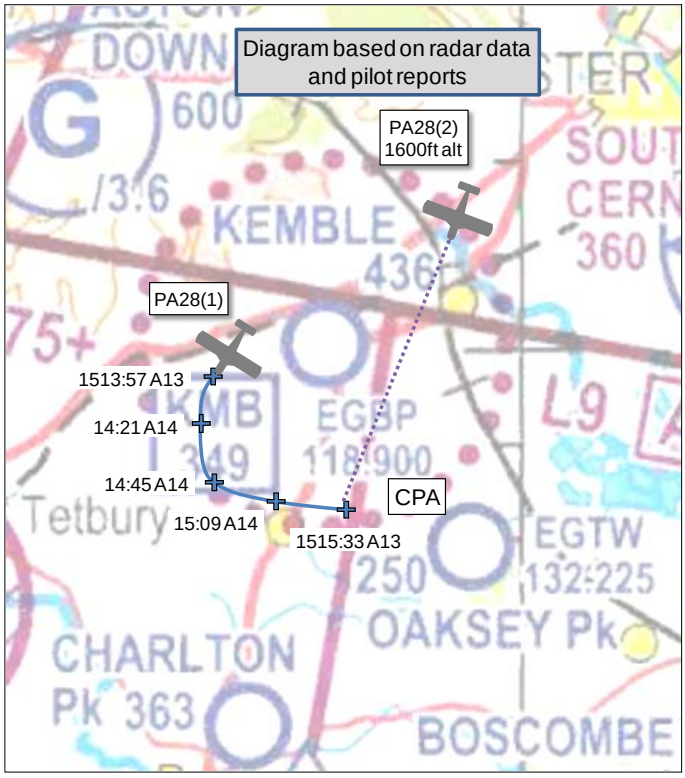
AIRPROX REPORT No 2013106

Date/Time: 9 Aug 2013 1515Z

Position: 5140N 00204W (Kemble Airfield -elevation 436ft)

Airspace: Kemble ATZ (*Class*: G)

	Reporting Ac	*Reported Ac*
Type:	PA28(1)	PA28(2)
Operator:	Civ Trg	Civ Pte
Alt/FL:	1000ft QFE (1004hPa)	1600ft QNH
Weather:	VMC CLBC	VMC CAVOK
Visibility:	20km	NK
Reported Separation:	50ft V/50m H	NK
Recorded Separation:	NK	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PA28(1) PILOT reports carrying out training circuits, left-hand RW26, under VFR, at Kemble airfield, in communication with the Kemble FISO. His aircraft was coloured blue and white, no mention was made in his report about lights being displayed. SSR Mode C was selected; ACAS was not fitted. Towards the end of the downwind leg, his student, who was building up to his first solo, pointed out a similar type of aircraft coming towards them. It was at a similar height in the 10:30 position on a constant bearing, approximately 200m away. He took control from the student, turned left, and descended to avoid the other aircraft, which appeared to take no avoiding action. He reported it immediately on the radio to alert Kemble and other local traffic. The other aircraft was on the frequency and reported that he was at 1500ft QNH that Kemble 'had given him'. This confirmed he was at circuit height (Kemble elevation 436ft).

He assessed the risk of collision as 'High'.

THE PA28(2) PILOT reports operating on a VFR flight, transiting the Kemble ATZ, in communication with the Kemble FISO. His aircraft was coloured white and blue; he could not recollect which lights were illuminated. SSR Mode C was selected. He was inbound to a landing strip situated to the south of Kemble at 1600ft on the 'Kemble setting'. He observed the other aircraft on base-leg, much too high he thought, at a similar altitude. He turned left and easily missed him.

He assessed the risk of collision as 'None'.

THE KEMBLE FISO reports that after PA28(2) contacted him he asked the pilot to report passing abeam. The pilot did not specifically state that he would transit the ATZ, and he expected that PA28(2) would remain outside, which was indicated on his flight progress strip. However, he did not specifically establish this. He dealt with circuit traffic and then saw PA28(2) closer to the airfield than he expected, inside the ATZ. He advised the pilot of PA28(2) that the circuit was active but did not pass traffic information to the pilot of PA28(1) on PA28(2) because he was not anticipating a confliction. When he next looked towards base-leg/final approach he saw PA28(1) conduct a sharp descending turn as an avoidance manoeuvre. Since the Airprox he advised that his standard practice is to confirm with passing pilots if they will transit the ATZ so that traffic information can be passed appropriately.

