

AIRPROX REPORT No 2010102

Date/Time: 29 Jul 2010 1310Z

Position: 5150N 00119W
(Oxford/Kidlington
RW01RHC - elev 270ft)

Airspace: Oxford ATZ (Class: G)
Reporting Ac Reported Ac

Type: PA34-200T PA34

Operator: Civ Trg Civ Pte

Alt/FL: 800ft NR
QNH (1016mb) (N/K)

Weather: VMC VMC NR

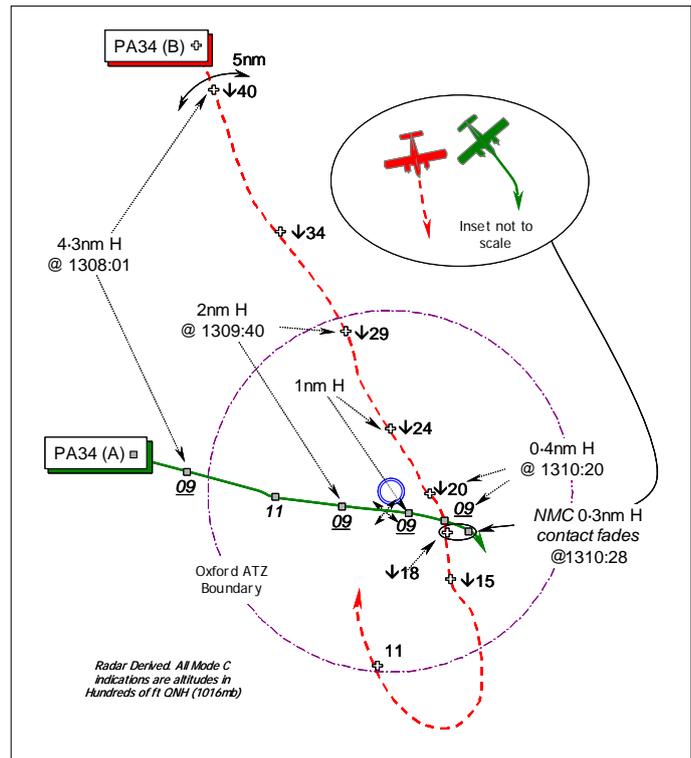
Visibility: >10km >10km

Reported Separation:

200ft V NR

Recorded Separation:

>0.3nm H - see Note (2)



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PILOT OF PA34-200T (A) reports that he was instructing a local instrument training flight at Oxford under VFR in VMC finishing with an NDB approach. The runway in use was RW01 and he was flying the published OXFORD/KIDLINGTON NDB (L)/DME 100° procedure with visual manoeuvring to the active RW. On completion of the approach, as instructed by Oxford TOWER, they were joining visually to RW01RHC - low level - at 800ft QNH (1016mb) [a height of about 530ft]. The controller had instructed them to position No2 to a Zlin on final approach but at the end of the downwind leg heading 190° at 120kt, TOWER alerted them to another ac joining the cct – another PA34 that was inside of them - and therefore to position as No3 in the pattern. Looking to their R nothing was seen until his student indicated the ac was above them, where it was seen 200ft above them, gear down and descending. No avoiding action was taken as they were visual with it and he assessed the Risk as 'low'.

His ac is coloured blue & white and the HISL was on; a squawk of A7000 was selected with Mode C.

THE PILOT OF PA34 (B) reports he was inbound to Oxford/Kidlington on an IFR flight plan from Durham Tees Valley Airport and was flying a visual approach from the NNW at 160kt. Descending to the cct pattern altitude and about to cross the runway mid-field to join RH downwind for RW01, 'the radar controller (sic)' [UKAB Note (1): actually the procedural APPROACH controller as there is no ASR provisioned at Oxford] drew his attention to opposite direction traffic below his ac several miles away, which he reported in sight. The controller made no mention of other general traffic in the vicinity or in particular other ac in the pattern. As he was switched to the TOWER frequency, he saw a light twin below and slightly to his L on approximately the same track and he remarked to the controller about seeing a small ac below his ac. The other ac was first seen about 500-700ft below his ac to the L, and as he had higher speed the other ac was immediately obscured by his port wing and engine nacelle. The controller's response was 'there are a lot of aircraft over Oxford not necessarily in contact with this unit'. This was a very chilling message, which he remembers very clearly. As the ac below was now invisible under his port wing and he was descending into the pattern altitude, to avoid it he made an instant decision to turn 90° to the R to join a tight RH downwind pattern. As he switched to TOWER frequency, he could hear the ADC asking another pilot – the pilot of PA34 (A) - to extend his pattern as the other Seneca was cutting inside. At this point he understood that his ac - PA34 (B) - was 'the other Seneca' and the ac he had seen was in the cct –

PA34 (A). He said something like 'sorry about that' over the RT, but did not feel especially guilty as deciding on a tight pattern at this instant in time seemed the natural thing to do to avoid descending onto another ac believed to be on easterly track. Transitioning into a climb and executing a missed approach would possibly have been a better option, but he was not fully aware at this point about the boundaries of Brize Norton's CAS [just to the W].

