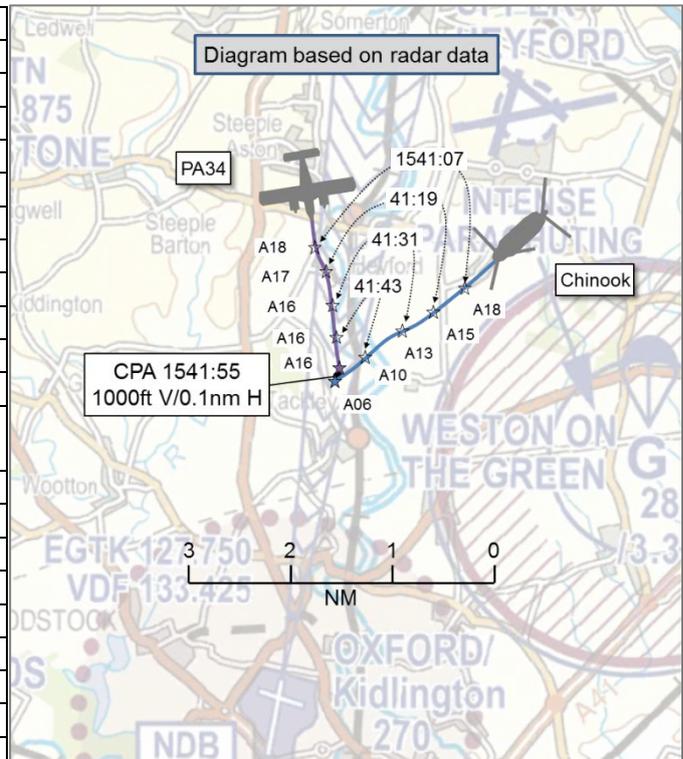


AIRPROX REPORT No 2017003

Date: 05 Jan 2017 Time: 1542Z Position: 5154N 00118W Location: 3.5nm NE Oxford airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA34	Chinook
Operator	Civ Trg	HQ JHC
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Aerodrome	Basic
Provider	Oxford	Brize
Altitude/FL	1500ft	700ft
Transponder	A,C,S	A,C,S
Reported		
Colours	White, blue	Green
Lighting	Strobes, landing, nav	White HISL, nav (bright)
Conditions	VMC	VMC
Visibility	10km	3.5km Haze
Altitude/FL	1500ft	700ft
Altimeter	QNH (1034hPa)	QNH
Heading	193°	235°
Speed	100kkt	NK
ACAS/TAS	TAS	TAS
Alert	None	TA
Separation		
Reported	100-200ft V/0m H	500ft V/0m H
Recorded	1000ft V/0.1nm H	



THE PIPER PA34 PILOT reports that they were on an IFR navigation flight, took up the hold, and flew a procedural NDB approach RW19 at Oxford. On final approach, they were on track descending with the approach and had transferred to the Tower frequency. At about 1500ft/3.5nm from the threshold they received a very late warning from the Tower, via Radar, that a Chinook from Brize was converging on the centreline at a similar level from the east. On looking to the left he immediately spotted the Chinook in about the 10 o'clock position at the same altitude, approximately 1nm away converging. The aircraft was seen to start descending. To avoid it he decided to stop their descent and the Chinook passed directly below them where he lost sight of it. Once he had regained sight they continued their approach visually. They received no Traffic Alert from the aircraft system.

He assessed the risk of collision as 'Medium'.

THE CHINOOK PILOT reports that he was in descent to low-level having transited over the top of Bicester Glider Site at 3100ft. Into-sun visibility was challenging, with slant vis relatively poor. As they cleared the site [Bicester] he called Brize Approach to obtain a Basic Service and to advise that they were inbound towards 'Field 11c'. The controller was working 3 or 4 other aircraft and it was hard to make the initial call. At approximately 7-800 ft in the descent they received a TA alert in their 2 o'clock at about 1-1.5nm at the same time as Brize called the contact to them. They acquired the PA34 visually, increased their rate of descent to maintain separation and continued on their training sortie. They assessed that they maintained 500ft vertical separation throughout. As a result of this separation, he did not feel that safety was compromised from his perspective. Having talked to the Deputy SATCO at Oxford, and having obtained the point of view of the PA34 pilot who was carrying out a training IFR approach into Oxford, he could appreciate his actions and why he filed the Airprox.

He assessed the risk of collision as 'Low'.

