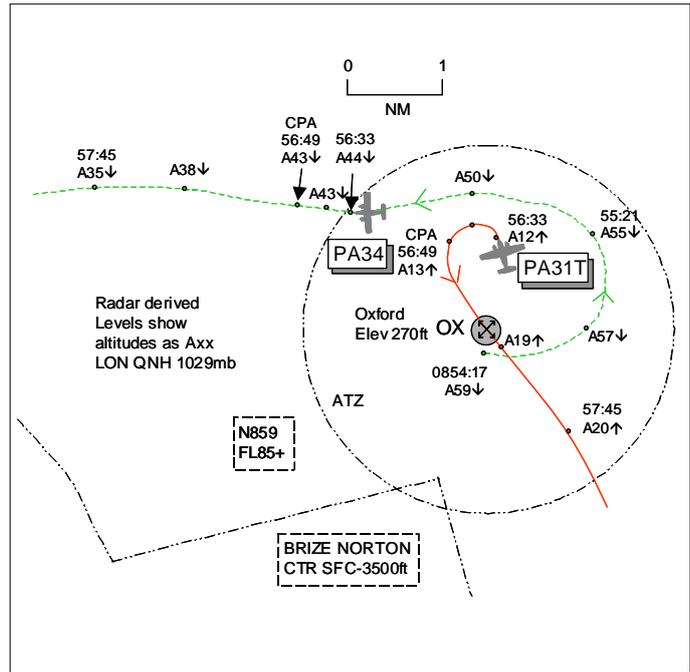


**AIRPROX REPORT No 2010099**

Date/Time: 23 Jul 2010 0857Z  
Position: 5151N 00121W (1.5 nm NW Oxford - elev 270ft)  
Airspace: ATZ/Oxford AIAA (Class: G)  
Reporter: Oxford ADC

	<u>1st Ac</u>	<u>2nd Ac</u>
<u>Type:</u>	PA34	PA31T
<u>Operator:</u>	Civ Trg	Civ Comm
<u>Alt/FL:</u>	3500ft↓ (QNH)	↑2500ft (QNH)
<u>Weather:</u>	IMC KLWD	IMC KLWD
<u>Visibility:</u>		
<u>Reported Separation:</u>	Not seen	Not seen
<u>Recorded Separation:</u>	3000ft V/1.6nm H	



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

**THE OXFORD ADC** reports that there was a quiet traffic situation with IMC above altitude 1500ft, 1 ac departing VFR and the subject PA31T taxiing to the hold for an IFR CPT airways departure. APP was working 2 IFR inbound ac and made comment that one of the inbounds, the subject PA34 flight, was requesting an Expected Approach Time (EAT). ADC was not sure of the significance of this until later discovering that the flight had been 'held-off' in the WCO NDB area at FL60 for some time. The PA31T pilot requested departure clearance and was passed the instructions given by APP, "PA31T c/s cleared standard CPT departure hold at Botly climb FL50 remain outside CAS squawk 2234 onward frequency London Control 120.475". The flight was released subject to APP so the ac was kept on the ground awaiting release. APP then advised that the PA34 was "Beacon outbound NDB100 procedure" which placed the IFR ac to the NW of the OX descending. APP then told the ADC to change the outbound clearance on the PA31T to climb to 2500ft QNH 1020mb, making comment to suggest that a form of non-standard separation was being used. APP then released the flight which the ADC queried owing to the IFR NDB100 traffic (the PA34) but APP confirmed again that the PA31T was released. ADC was unaware of APP's traffic situation i.e. had any descent restrictions been applied to the PA34, so ADC carried out the APP's instruction and cleared the PA31T for take-off before transferring the flight to APP once airborne. As the PA31T flight contacted APP the relieving ATCO for that position was told by APP "not to take over until it was sorted out".

The Oxford METAR shows EGTK0730 02007KT 9000 FEW013 BKN016 BKN019 14/11 Q1020=

**THE OXFORD APP** reports that the PA34 flight routed to the OX at FL60 to enable departure of the PA31T to CPT climbing FL50. The PA34 pilot asked for an EAT and was given 0913. For expediency the outbound PA31T was told to climb to altitude 2500ft initially and to report S of Oxford. Visibility was such that the PA31T was clearly visible from the end of RW to 2500ft and the PA34 flight was asked if they were happy to commence the NDB100 procedure from FL60. This was agreed and the flight was descended initially to altitude 3500ft and asked to report beacon outbound. With the PA31T continuously visible his plan was to hold the PA34 at 3500ft if necessary as it went outbound, as it would not descend below 3500ft until 1min later. The PA34 flight reported outbound and the PA31T flight called APP. As the PA34 was turning N and then W from OX and the PA31T

was already S of OX en-route to CPT, the PA31T flight was climbed to FL50 and transferred to LACC.