He added that although unfamiliar with Oxford airport, he was also unfamiliar with the practice that the radar controller (*sic*) omits to mention other landing traffic after being cleared for a visual approach. He assessed the Risk as low – medium. The ac's HISL was on.

THE OXFORD PROCEDURAL APPROACH CONTROLLER (APP) was not informed of the Airprox until a couple of days afterwards but provided a comprehensive report to the best of his recollection.

Traffic levels on APP at the time were moderate to high with PA34 (A) flying VFR on the 100° procedure, a number of other ac operating in the local area VFR, some over flights and PA34 (B). LTC pre-noted PA34 (B) leaving HON approaching the Airprox from the NNW. Upon first contact the pilot of PA34 (B) requested radar vectors to an ILS approach for RW19. The pilot was informed that Oxford is not radar equipped, that RW01RHC was in use and that the current procedure available was the 100° approach with visual manoeuvring to RW01 RHC. The pilot of PA34 (B) declined and stated he would join visually and had the field in sight. He requested the ac's range, which was 10 DME, before requesting that he report at 5 DME, to descend as required to 2500ft QNH and to expect a crosswind join for RW01RHC, which was all read back. The crosswind join had been co-ordinated with TOWER and approved by the ADC. Meanwhile, PA34 (A) already inbound on the 100° procedure had cancelled IFR and joined the cct. Basic TI was given on a couple of ac that were operating VFR out to the NW conducting general handling at various levels. When the pilot of PA34 (B) reported 5 DME field in sight, still indicating NNW, he was instructed to join crosswind at 1500ft QNH, which was read back. He advised the pilot of PA34 (B) that there were a number of ac in the cct and to contact the TOWER on 133.425MHz, which was read back by the pilot who then switched to TOWER. He was not aware that the pilot of PA34 (B) had any sort of difficulty in finding the field; visibility was good and he had reported field in sight at 10 DME.

THE OXFORD AERODROME CONTROLLER (ADC) reports that PA34 (A) was in the visual cct to RW01RHC and had called downwind. APP was working PA34 (B) inbound for a crosswind join and the controller had already commented on apparent language difficulties he was experiencing with the pilot and apparent lack of preparation for arrival at Oxford. PA34 (B)'s crosswind join was co-ordinated by APP and had been accepted with 1 ac in the cct. As is normal, the transfer of communication was to be at 5nm, and as the transfer was taking place he looked to check the position of PA34 (A) in the cct in order to give TI to the pilot of PA34 (B) when he called. From overhead the Control Tower, PA34 (B) suddenly appeared, apparently diving into the cct, straight at PA34 (A). TI was given to PA34 (A) but because of the angle of approach, apparently the instructor had not seen PA34 (B) until pointed out by his student. By this time PA34 (B) had turned inside PA34 (A) and had started to pull ahead. With language difficulty in mind, the crew of PA34 (A) was asked to reposition No2 to PA34 (B) in order to alleviate any further problems. The pilot of PA34 (B) then contracted TWR and was instructed to report final No1. Both ac landed safely without further incident.

ATSI reports that because of a problem with the recording equipment at Oxford, no RT data is available for the period of this Airprox. The Unit confirm that the problem has been rectified. Furthermore, a new recording system has been identified and replacement is now at an advanced stage. In the absence of any RTF recordings, information was taken from the controllers' recollection of events, together with reports from the pilots of the subject ac.

The Oxford unofficial 1250Z weather observation was: Surface wind 290°/10-15kt; Visibility 10km; Cloud: FEW @ 3300ft, BKN @ 4800ft; Temperature +19/+11; QNH 1016mb, QFE 1006mb. Oxford ATC is not equipped with any surveillance radar equipment.

