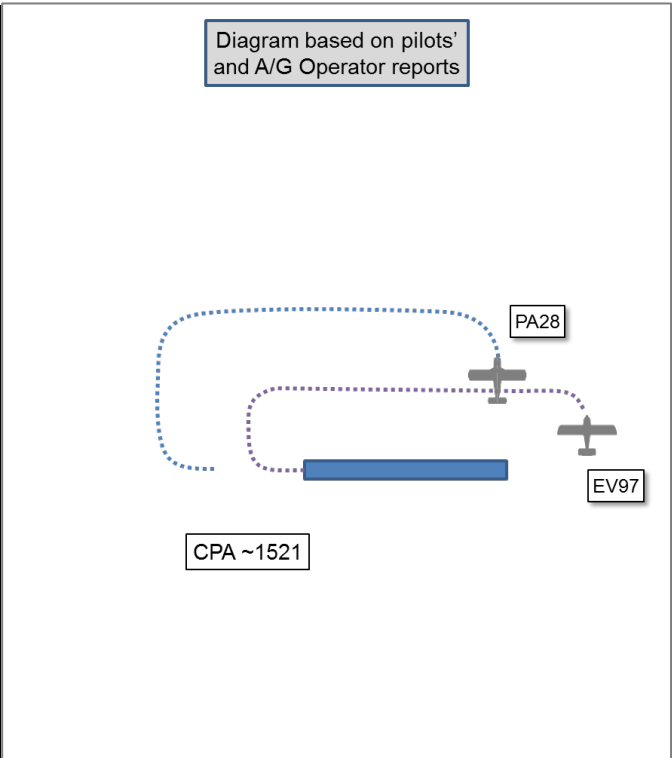


**AIRPROX REPORT No 2018316**

Date: 14 Dec 2018 Time: 1521Z Position: 5626N 00322W Location: Perth/Scone aerodrome

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	EV97
Operator	Civ FW	Civ FW
Airspace	Perth ATZ	Perth ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Perth	Perth
Altitude/FL	NK	NK
Transponder	A, C, S	A, C, S
<b>Reported</b>		
Colours	White, blue	Red
Lighting	Strobes, nav	Strobes, nav
Conditions	VMC	VMC
Visibility	25km	20nm
Altitude/FL	1050ft	400ft
Altimeter	QNH (1020hPa)	agl
Heading	180°	096°
Speed	75kt	55kt
ACAS/TAS	Not fitted	Not fitted
<b>Separation</b>		
Reported	150ft V/300m H	0ft V/400m H
Recorded	NK	



**THE PA28 INSTRUCTOR** reports that he returned to Perth to carry out circuits as part of a dual check for currency on a qualified PPL holder. The handling pilot contacted Perth radio and elected to carry out an overhead join as there was other traffic in the circuit and joining. RW09 was in use with a left hand circuit pattern. A standard overhead join was made with a radio call to confirm descending on deadside. A descending left turn was made down to circuit height (1000ft agl) and crosswind flown wings level heading 360°. The EV97 was in the circuit pattern and made a radio call that he was going around off RW09. From overhead the runway it was observed that the EV97 was climbing away on runway heading. As a downwind turn was made the EV97 was seen to be turning left outside of the PA28 circuit pattern. Standard calls were made but no further calls were made by the EV97 pilot he thought. On turning left base in the descent, a radio call on left base was made and another aircraft (a C152) was observed on a short final. As a turn onto final was initiated the EV97 was observed turning inside their pattern. He did not recall any radio transmission from the EV97 pilot from the initial go-around call to suggest that they had proceeded downwind or that the intention was to carry out a circuit pattern within the circuit pattern flown by the PA28. A frustrated call was broadcast by the PA28 pilot questioning the 'reckless and dangerous' actions of the EV97 pilot, with no response. He did not think the EV97 pilot had called Perth to confirm that they were on final. Due to the close proximity and the inability of the EV97 pilot to exit and clear the runway in time, he felt that it was necessary to carry out a go-around.

He assessed the risk of collision as 'Low'.

**THE EV97 EXAMINER** reports that he was conducting a test on the EV97 pilot. Both the EV97 and the PA28 pilots were operating in the visual circuit. Each pilot had the other aircraft in sight throughout the circuit with the PA28 following the EV97 in the pattern. The EV97 pilot conducted a low-level circuit to short-field landing and the PA28 pilot conducted a normal circuit.

He assessed the risk of collision as 'None'.

