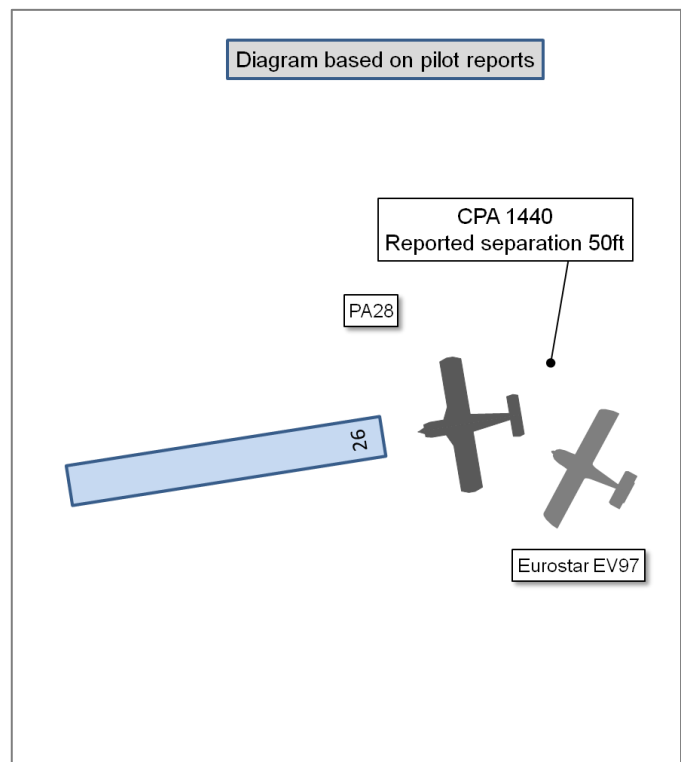


**AIRPROX REPORT No 2015002**

Date: 16 Jan 2015 Time: 1440Z Position: 5140N 00203W Location: Kemble Airfield

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	Eurostar EV97
Operator	Civ Club	Civ Club
Airspace	Kemble ATZ	Kemble ATZ
Class	G	G
Rules	VFR	VFR
Service	FIS	FIS
Provider	Kemble	Kemble
Altitude/FL	NK	NK
ACAS/TAS	Not fitted	Not fitted
Alert	N/A	N/A
Transponder	A,C and S	Not fitted
<b>Reported</b>		
Colours	Blue and white	Grey
Lighting	N/R	No lights fitted
Conditions	VMC	VMC
Visibility	5km	NR
Altitude/FL	160ft	50/100ft
Altimeter	QFE (991hPa)	QFE (994hPa)
Heading	261°	260°
Speed	65kt	70kt
<b>Separation</b>		
Reported	50ftV/0m H	Not seen
Recorded	NK	



**THE PA28 PILOT** reports that although the weather in the Kemble circuit was CAVOK, there was a heavy CB shower approaching from the NW. He called Kemble for an overhead join, and was instructed to call in the overhead, which he duly did. He was then instructed to call downwind; however, during the deadside descent he saw traffic crosswind, (a PA28 not involved in the incident) so he elected to join the circuit behind this aircraft. A further aircraft called for an overhead join and so he decided to draw attention to himself by making an additional "crosswind" call. Once downwind, with good spacing from the PA28 in front, he heard the aircraft behind him call "downwind, visual one ahead". As he turned onto base, he looked back and saw that the one behind had good spacing, but he lost sight of this aircraft as it flew in front of the sun. He turned finals and made the finals call, but it was "stepped on" and no response was heard from ATC, by this stage the PA28 ahead had cleared the runway, but he was prevented from making another finals call by other radio traffic. This included another aircraft calling final. ATC asked this aircraft to confirm that there was no traffic ahead and, to his horror, the other pilot confirmed this was the case and was given a clearance to land at his discretion. Now on short finals, the PA28 pilot made an immediate "short finals" call, stating that he was number 1. ATC then told the other aircraft that the PA28 was below him that his landing clearance was cancelled and he was told to go around. Shortly afterwards the aircraft overtook, immediately above, with approximately 50ft separation. The PA28 landed safely and, once on the runway, the pilot reported an Airprox, which was acknowledged by ATC. He didn't get a good look at the other aircraft but his passenger believed it to be a Eurostar. He opined that, although he knew microlight circuits were flown at Kemble, he thought the other aircraft was at a similar height when downwind, not a lower circuit height; somehow it had caught him up, and possibly the two PA28s in the circuit had caused its pilot confusion. Furthermore, he noted that the frequency was very busy, often with non-urgent ground calls, causing high controller workload and simultaneous radio transmissions.