PA34 (B) was inbound to Oxford IFR from Durham Tees Valley Airport. The flight exited CAS at HONILEY, the controller believing he had issued FL50 when the Airways Controller requested a level. On first contact, the pilot of PA34 (B) requested radar vectors to the ILS for RW19. The pilot was informed that no radar was available and the RW in use was RW01 with a right hand cct (RHC). The current procedure was the 100° approach with visual manoeuvring to RW01. The pilot then stated his intention of carrying out a visual approach and reported the airfield in sight, at a range of 10nm to the NNW. The pilot of PA34 (B) was requested to report at 5nm DME, to descend to 2500ft QNH (1016mb) and advised to expect a crosswind join for RW01RHC, which was read back. This join had been co-ordinated with the ADC. When the pilot of PA34 (B) reported at 5nm DME (still NNW of the airport), with the airport in sight, he was instructed to join crosswind at an altitude of 1500ft. This was read back correctly. The pilot was informed there were a number of ac in the cct and then transferred to the TOWER.

Meanwhile, PA34 (A) was returning to Oxford on an IRT, operating VFR, following an NDB approach and go around that was positioning into the RH cct to RW01. The pilot reported downwind with TOWER and was instructed to continue No2 to a Zlin ac.

The ADC heard APP transfer PA34 (B). The controller confirmed that it was normal for inbound ac to be transferred to the TOWER frequency at a range of 5nm. The ADC reported that, prior to the pilot of PA34 (B) contacting TOWER, he checked PA34 (A)'s cct position. As he was establishing this, he noticed PA34 (B) suddenly appearing from overhead the VCR, descending into the cct towards PA34 (A). He immediately warned the crew of PA34 (A) and instructed them to continue behind PA34 (B). By this time, PA34 (B), whose pilot was still not in contact on the TOWER frequency, had proceeded ahead of and inside PA34 (A).

The UK AIP, Page AD 2-EGTK-1-6, states the Noise Abatement procedures for Oxford. Included:

'Whenever possible aircraft joining the circuit should, subject to ATC approval, plan to join on base leg or via a straight-in approach, giving way to traffic already established in the circuit'.

Additionally, on the same page, Flight Procedures-Circuits states:

'Circuits variable. To be flown to the east of runway 01/19. To provide separation between fixed-wing and rotary-wing traffic, the circuit height for fixed-wing aircraft is 1200ft QFE'.

With no radar information, Oxford ATC relies on position reports from the pilots and DF indications. On this occasion, the ADC believed that PA34 (B) was some 5nm NNW of the airport, when he was transferred from APP. Accordingly, he checked the position of other traffic in the cct, so as to be able to inform the pilot of PA34 (B) of the cct situation on initial contact. Fortunately, he was able to observe PA34 (B) as it exited the VCR overhead and was able to warn the crew of PA34 (A) of its presence.

UKAB Note (2): The LACC System recording shows PA34 (A) approaching Oxford Airport from the W, level at an indicated altitude of 900ft QNH (1016mb); on completion of the 100° procedure the ac passes S abeam the Airport at a Radar Ground Speed (RGS) of 108kt. PA34 (B) is shown approaching the Airport in a continuous descent on a generally SSE'ly track. PA34 (B) is shown inside 5d from Oxford at 1308:01, 4.3nm N of PA34 (A). PA34 (B) descends into the ATZ at a RGS of about 190kt after crossing through the climb-out to RW01 ½nm N of the airport and descending through 2300ft QNH. At 1310:20, PA34 (A) is shown crossing through PA34 (B)'s 12 o'clock at a range of 0.4nm indicating 1100ft below the latter, before PA34 (A) commences a R turn downwind. PA34 (B) passes 0.3nm W of and inside PA34 (A) descending through 1800ft before PA34 (A) fades from coverage. Continuing on a southerly course PA34 (B) extends downwind to a range of 2.6nm from the Airport before turning in onto final approach for RW01RHC and fading from coverage

UKAB Note (3): The UK AIP at AD 2-EGTK-1 – 5 notifies the Oxford/Kidlington Aerodrome Traffic Zone (ATZ) as a circle radius 2nm centred on the midpoint of RW01/19, extending from the surface to 2000ft above the aerodrome elevation of 270ft.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authority.

The unserviceability of the Oxford RT recorders and hence the absence of an RT recording of the APP and TWR frequencies had hampered the investigation of this Airprox significantly. Controller Members were concerned that this should have occurred as usually a dual recorder system is proof against such difficulties. The Board was reassured that a new recording system was being procured. Nevertheless, without an RT transcript it was not feasible to resolve exactly what information was passed to the pilot of PA34 (B) or when he called. However, there was no reason to doubt the veracity of the accounts submitted by the controller's involved nor the report submitted by ATSI.