**THE PA34 PILOT** reports returning from a local IFR training sortie and being instructed by Brize Radar to climb to FL60 for the NDB100 hold at Oxford. About 7DME E of Oxford they were handed over to Oxford Approach. At 0852 they entered the hold at FL60 and 115kt and shortly after this they requested an EAT, which was given as 0913. They were then asked by APP if they were operating IFR or VFR but considering the Wx they had no other choice than to maintain IFR. Within 2min they were asked if they could fly beacon outbound promptly to which he replied that they were able and that they were 1.5D on the inbound axis. They were subsequently cleared for the NDB DME 100 approach for landing RW01. They reported beacon outbound and were requested to report passing altitude 3500ft. To his surprise, as he was about to report passing 3500ft he heard another pilot make his initial call to APP announcing he was on a standard CPT departure climbing FL50. Owing to IMC he was not able to see this ac and owing to the conflicting tracks of the NDB100 procedure and the CPT departure and the similar altitudes of both ac he felt safety was at risk.

**THE PA31T PILOT** reports being unaware of being involved in an Airprox until contacted by UKAB post incident. He was outbound from Oxford IFR and had been cleared initially to 2500ft and then FL50 but the point at which the amended clearance was given was unknown.

**ATSI** reports that the Airprox occurred at 0857:38 (UTC), in the vicinity of Oxford Airport, which is situated in Class G airspace. Oxford Tower (TWR) and Oxford Approach (APP) were operating as split positions, without the aid of surveillance equipment. Traffic levels and workload were assessed as light to medium.

The PA34 was operating IFR, on a training flight returning to Oxford from the W whilst the PA31T was on an IFR flight, from Oxford to Cannes. Both flights were in receipt of a PS from Oxford APP.

CAP493 Manual of Air Traffic Services (MATS Pt1), Section 1, Chapter 11, page 10, paragraph 6.1.1, states:

'A Procedural Service is an ATS where, in addition to the provisions of a Basic Service, the controller provides restrictions, instructions and approach clearances, which if complied with, shall achieve deconfliction minima against other aircraft participating in the Procedural Service. Neither traffic information nor deconfliction advice can be passed with respect to unknown traffic.'

At 0846:52, on release from Brize Radar, the PA34 flight called Oxford Approach, *"PA34 c/s we er maintain flight level six zero."* Approach replied, *"PA34 c/s Oxford Approach Weston on the Green Danger Area one nine two active to flight level one two zero are you operating IFR or VFR."* The PA34 pilot responded, *"er we're IFR PA34 c/s."* Approach then passed a clearance, *"PA34 c/s roger at the instructors discretion route to the Oscar Xray at flight level six zero report entering the hold for the NDB one hundred procedure landing runway zero one."* The PA34 pilot responded, *"Flight level six ????? PA34 c/s."*

For ac in the hold, where the inbound heading is 100°, the alternative NDB 100 procedure is:

'From overhead NDB(L) OX(IAF) at 3500, extend outbound leg of holding pattern, after passing abeam NDB(L) OX descend to 1900(1630). At I-OXF DME6.5 turn left onto extended FAT. When established continue as for main procedure.'

At 0849:37, the TWR passed departure instructions to the outbound PA31T flight, *"PA31T c/s hold at the holding point after departure left turn standard Compton departure hold at BOTLY climb flight level five zero squawk two two three four remaining outside controlled airspace London when instructed one two zero decimal four seven five."* The pilot gave a correct read-back.

At 0850:53, the PA34 pilot reported entering the hold and APP instructed the flight to maintain FL60. This was acknowledged by the pilot of the PA34, who subsequently requested an EAT. The pilot was asked to standby and at 0851:34 an EAT of 0913 was passed and acknowledged by the pilot.

APP later explained that the plan was then changed in order to improve the EAT and provide a more expeditious approach for the PA34. At 0853:22, APP asked the PA34 flight, *"PA34 c/s if I can give you descent can you go er straight outbound."* The pilot replied, *"Affirm PA34 c/s we're er just er one er point five miles from the beacon inbound."* APP instructed the pilot, *"PA34 c/s thank you in which case descend to altitude three thousand five hundred feet on the QNH one zero two zero report beacon outbound for the NDB one hundred procedure landing runway zero one."* The PA34 pilot replied, *"Three thousand five hundred feet one zero two zero wilco PA34 c/s."*

APP then issued a revised clearance for the outbound and, at 0854:15, this was passed to the PA31 by TWR, *"PA31T c/s hold at BOTLY altitude two thousand five hundred feet and to contact Oxford Approach er when instructed before London for further climb one two five three two five."* The pilot replied, *"Okay hold at BOTLY two thousand five hundred feet and to approach initially one two five three two five PA31T c/s."*

The PA34 pilot reported beacon outbound at 0854:19 and Approach responded, *"PA34 c/s report passing altitude three thousand five hundred feet."* This was acknowledged by the PA34 pilot. Allowing the PA34 to descend below 3500ft would result in a loss of the 1000ft deconfliction minima against the outbound PA31T, restricted to 2500ft.