He assessed the risk of collision as 'High'.

**THE EUROSTAR EV97 PILOT** reports that he returned to the circuit after a short local flight, the circuit was very busy, and he carried out a standard overhead join with a request for a touch-and-go for RW26 hard. Although he hadn't booked in for circuits, his request was granted, and he proceeded to do a couple of circuits. With regard to the incident he recalled flying a normal 1000ft circuit, making all the requisite calls and being given a clearance at every stage; however, the frequency was busy and a number of calls were "stepped on", there was also some confusion by all about the exact position of some circuit traffic. This concentrated his mind more than ever, because he was aware that the FISO was only there to provide assistance and it was his responsibility to be fully aware of all traffic. He made the final call for a touch-and-go, was given permission to land at his discretion, and so continued the approach to 50/75ft. He believed the other aircraft was behind him but was then instructed by the FISO to go around, which he duly did. He didn't see the other aircraft concerned.

The pilot noted that Kemble had been operating with microlight circuits at 700ft and light aircraft circuits at 1000ft, but recently this had been changed. The grass runway was closed at the time of this incident, so all aircraft were having to use the hard runway. He reported that microlight pilots from the flying club are taught to fly circuits at varying speeds to allow them to fit in around the light aircraft, and are aware that they should go around in the event that they make a misjudgement on base and see a light aircraft turning finals. He opined that it wasn't helpful if light aircraft flew such large circuits, sometimes outside the ATZ, which makes it difficult to see them and assess their speed.

He reported that he did not see the other aircraft and therefore could not assess the risk of collision.

**THE KEMBLE FISO** reports it had been a very busy shift, with several incidents, one only 4 minutes before this one. The assistant was making an operational telephone call and the FISO could feel herself getting confused and "behind the flow of things" so she radioed the Operations Manager to ask for a relief controller; the assistant heard her distress and finished his telephone call. The Eurostar, which had been flying the microlight circuit, turned finals and, because she was unsure of the traffic situation, she said if there was no-one ahead then he could touch-and-go at his discretion. The PA28 pilot, who had been flying in the GA circuit, then, advised on the radio that he was on final, so the controller went back to the Eurostar and said "touch-and-go cancelled" (she noted that the standard phraseology words had completely eluded her). The Eurostar was seen to continue to descend so she went back to him and told him there was an aircraft beneath him and suggested he went around, which he then did. She estimated the Eurostar was 12ft above the PA28. The assistant was now standing behind her and took over the radio following the incident. The PA28 pilot then declared an Airprox.

## **Factual Background**

The weather at Fairford was recorded as:

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METAR EGVA 161358Z AUTO 33007KT 9999 UP SCT024 OVC033 05/02 A2966
SPECI EGVA 161406Z AUTO 33006KT 9999 SCT025 SCT031 04/02 A2966
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## **Analysis and Investigation**

### **CAA ATSI**

ATSI had access to reports from both pilots, the Kemble FISO, RTF recordings and transcript of the Kemble Information frequency together with area radar recordings (which did not display the event). Kemble ATSU also provided copies of their local reports for all three incidents, and ATSI interviewed the Kemble FISO. The Kemble FISO's workload was considered to be high due to the complexity of the situation. The unit was adequately staffed for the day. At the time of the Airprox Kemble operated two separate circuits – one for light-aircraft at 1000ft and another for microlights and helicopters at 700ft inside the light-aircraft circuit.

Prior to the first incident the Kemble FISO had taken over the position unexpectedly due to another FISO requiring to be relieved. The FISO reported that prior to taking over they did not feel entirely up-to-speed with the traffic situation; however, they were confident that their experience would ensure that the situation would be manageable shortly after handover. At the time, a B757 was inbound to Kemble. When the B757 reported on final they requested information about an aircraft over the threshold ahead of them that the FISO was unaware of. The light-aircraft carried out a go-around and the B757 landed safely; however the incident played on the FISO's mind and was a significant distraction.

The FISO's workload was heavy, in part due to the 'G' grass taxiway being waterlogged, which resulted in backtracking or using the Southside to taxi aircraft. The resulting workload was complex and distracting with a high volume of R/T calls. The FISO felt uncomfortable with the level and complexity of traffic and agreed with another FISO (who was operating as an assistant at the time) that they would take over the position. However, they were waiting for a phone call from the pilot of the light aircraft from the previous incident, and the decision was made to hand over after the pilot telephoned. The telephone call took longer than expected, and the controlling FISO became confused as to the landing order of the aircraft; at this point the FISO realised that they could no longer wait for the phone call to finish and radioed for help. Help arrived within minutes but in the meantime the Airprox occurred.

