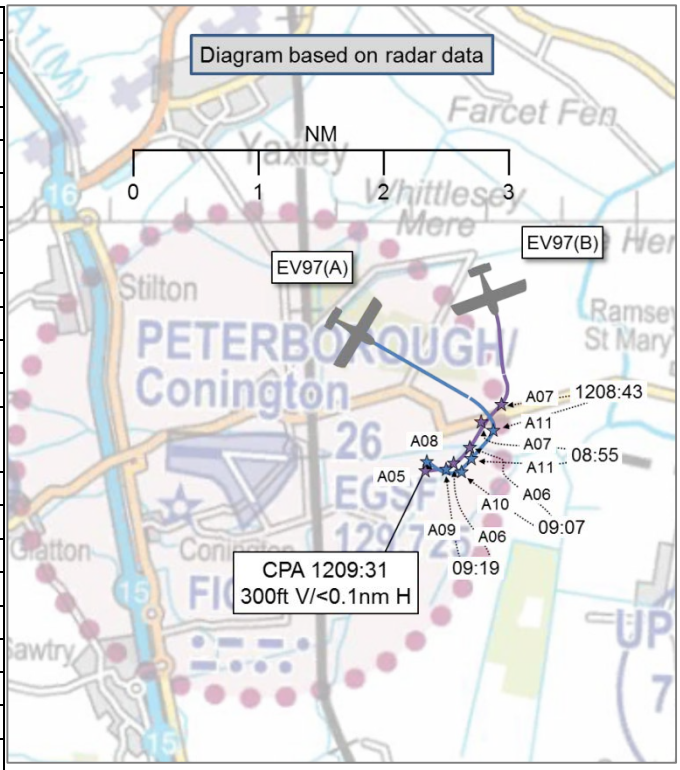
AIRPROX REPORT No 2016008

Date: 24 Jan 2016 Time: 1210Z Position: 5228N 00013W Location: Peterborough/Conington

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	EV97(A)	EV97(B)
Operator	Civ Trg	Civ Club
Airspace	Conington ATZ	Conington ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Conington Radio	Conington Radio
Altitude/FL	800ft	500ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Silver/blue	Blue/white
Lighting	LED landing	Strobe, nav, landing
Conditions	VMC	VMC
Visibility	20km	20km
Altitude/FL	700ft	480ft
Altimeter	QFE (1026hPa)	QFE (1026hPa)
Heading	275°	280°
Speed	56kt	70kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	50-100ft V/0m H	200-250ft V/ 100-150ft H
Recorded	300ft V/<0.1nm H	



THE EV97(A) PILOT reports instructing in the circuit at Conington, using RW28R. Whilst on final approach, he heard the EV97(B) pilot call 'descending dead side' and both the student and EV97(A) pilot visually identified it. On the touch-and-go, the Instructor pointed EV97(B) out to his student as it crossed the upwind end of the runway above them. During the climb out, he heard the pilot call 'turning downwind'. Having turned crosswind and then downwind, he could not see EV97(B), but expected him to be well ahead. Having turned final, he was coaching the student to offset for drift and to take landing flap. In the meantime, the EV97(B) pilot called 'Final'. The Instructor checked around but could not see it, and also asked his student, who saw it below them. At the same time the A/G Operator responded to the EV97(B) pilot with 'One other aircraft established on Final'. The Instructor called '[EV97(A) C/S] Final, going around' and, since the student did not respond immediately, he took control, applied full power and climbed. It was only as he did this that he saw EV97(B), overtaking from below and about half a wingspan to the left.

The Instructor discussed the Airprox with the EV97(B) pilot after landing and it was evident that he had inadvertently cut in on the EV97(B) in the circuit. The Instructor was not able to piece together how he caught up with him when flying a standard circuit although he commented that the wind was south-westerly at about 20kt at circuit height and it was possible that EV97(B) may have drifted out downwind. In which case, assuming the EV97(B) tracked parallel to the runway whilst downwind, his long base leg, with a significant headwind component, would explain why the EV97(B) was significantly lower than EV97(A) on base leg. The EV97(A) student was not flying a steady speed downwind, so it was difficult for the Instructor to assess whether their speed may have influenced events. The Instructor further commented that, whatever the reason, his mind-set was that the EV97(B) was well ahead and so he was not keeping a good enough lookout in the area in which they probably came into proximity, which was when he was late downwind with the EV97(B) on base leg,

ahead and below. Once EV97(A) had turned onto base leg, EV97(B) was shielded from his view in the right-hand seat by their wing and fuselage, and the student's workload was fairly high.

He assessed the risk of collision as 'High'.

THE EV97(B) PILOT reports returning to Conington after a short local flight. He joined the Conington ATZ from the south, immediately starting his descent onto the deadside to join the RW28R circuit by means of a Standard Overhead Join, which is the normal procedure at Conington. He made a standard call that he was joining from the deadside and was intending to immediately start his descent; this call was acknowledged and he was advised of circuit traffic. He was aware EV97(A) had just made a touch-and-go and would be climbing back out below him so he made an early 'turning downwind now' call to alert the EV97(A) pilot and the A/G Operator of his position. He joined downwind at 1000ft, observing the turn points and keeping level with the 'wind turbines' to avoid overflying a local village. He turned base at 'farm buildings' where he started the descent, reducing airspeed to about 70kt and applying first flap. He did not recall hearing a downwind call from EV97(A). He turned final at about 800ft and, at ½ mile from RW28, at about 480ft as verified in his GPS flight log, he observed EV97(A) about 200-300ft above him, passing in front from north to south. He initially thought EV97(A) was descending deadside for a standard overheard join for RW28R, although he commented to his passenger that he appeared low when he was passing the 28 numbers. Upon making his 'Final to Land' call the tower acknowledged and advised him that there was one ahead on final. At that point he tried to see if there was traffic ahead, where it was very apparent there wasn't. He had kept EV97(A) in sight and it was then he noticed it was turning west and appeared to be lining up for a final approach. The EV97(A) was still above him at that point and, after they had made their turn, he passed directly below them, still in his view and about 200-250ft above. He immediately called 'the tower' and advised that he was on final and had passed directly underneath EV97(A). This call was not acknowledged and instead he heard 'thanks for that' but could not tell whether this came from 'the tower' or from EV97(A) pilot.