Factual Background

The Kemble weather as given in the unit report (no time of observation listed) was:

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300/5kts 9999 SCT036 QFE1004 QNH1019
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Kemble Airfield has an ATZ of radius 2nm centred at 514005N 0020325W extending from the surface to 2000ft above aerodrome level. The aerodrome elevation is 436ft. The published circuit height at Kemble for fixed wing, non-jet aircraft is 1000ft.

The Rules of the Air Regulations 2007 states that: "A flying machine flying in the vicinity of what the commander of the aircraft knows, or ought reasonably to know, to be an aerodrome shall conform to the pattern of traffic formed by other aircraft intending to land at that aerodrome, or keep clear of the airspace in which it is formed". [1]

The Rules of the Air Regulations 2007 (flights within ATZs)[2] states that: "If the aerodrome has a flight information service unit the commander shall obtain information from the flight information service unit to enable the flight to be conducted safely within the zone". The Regulations also state that: "The commander of an aircraft flying within the aerodrome traffic zone of an aerodrome shall, if the aircraft is fitted with means of communication by radio with the ground, communicate his position and height to the flight information service unit at the aerodrome on entering the zone and immediately prior to leaving it". [3]

Analysis and Investigation

CAA ATSI

An Airprox was reported by the pilot of PA28(1), which came into proximity with PA28(2) in the vicinity of Kemble aerodrome.

PA28(1) was operating VFR in the left-hand circuit for RW26 at Kemble and was in receipt of a Basic Service from Kemble Information on 118.900MHz. PA28(2) was on a VFR flight inbound to a landing strip which is situated south-southwest of Kemble aerodrome and was in receipt of a Basic Service from Kemble Information on 118.900MHz.

ATSI had access to both pilot reports, recorded area surveillance and transcription of frequency 118.900MHz and a unit report. Additionally ATSI interviewed the Kemble FISO.

Prior to PA28(2) contacting Kemble PA28(1) was established in the left-hand circuit for RW26.

At 1513:46 PA28(2) contacted Kemble requesting to pass to the east of the airfield at 1300ft. The pilot of PA28(2) was passed the QNH of 1019hPa, a Basic Service was agreed and the FISO asked him to report passing abeam.

At 1514:34 the pilot of PA28(1) reported downwind and was instructed to report final with the information that there was one ahead, late downwind.

At 1514:44 PA28(2)'s pilot reported "*passed abeam*" and was informed that the circuit was active. The FISO requested that he report descending into his landing site.

At 1515:31 PA28(1)'s pilot stated that he would like to file an "*airmiss someone's just gone through the middle of the circuit at one thousand feet".*

[1] Rule 12: Flight in the vicinity of an aerodrome.
[2] Rule 45, Paragraph (4): Flights within aerodrome traffic zones
[3] Rule 45, Paragraph (6c)

When the pilot of PA28(2) reported at 1500ft on 1019hPa, the pilot of PA28(1) commented that PA28(2) was at 1000ft on the Kemble QFE (1004hPa). There then followed an exchange on the RTF between the pilots of the two aircraft regarding QNH/QFE and the Kemble elevation.

Radar recordings show that PA28(1) was carrying out the circuit at approximately 1.8-2nm from the airfield, close to the edge of the ATZ. However, recordings do not show PA28(2) and therefore the geometry of the encounter cannot be positively determined from radar sources.