It was evident to the Board that the crux of this Airprox was the integration of an IFR visual approach with VFR cct traffic in a non-radar environment where APP could only provide a Procedural Service. A highly experienced GA Member believed it should have been plain to the pilot of PA34 (B) from his pre-flight planning that no radar services were available from Oxford and that radar vectors to the ILS were not an option. Noting that the IFR flight plan had not been cancelled, the Member opined that after refusing the offered 100° approach to circle for RW01RHC and instead electing to fly a visual approach, the pilot of PA34 (B) was obliged to set-up his visual arrival in an appropriate manner by complying with the APP controllers instructions and not by entering the cct area, fast, from above. CAT pilot Members agreed that if the pilot of PA34 (B) had done as instructed the Airprox would not have occurred.

Whilst the pilot of PA34 (B), as IFR traffic, expected to be given TI about other ac in the cct, he had reported that he was not advised that PA34 (A) was already in the pattern. This was at odds with APP's report that when the pilot of PA34 (B) reported he was at 5 DME, he was instructed to join crosswind at 1500ft QNH, that there were a number of ac in the cct and to contact TWR, which was all read back. Without a transcript it was not possible to resolve this discrepancy but it seemed to pilot Members that these instructions were plain enough and, if complied with, would have allowed sufficient time for TWR to update the cct information on PA34 (A), for the pilot of PA34 (B) to sight PA34 (A) ahead in the pattern and fit in with it. However, several controller Members disagreed. In their view APP had not done enough to integrate the arrival of the IFR PA34 (B) on his visual approach with the VFR PA34 (A) establishing downwind ahead. Although the pilot of PA34 (B) had refused the 100° procedure, APP should have done more and did not give an appropriate level of service to the IFR flight. A Member opined that APP could have insisted that the pilot of PA34 (B) execute the 100° procedure, which would have ensured the flight's safe integration. But it was evident that this was not what APP had coordinated with TWR and some controller Members did not believe that APP should have arranged PA34 (B)'s visual approach in this way.

The ATSI Advisor explained that it was in order for APP to instruct the pilot of PA34 (B) to join crosswind at 1500ft QNH, clear of PA34 (A) and that is what TOWER expected. Whilst APP did not know exactly where PA34 (B) was in this non-radar environment until the pilot reported at 5DME, he instructed the pilot to call TOWER at that point and passed TI, albeit the detail of that information was not known. PA34 (B) pilot's actions were plain from his report, insofar as he was joining by descending to traffic pattern altitude whilst crossing the runway midfield to join right downwind for RWY01RHC when he saw PA34 (A) below his port wing. The radar recording shows that the pilot of PA34 (B) had flown his visual approach as he reported but this was at variance with APP's instructions. Moreover, he did not call TWR straight away it would seem; the pilot of PA34 (B) reports that as he switched to the TOWER frequency he saw the light twin - PA34 (A) - below and slightly to his L on approximately the same track. This occurred when both ac were to the SE of Oxford Airport,

after PA34 (A) had crossed ahead and below PA34 (B), whose pilot therefore, could not have called TOWER when instructed at 5DME to the NNW.

TOWER had planned the cct pattern based on the co-ordination with APP and was expecting PA34 (B) crosswind for RW01RHC, level at 1500ft QNH a controller Member stressed, not descending into the cct late downwind. If the pilot of PA34 (B) had done as instructed accurate TI could have been issued on PA34 (A), visual contact by PA34 (B) confirmed and the order of landing established, or other instructions issued. PA34 (A) had little impact on the outcome. PA34 (B) entered the cct area fast, descending and still not in contact with TOWER the controller reported. This necessitated a swift adjustment of the landing order, which was communicated to the pilot of PA34 (B) as soon as he called. It was evident from the radar recording that PA34 (B) flew inside PA34 (A) descending through 1800ft QNH, still 300ft above the pattern altitude and probably about 900ft above PA34 (A) the recording suggests, although PA34 (A)'s Mode C is not evident at that point. Without the transcript it was impossible to be dogmatic about what was actually transmitted and when, but it was plain to pilot Members that this was a poorly planned and executed arrival and not in accord with the instructions given to integrate these two flights. The Board agreed therefore that this Airprox had resulted because the pilot of PA34 (B) did not comply with the APPROACH controller's instructions. However, at the distances recorded here the Members agreed unanimously that no Risk of a collision had existed.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The pilot of PA34 (B) did not comply with the APPROACH controller's instructions.

Degree of Risk: C.