The EV97(B) pilot spoke to the EV97(A) Instructor after he had landed to discuss what had taken place. The Instructor asked if he had heard his downwind call which he said he had not. He also asked whether he had taken the circuit too wide which allowed him to catch up. The EV97(B) pilot maintained that he had followed the circuit pattern he had been trained to follow and as published by the Conington operator. They discussed potential radio serviceability issues and the regulations pertaining to conduct in the visual circuit. The EV97(B) pilot noted that at no time did he feel threatened by the close proximity of EV97(A) and, after speaking to his passenger, did not consider this to be a near miss and did not feel in any danger. He stated that if the aircraft had been as close as 50ft he would have had a very different view of the event, as would the passenger who had never been in a small aircraft before.

He assessed the risk of collision as 'None'.

THE A/G OPERATOR reports EV97(A) was established in the Conington RW28R circuit. EV97(B) re-joined the circuit overhead following a local flight. The EV97(B) pilot reported turning downwind while EV97(A) was climbing out from RW28 after performing a touch-and-go. The EV97(B) pilot called downwind. The EV97(A) pilot called final, the A/G Operator replied 'One other aircraft established on final'. At the time of the final call he could see both aircraft converging on final approach about 1.5 miles from the threshold; it was not possible to see the horizontal separation between the aircraft. As a safety precaution the A/G Operator immediately reported the additional Traffic Information in his response to the EV97(B) pilot. The EV97(A) pilot called 'Final going around' and was seen climbing away.

Factual Background

The weather at Wittering and Cambridge was recorded as follows:

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METAR EGXT 241150Z AUTO 22012KT 9999 BKN012/// BKN140/// 13/12 Q1024=
METAR EGXT 241250Z AUTO 22015KT 9999 BKN013/// BKN150/// 13/12 Q1023=
METAR EGSC 241150Z 19009KT 9999 SCT020 13/11 Q1025=
METAR EGSC 241220Z 19009KT 9999 SCT015 SCT030 13/11 Q1025=
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Analysis and Investigation

UKAB Secretariat

Both 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]. When two or more heavier-than-air aircraft are approaching an aerodrome or an operating site for the purpose of landing, aircraft at the higher level shall give way to aircraft at the lower level, but the latter shall not take advantage of this rule to cut in front of another which is in the final stages of an approach to land, or to overtake that aircraft[3].

Summary

An Airprox was reported when two EV97s flew into proximity at 1210 on Sunday 24th January 2016. Both pilots were operating in the Conington visual circuit, under VFR in VMC, both in receipt of an A/G Service from Conington Radio.

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 A/G Operator.

Members first thanked both pilots for their frank and honest reports which had helped immensely in determining what had happened in this incident. In considering the pilots' actions, the Board opined that circuit planning and size appeared key to this Airprox. Members agreed that there was no strict definition of circuit dimensions, and it was for following pilots to integrate or remain integrated with circuit traffic ahead; however, this required all those in the circuit to follow similar procedures and retain situational awareness on the other traffic. As an example, although Pooley's (a well-known flight guide) indicated that the downwind leg for RW28R at Conington diverged from the runway, it showed that the circuit still remained within the ATZ; whereas, in this incident, it was clear that the EV97(B) pilot had left the lateral limits of the ATZ. No doubt focused on instructional activities, it was considered likely that the EV97(A) pilot had lost sight and situational awareness of the EV97(B) ahead as a result of the latter's wider than normal circuit; as a result, EV97(A) pilot had inadvertently turned in front of him on to final. Although the Board therefore considered that the fundamental cause of the Airprox was that the EV97(A) pilot had not integrated effectively with the EV97(B), members also felt that the EV97(B) pilot had a responsibility to position himself appropriately in the visual circuit; the radar replay indicated that he had flown a much wider and lower base-to-final turn, and hence had been in a position such that the EV97(A) pilot's ability to regain visual contact was compromised. Board members therefore also agreed that the EV97(B) pilot's wider and hence lower than normal base-to-final turn was a contributory factor to the Airprox.

The Board were particularly impressed with the proactive conduct of the A/G Operator and commended him for taking vital action at a late stage, by passing effective Traffic Information. The Board expressed their hope that A/G Operators in general were aware that they were a vital part of

[1] SERA.3205 Proximity.
[2] SERA.3225 Operation on and in the Vicinity of an Aerodrome.
[3] SERA.3210 Right-of-way, (4) Landing, (i).

the safety picture. Members also expressed their opinion that an essential part of circuit design was the ability to achieve a safe landing on the airfield surface in the event of an engine failure; they were uneasy that the Conington circuit design did not appear to cater for this eventuality.

Turning to the risk, and notwithstanding the EV97(B) pilot's assurance of separation, after some discussion members agreed that safety margins had been much reduced below normal. Lastly, members looked forward to the planned August publication of the CAA 'Skyway Code' and expressed their hope that it could formalise, at least to some degree, reasonable expectations for the conduct of visual circuits.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The EV97(A) pilot did not integrate effectively with the EV97(B).

Contributory Factor: The EV97(B) pilot flew a wider and lower than normal base-to-final turn.

Degree of Risk: B.