Summary

Both aircraft were operating VFR in receipt of a Basic Service from the Kemble FISO; the Airprox occurred within Class G airspace, close to the boundary of the Kemble ATZ. PA28(1) was carrying out left-hand circuits to RW26 at the published height of 1000ft. The pilot of PA28(2) contacted Kemble, requesting to pass east of the airfield, inbound to his landing site. The pilot was given the QNH and was requested to report passing abeam. On making this call the pilot of PA28(2) was advised that the circuit was active. Shortly afterwards the pilot of PA28(1) reported traffic crossing through the circuit at 1000ft. PA28(2)'s pilot reported being at 1500ft on QNH, which equates to a level of 64ft above the circuit height of 1000ft QFE (airfield elevation 436ft). The pilot of PA28(2) did not state he would enter the ATZ, and the FISO did not confirm he would be remaining outside. The pilot of PA28(1) was not issued with traffic information about PA28(2).

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both aircraft, a transcript of the relevant RT frequency, radar video recordings, a report from the FISO involved and reports from the appropriate ATC and operating authorities.

The Airprox was not recorded on the radar recordings; although PA28(1) was shown in the Kemble circuit left-hand RW26, 1.8-2nm from the airfield and close to the ATZ boundary, PA28(2) was not displayed on the recording. As a result of this lack of information, the Board wondered if PA28(2) had actually entered the ATZ. However, because the pilot of PA28(2) had himself reported transiting the Kemble ATZ and the FISO had also reported sighting the aircraft in the ATZ, the Board therefore concluded that the PA28(2) had entered the Kemble ATZ.

The Board first considered the pilots' actions. A civil pilot member thought that PA28(1) was carrying out a wider circuit than might be expected. However, it was pointed out that, nevertheless, the aircraft was within the dimensions of the ATZ and was following other traffic in the circuit. The actions of the pilot of PA28(2) were then discussed. Civil pilot members considered that the pilot of PA28(2) had planned to position too close to the airfield during transit and a greater distance would have been more appropriate at that height, especially as he had not reported his intention of entering the ATZ. The Board reasoned that he may have approached close to the airfield because he had not been made aware of any circuit traffic. However, the RT recording of the FISO frequency reveals that there were other aircraft reporting in the circuit, as well as PA28(1), and so the pilot of PA28(2) should reasonably have been aware that the circuit was active despite the fact that he was only formally informed of this fact by the FISO after he had reported *"passed abeam".* The RTF recording confirmed that the pilot of PA28(2) had not reported his position and height to the FISO when entering the ATZ, and that it was apparent that there was some confusion about the difference between flying on QFE and QNH especially at an airfield like Kemble with its elevation of 436ft. At the time of the Airprox, PA28(1) was at circuit height 1000ft QFE. The pilot of PA28(2) reported at 1500ft QNH. The latter pilot reported that he was surprised to see PA28(1) 'much too high', (i.e. above circuit height) although, in fact, PA28(2) was at an equivalent height of 1064ft QFE.

The actions of the FISO were then considered. It was apparent that the FISO, without checking with the pilot, had assumed that PA28(2) would not enter the ATZ. His request to the pilot to report 'passing abeam' was considered to be ambiguous because no requirement to mention bearing or range was made. The Board considered that, even if PA28(2)'s pilot had not intended to enter the ATZ, the FISO should have informed him that the circuit was active, before he reported passing

abeam, in order to warn the pilot accordingly. With regard to PA28(1), the Board concluded that the FISO had not issued Traffic Information to its pilot because of the incorrect assumption that PA28(2) was remaining outside the ATZ.

The Board then considered the cause and risk of the Airprox. Although there were no radar recordings to absolutely confirm the position of the Airprox, based on the reports from the pilot of PA28(1) and the FISO, the Board considered that the cause of the Airprox had been that the pilot of PA28(2) had routed through the airfield's circuit at a reported altitude equivalent to the circuit height without having communicated this intention. The Board recognised that the pilot of PA28(1) had taken appropriate avoiding action to prevent the collision and, taking into account his report of a minimum distance between the aircraft of 50ft vertical and 50m horizontal, the Board agreed that this was a Cat B risk in that safety margins had been much reduced below the normal.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA28(2) pilot flew through the Kemble visual circuit at circuit height**.**

Degree of Risk: B.

Contributory Causes: 1. The PA28(2) pilot did not communicate his position and height to the FISO on entering the ATZ.
2. Lack of timely Traffic Information.
3. The FISO's ambiguous request to 'call passing abeam'.

ERC Score: 4