When the PA28 reported descending deadside, the FISO requested the pilot to report downwind and advised that the circuit was active with four in. The EV97 carried out a touch-and-go and, when the PA28 reported crosswind with contact one ahead downwind, he was requested to report final. The EV97 reported mid/late downwind, was also requested to report final, and was advised that the FISO believed that there was a PA28 ahead. The EV97 reported that they were visual with the one ahead and would report final. Figure 1 shows the position of the PA28 when the EV97 reported visual (the EV97 is not shown on the radar recordings).

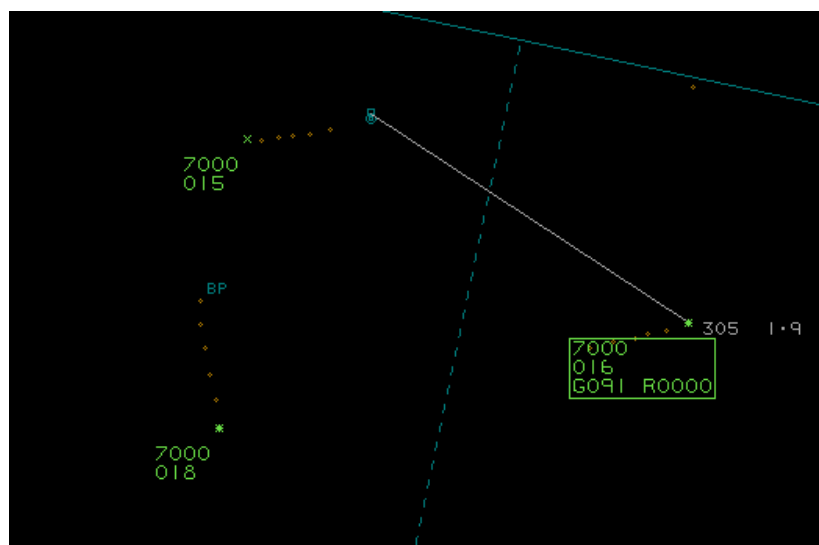


Figure 1 – 1438:11

There were no further transmissions between either the PA28 or the EV97 and the FISO until a crossed transmission that ended "*is contact one ahead*", which could have involved the PA28. The FISO stated that there were two stations transmitting at once, and requested the aircraft turning final to give their callsign. The EV97 replied that they were just turning final to land. Radar did not show the position of the EV97 but did show the PA28 on final at 1.4nm (Figure 2 at 1439:24). At 1439:31 the PA28 faded from radar and a brief contact could be seen which continued for approximately 4 sweeps, which may have been the EV97 (circled in yellow in Figure 3). The FISO transmitted "[callsign] *just to confirm you're visual with none ahead, touch and go at your discretion surface wind northwesterly three knots*". The PA28 reported that they were short final and number one to land. The FISO informed the EV97 that the touch and go was cancelled and gave the PA28 "*runway two six your discretion*".