THE OXFORD AERODROME CONTROLLER reports that the PA34 pilot made initial contact on his frequency at about 6nm whilst on the final approach track of the NDB(L)/DME RW19 procedure. When the PA34 pilot was at about 4nm final he observed an aircraft on the Aerodrome Traffic Monitor (ATM) to the east of the PA34 on a track converging with them in a south-westerly direction. He observed the aircraft almost immediately from the Visual Control Room (VCR), a Chinook, which at the time was at about 2000ft. He passed Traffic Information to the PA34 pilot and, although he mistakenly called the traffic as being in the pilot's 3 o'clock instead of 9 o'clock, the pilot reported visual within about 5 seconds. The Oxford Radar controller and he telephoned at the same time to inform each other about the Chinook. The Radar controller 'conferenced' him into a telephone call they were receiving from RAF Brize Norton, who were also informing them about the Chinook. The Chinook descended throughout and passed at low-level beneath the PA34 when they were about 2nm final. Shortly after the PA34 pilot reported visual, he offered the option for them to break off their approach. The PA34 pilot stated that they intended to maintain level flight while the Chinook descended beneath them. The pilot of the PA34 made no further comment about the incident on the RT. He estimated the minimum separation between the two aircraft to be 500ft at between 0.5-1nm, while the Chinook was still east of the PA34 and descending.

THE BRIZE RADAR CONTROLLER stated that the Airprox was notified to him one week after the incident occurred. His memory of the event was not clear, and his report contained only what he could recall. He was working with the Zone and Director frequencies. He was called by the Chinook pilot, who requested a Basic Service and a transit of the Brize Control Zone (CTR). The pilot had mentioned a field, but he could not recall if it had climbed out of low-level. Having asked the pilot to squawk he had noticed that he was in the Oxford approach lane. He attempted to call Oxford on the landline marked 'Oxford'. At the same time, the Switchboard (SWB) line was ringing; he explained that this could be anyone calling the Radar console and he ignored this line whilst waiting for Oxford. He called the Oxford inbound traffic to the Chinook pilot because he believed that there was a risk of collision. He later found out that the SWB line was in fact Oxford ATC trying to call him. Because they did not use the line marked 'Oxford' he did not prioritise their call. Once the aircraft was clear of the Oxford approach lane he gave the pilot a clearance to cross the Zone on a reverse C-D crossing.

He perceived the severity of the incident as 'Low'.

THE BRIZE SUPERVISOR reports that he saw the Radar/Zone controller call the Oxford inbound traffic to the Chinook pilot and try to call Oxford on the landline as soon as he realised which aircraft it was (squawk applied). After the event the Oxford Supervisor called but he did not recall him mentioning an Airprox. A few telephone exchanges occurred between Brize, Oxford and Benson and it was established that the Chinook pilot had free-called Brize. In his opinion the Radar/Zone controller reacted quickly and in the best possible way.

Factual Background

The weather at Oxford was recorded as follows:

EGTK 051520Z 00000KT CAVOK 03/00 Q1034=

Analysis and Investigation

CAA ATSI

The PA34, (transponding 4501), pilot had been receiving a Traffic Service from Oxford Radar whilst flying a procedural NDB approach to RW19 at Oxford. He had been transferred to Oxford Tower after the aircraft had reported the base turn complete. The Chinook, (initially transponding 3620, (RAF Benson)), had been visible for some time prior to this and observed to be maintaining 3500ft on a west-north-westerly track. The Chinook was then observed to commence a descent at 1539:50 (Figure 1).



Figure 1 – 1539:50.

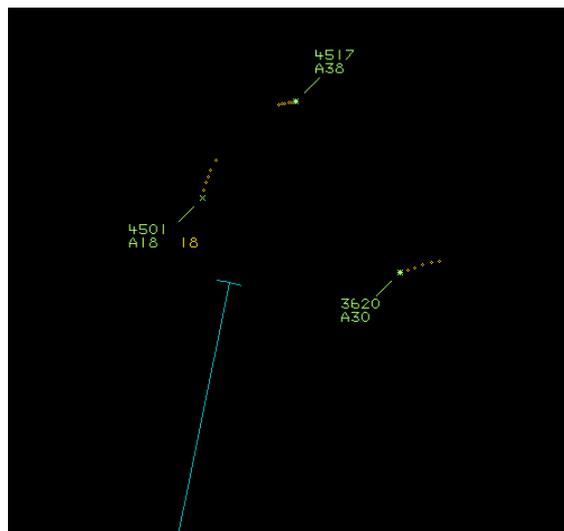


Figure 2 – 1540:08.

The PA34 pilot reported on the Oxford Tower frequency at 1540:08 (Figure 2). At 1540:45 the Chinook transponder code changed to 3707 (RAF Brize Norton). At 1541:06 the Aerodrome controller observed the Chinook, initially on the ATM and subsequently visually from the VCR, to be converging with the PA34, and passed Traffic Information (Figure 3).