**THE PERTH A/G OPERATOR** reports that he was not aware that a report had been filed until the acknowledgment correspondence from the Airprox Board arrived. However, because of comments made on R/T by the reporting pilot at the time, he had made a few notes in case he was asked, at a later date, to comment. The A/G Operator stated that he did not see or hear anything that warranted his filing a report of any kind. The weather at the time was reasonable and visibility was good enough to be able to observe aircraft in the circuit. There were a number of aircraft in the circuit at the time as well as aircraft re-joining; the frequency was very busy. The A/G Operator had had a phone call earlier in the afternoon from the Examiner who was to carry out a flight check of some sort on the EV97 pilot. The Examiner informed him that it was a check flight and that there might be a simulated engine failure and other such exercises carried out during the flight. The A/G Operator noted that this Examiner always pre-warned Perth Tower when such events may occur. The A/G Operator kept a close watch on the EV97 while it was in the circuit because he had been told about the check taking place. The EV97 pilot reported going around from his penultimate circuit and, after a radio call from another aircraft, said '[EV97 C/S] bad weather circuit about to turn downwind', or words to that effect. The A/G Operator observed the EV97 at low-level, at about 500ft, and well within the normal circuit pattern. The EV97 pilot flew a very tight circuit, as expected, and when he turned finals he did report on finals, fitting neatly in between a Jabiru on very short finals and another aircraft which had turned finals further out, at about the same time as the EV97. This turned out to be the PA28. Perhaps 5 to 10sec after the EV97 pilot's finals call, another pilot, which turned out to be that of the PA28, made a transmission asking whether a red aircraft had cut in front of him. At that point the EV97 pilot reported very short finals, and the A/G Operator confirmed the PA28 was number two. The Jabiru landed ahead and cleared the runway as the EV97 pilot reported very short finals. The EV97 landed and as he cleared and reported clear of the runway, the A/G Operator saw that the PA28 pilot had initiated and then called a go-around although the runway was, by then, clear.

## Factual Background

The weather at Dundee was recorded as follows:

METAR EGNP 141520Z 14004KT CAVOK 04/M01 Q1021=

## Analysis and Investigation

### UKAB Secretariat

The PA28 and EV97 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 PA28 and an EV97 flew into proximity in the Perth visual circuit at about 1521hrs on Friday 14<sup>th</sup> December 2018. Both pilots were operating under VFR in VMC, both in receipt of an AGCS from Perth Radio.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from both pilots, radar photographs/video recordings (which did not show the aircraft tracks at CPA) and a report from the A/G Operator involved.

Members first discussed the regulation that pilots must 'conform with the pattern of traffic formed by other aircraft in operation'. On the one hand, this could be interpreted in a literal sense, that pilot's must follow the aircraft ahead. Members felt that this was not the intent of the regulation, nor was it practical,

<sup>1</sup> SERA.3205 Proximity.

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

and that it was common practice for pilots to practice different kinds of visual circuit concurrently, especially at a busy training airfield. As in this incident, in the Board's opinion a pilot could be 'conforming with the pattern of traffic' if conducting a low-level circuit which passed inside and overtook another aircraft conducting a normal circuit, provided they did not impede the other aircraft. However, if this was the situation, it was also incumbent on the 'passing aircraft' pilot to ensure the other pilot was aware of their intentions. In other words, courtesy and consideration were also key factors in successfully 'conforming with the pattern of traffic'.

Members noted that the Perth A/G Operator recalled hearing the EV97 pilot's R/T calls, but it appeared the PA28 instructor had not assimilated them and was therefore not aware of the EV97 pilot's intention to conduct a low-level circuit; the Board considered this a contributory factor. Some members thought that the EV97 pilot should have ensured that the PA28 pilot was aware that he was passing by the PA28 on the inside by positively communicating that to the PA28 pilot. Others noted that the circuit was busy, with numerous transmissions, and that the EV97 pilot had probably assumed that the PA28 pilot would hear his transmissions and understand their implications. Ultimately, without a radar recording it was not possible definitively to establish the spacing of the aircraft on final approach, but members noted that the EV97 examiner and the Perth A/G Operator were both of the opinion that there had been sufficient spacing, and some members wondered whether it had been his surprise at seeing the EV97 in a position he did not expect that had caused the PA28 pilot to perceive it as being closer than it actually was. After considerable further discussion, the Board agreed that the incident could best be described as a conflict in the visual circuit, and that with each pilot visual with the other aircraft although safety had been reduced, there had been no risk of collision.

### **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: A conflict in the visual circuit.

Contributory Factors: The PA28 instructor did not assimilate the EV97 pilot's R/T calls concerning his low-level circuit.

Degree of Risk: C.

#### 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:

#### **ANSP:**

**Situational Awareness and Action** were assessed as **not used** because neither pilot was in receipt of a service under which they would receive deconfliction or sequencing.

#### **Flight Crew:**

**Tactical Planning** was assessed as **partially effective** because the EV97 pilot did not follow the PA28 in sequence or positively inform its pilot that he would be passing on a tighter circuit.

**Situational Awareness and Action** were assessed as **ineffective** because the PA28 instructor formed the mental model that the EV97 would sequence behind him in the circuit and did not assimilate the EV97 pilot's subsequent R/T calls that he would be conducting a low-level circuit.

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<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](#).