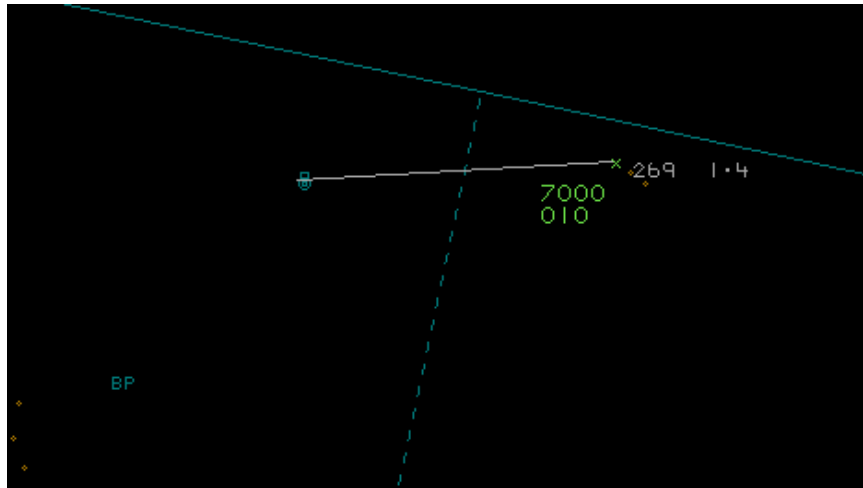


Figure 2 – 1439:24

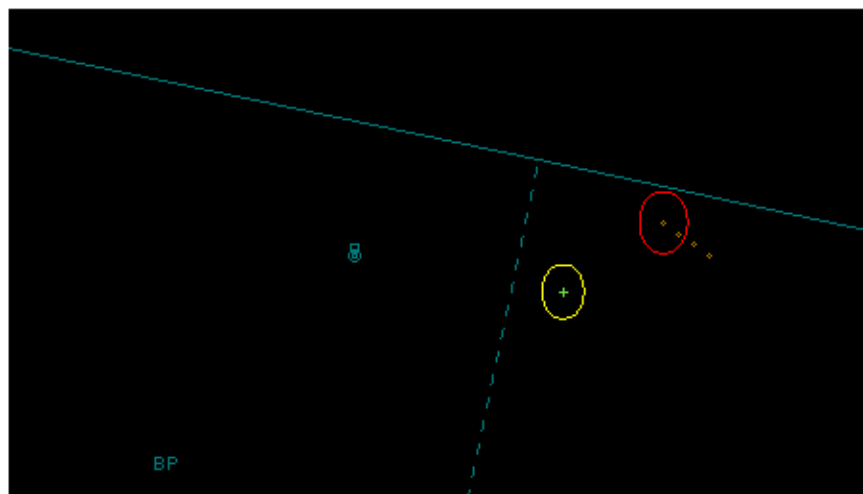


Figure 3 – 1439:31

The FISO saw the Airprox and, at interview, estimated that the aircraft were approximately 20-30ft apart vertically. They transmitted to the EV97 that there was “*an aircraft underneath you I suggest you go-around*”. At interview they reported that if the situation had continued it would have resulted in a collision. The PA28 vacated the runway and reported the Airprox on frequency.

The report from the pilot of the PA28 stated that, as he approached the end of the downwind leg, he heard an aircraft call downwind, visual with the one in front. When the PA28 turned base the pilot looked back and saw an aircraft behind with good spacing and believed this was the aircraft that had called downwind. The pilot of the PA28 then lost visual contact with the aircraft. The PA28 turned onto final and reported final; however, there was no response from Kemble, and the pilot thought that the transmission had been ‘stamped on’. The pilot of the PA28 reported that he was prevented from making another call due to other traffic. The pilot heard the EV97 call final, and the FISO ask the EV97 to confirm that there was no other traffic ahead before giving the EV97 land at their discretion. The pilot of the PA28 was on very short final at that point and with no other traffic ahead, stated that he was short final to land, number one. After the EV97 was advised to go around the PA28 saw the EV97 overtake immediately above at a distance of approximately 50ft. The pilot of the PA28 stated that if Kemble had not given the EV97 a go around then a collision was very likely.

The pilot of the EV97 stated that they were returning from a short local flight and decided to carry out some circuits. The pilot remembered flying a ‘normal 1000 foot circuit’ making the requisite calls and being given clearance for every stage, although he remembered several calls being stepped on and having to be repeated with some confusion as to the position of some circuit

traffic. The pilot of the EV97 reported that he was not visual with the PA28 and therefore unable to assess the risk.

At interview the FISO reported that, although they were current according to Kemble's minimum currency requirement, they were feeling rusty prior to taking the handover. Kemble is usually quieter over the winter with variable traffic levels. Also, the FISOs at Kemble rotate between the FISO position, assistant and the Ops room. There are no records regarding how long each FISO spends operational every shift, and the FISO had spent a significant amount of their duty time doing admin work over the previous months. They also reported being reluctant to refuse the handover despite not feeling comfortable with the traffic situation. Despite believing at the time that the traffic would be manageable shortly after handover, this was not the case, and the FISO reported that they never really caught up. Due to the traffic levels, they observed that they were looking at their strips more frequently than normal, which took their focus away from what was happening out of the window.

The FISO's workload was high and they were distracted by the previous incidents and the extra workload brought about by the taxiway closure; however, the EV97 was informed of a PA28 ahead and reported visual with it. FISOs are not permitted to issue instructions in the air and may only offer advice and information – pilots are therefore wholly responsible for collision avoidance in conformity with the Rules of the Air. Due to workload, the FISO's situational awareness was insufficient to realise that both aircraft were turning onto final and further specific traffic information was not passed to each aircraft prior to the Airprox. However, when the proximity of the two aircraft became apparent the FISO suggested a go-around, which is likely to have prevented a collision.