At 0855 the PA31T departed from RW01. APP later stated that the PA31T was monitored visually as it passed O/H the airfield and then routed to the SE of the airfield in the climb to 2500ft.

[UKAB Note (1): The PA31T first appears on recorded radar at 0856:33 1nm N of Oxford in a L turn passing through heading 350° and climbing through altitude 1200ft QNH with the PA34 1.6nm to its W tracking W'ly descending through altitude 4400ft QNH. The horizontal separation distance of 1.6nm remains the same for the next 2 sweeps, the second of which is the CPA, at 0856:49, when vertical separation has decreased to 3000ft, the PA34 descending through 4300ft with the PA31T turning through a SW'ly heading climbing through 1300ft.]

At 0857:45, the radar recording shows the PA31T to be 1.5nm SE of the airfield indicating altitude 2000ft. At this point the PA31T called Approach, *"Approach hello PA31T c/s with you passing two thousand for two thousand five hundred feet towards BOTLY."* APP replied, *"PA31T c/s Oxford Approach er good morning to you continue climb flight level five zero report passing altitude two thousand five hundred feet."* This was acknowledged, *"Continue climb flight level five zero and Wilco PA31T c/s."* APP later explained that he considered separation existed between the 2 ac, as the PA31T was visual to the SE and direction finding (D/F), indicated the PA34T to be WNW of the airfield.

Almost immediately, at 0857:58, the PA34 flight called, *"PA34 c/s passing altitude three thousand five hundred feet."* APP responded with, *"PA34 c/s roger report base turn complete"* which was acknowledged by the pilot.

At 0858:20, the PA31T pilot reported passing 2500ft and was transferred to London control. The PA34 pilot reported base turn complete and was transferred to the Tower.

APP later explained that the intention was to monitor visually the departing PA31T as it turned L off RW01 and passed through the O/H not above 2500ft. An aerodrome controller may apply reduced separation in the vicinity of an aerodrome when each ac is continuously visible to the controller; however, this does not apply to an Approach controller providing a PS. The Oxford MATS Part 2 does not have any additional provision for a reduction in the separation minima or for any form of deemed separation.

The PA34 was above cloud and cleared for the procedure without any restriction on the descent. The controller had an expectation that the PA34 would maintain 3500ft until NW of the airfield, passing abeam the OX in accordance with the published procedure and intended to use D/F to establish a form of geographical separation.

APP did not have access to surveillance equipment and was not sure of the exact position of the PA34. No TI or details of the plan were conveyed to the pilots. APP recognised that the procedure adopted was non-standard and resulted in the technical loss of the 1000ft deconfliction minima. This caused the pilot of the PA34 to be concerned that the safety of his ac might have been compromised. MATS Pt1, Section 1, Chapter 2, page 11, paragraph 1.3, states:

'In Class G airspace, separation between aircraft is ultimately the responsibility of the pilot; however, in providing a Deconfliction Service or a Procedural Service, controllers will provide information and advice aimed at achieving a defined deconfliction minima.'

Although there was a technical and procedural loss of the deconfliction minima, the radar recording shows that, at the point when the PA31T was SE of the airfield and cleared to climb above 2500ft, the distance between the ac was 6nm horizontal with 1500ft vertical separation.

The Oxford Approach controller applied a non-standard procedure that was not approved in the Oxford MATS Part 2 and that did not properly take into account any attendant risk of error. This resulted in a loss of procedural separation that reduced the required deconfliction minima to be technically less than 1000ft between the two IFR ac participating in the PS.

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

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authorities.

Members could add little to this incident. Without any procedures for reduced separation or deemed separation available to the APP in the procedural environment, his non-standard technique employed had led to a loss of procedural separation. The exact position of the PA34 was not known, so that when he allowed PA34 to descend below 3500ft separation was lost and this was exacerbated when the PA31T was cleared to FL50. Although this had had the potential to have been a more serious incident, it was clear from the radar recording that the actual flightpaths flown by both ac - the PA34 was high in the NDB100 procedure whilst the PA31T's low ROC whilst turning to the S – had resulted in the ac diverging rapidly as the PA31T turned through a S'ly heading back towards the O/H, 3000ft below and 1.6nm clear of the PA34. This allowed the Board to conclude unanimously that there had not been any risk of collision during this occurrence.

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

Cause: Loss of procedural separation.

Degree of Risk: C.