The EV97 was informed of a PA28 ahead, and the pilot of the EV97 reported visual when the PA28 was 1.9nm southeast of the airfield. The written report from the EV97 pilot stated that he was not visual with the PA28 when the Airprox occurred, and so it is unclear whether the EV97 pilot lost visual contact with the PA28, or was visual with another aircraft.

Both pilots were in receipt of an Aerodrome Flight Information Service. The EV97 was the second aircraft on final at Kemble but was not visual with the PA28 and believed that they were number one. Due to a heavy workload and distraction caused by two previous incidents, the FISO was unaware of the order that the aircraft were approaching Kemble, and informed the pilot of the EV97 to land at their discretion when the PA28 was on short final ahead. During the EV97's subsequent go around, the aircraft passed overhead the PA28 as it was landing.

The unit have stopped operating two different circuits and microlights will fly the same circuit as other light aircraft which is reported to have improved the situation at Kemble.

ATSI recommends that the Southern Region Inspectorate, in consultation with Kemble ATSU, ensure that the ATSU examine a way of monitoring how much time individual FISOs spend in the FISO position (as opposed to acting as assistants or in the Ops department) to ensure that each FISO has an appropriate ongoing level of experience and not just the minimum requirement.

### **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<sup>1</sup>. When two aircraft are approaching the runway for the purpose of landing, the higher one shall give way to the aircraft at the lower level<sup>2</sup>; therefore, the EV97 was required to give way to the PA28.

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

<sup>2</sup> SERA.3210 Right-of-way.

## Summary

An Airprox was reported on 16 Jan 2015 at 1440 between a PA28 and a Eurostar EV97. Both aircraft were in the Kemble visual circuit, the PA28 was short finals to land when the EV97 was advised to go around; as he did so he passed over the top of the PA28, which he did not see.

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

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RT frequencies from the FISOs involved and reports from the appropriate ATC and operating authorities.

The Board first looked at the role of the FISO. Some members commented that, given the number of crossed transmissions and seeming uncertainty in pilots' minds, they appeared to be in danger of relying on the FISO as if she were a controller rather than take matters into their own hands to either effect proper integration or depart the circuit until it became less busy. Initial discussions therefore centred on whether a unit such as Kemble, which could get very busy with mixed circuits (and even B757s flying in), should have been using an Air Traffic Controller instead. A controller would have had the authority to issue clearances and, in this case, the option of telling pilots to orbit depart the circuit or land until the situation could be resolved. However, the Board recognised that controllers were a costly option for a small airfield, and that it was probably unreasonable to expect Kemble to provide one. In looking at the specific actions of the FISO involved, it was clear that, given her lack of currency, she had been placed in a difficult position on taking over the responsibility and was immediately feeling behind events; the situation had only got worse. Nevertheless, despite having lost situational awareness of aircraft positioning on finals, the Board agreed that she had undoubtedly saved the day when, prompted by the PA28 pilot's call, she had advised the EV97 pilot to go around, repeating the advice when he didn't initially appear to respond.

Turning to the PA28 pilot, the Board thought that there was little more that he could have done in the circumstances. They commended him for diligently listening out on the frequency, having the wherewithal to hear the other pilot's call, and making his own call to the FISO to say that he was ahead. It was this call which had attracted the FISO's attention, enabled her to realise the geometry of the two aircraft, and advise the EV97 pilot to go around.

In looking at the actions of EV97 pilot, the Board thought that he had probably been visual with the PA28 ahead of the Airprox PA28, and had based his spacing around that. With this mental model set in his mind, he either didn't look for, or didn't see, the other PA28 on finals that he subsequently came close to. Notwithstanding, despite the advice given by the FISO to land at his discretion, the busy circuit, and the busy radio frequency, the Board agreed that it had been solely his responsibility to ensure his sequencing in the circuit and associated spacing behind the PA28.

The Board then discussed the cause of the Airprox and quickly resolved that the EV97 pilot had flown into conflict with the PA28, which he did not see. When discussing the risk, the Board were split between whether it had largely been down to providence that the aircraft had avoided a collision, and whether the FISO's actions had fundamentally made a difference. In the end it was agreed that, although safety margins had been very much reduced, it had been the FISO's actions that had prevented the incident becoming an accident; the risk was therefore assessed as Category B.

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

Cause: The EV97 pilot flew into conflict with the PA28, which he did not see.

Degree of Risk: B.