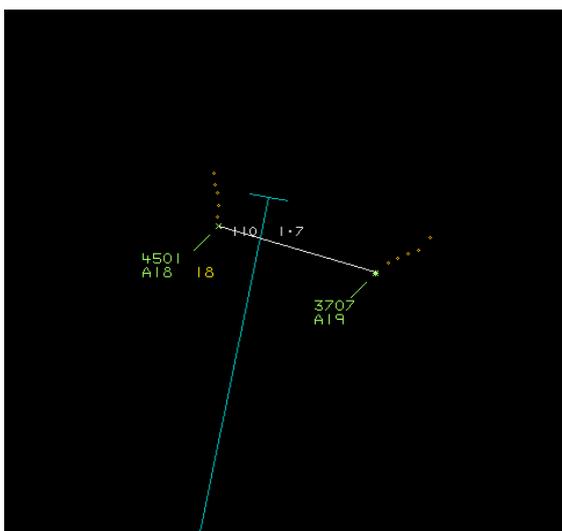


Figure 3 – 1541:06.

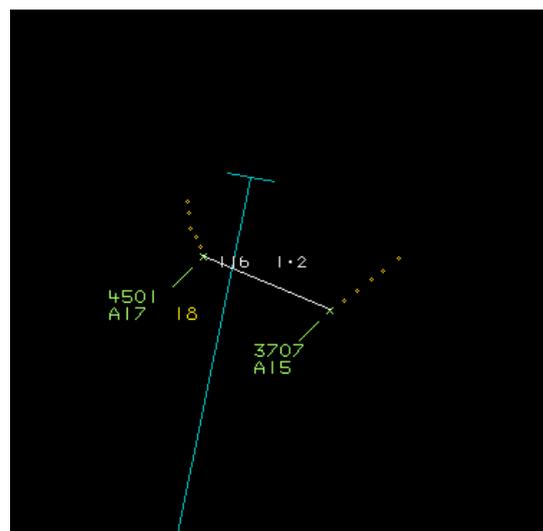


Figure 4 – 1541:20.

At 1541:20 the PA34 pilot reported becoming visual with the Chinook (Figure 4).

The Aerodrome controller asked if the PA34 pilot wished to break-off the approach, but this was declined by the PA34 pilot, who stated their intention was to maintain their current level, as the Chinook was passing beneath them.

(CPA took place at 1541:55 with the aircraft separated by <0.1nm laterally and 1000ft vertically (Figure 5).

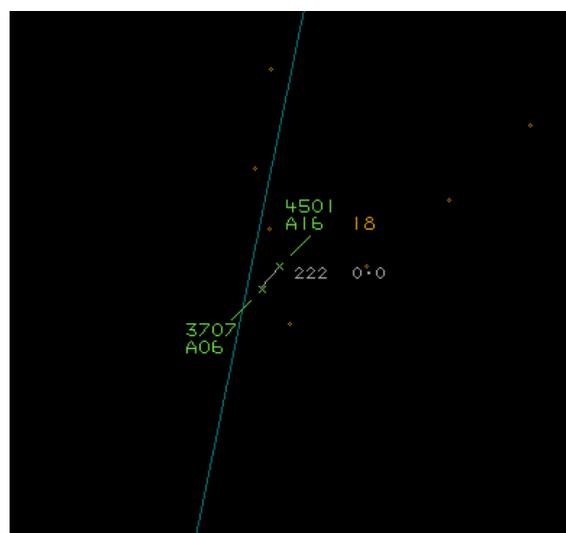


Figure 5– 1541:55.

The Oxford Radar controller was a trainee under supervision by an On the Job Training Instructor (OJTI) and both had been monitoring the movement of the Chinook. Due to its profile and level in the time period prior to the PA34 pilot being transferred to Oxford Tower, neither controller considered the Chinook to be pertinent traffic. They admitted in their report to there being a degree of complacency, as the aircraft was apparently receiving a service from Benson ATC, as indicated by its transponder code.

Although the Traffic Information passed by the Oxford Aerodrome controller was not wholly accurate, with the controller admitting in his report that he had referenced the Chinook as being in the PA34's 3 o'clock rather than its 9 o'clock, it still assisted the PA34 pilot in visually acquiring the Chinook.

At the time that the Aerodrome controller was passing the Traffic Information, the Brize Norton Radar controller had been attempting to contact Oxford. This attempt had not been successful, but the Oxford Radar controller had also been trying to contact Brize Norton at the same time, and so contact was finally established at 1541:10, with the Brize Norton controller reporting that the Chinook had just appeared on their radar. The Brize Norton controller then went on to pass Traffic Information to the Chinook pilot on the PA34 whilst still on the telephone to Oxford. The Oxford Radar controller took the opportunity to ring the Aerodrome controller to have them pass Traffic Information to the PA34 pilot on the Chinook. However, the Aerodrome controller had already done so, effectively some 40 seconds earlier.

The Airprox took place in Class G airspace where ultimately pilots are responsible for their own separation.

Military ATM

Portions of the tape transcripts between the Brize Zone controller and the Chinook pilot are reproduced below:

From	To	Speech Transcription	Time	Remarks
Chinook	Brize Zone	Brize Zone good afternoon [Chinook C/S] Basic Service	15:40:15	
Brize Zone	Chinook	[Chinook C/S] Brize Zone good afternoon squawk three seven zero one pass your message	15:40:21	
Chinook	Brize Zone	[Chinook C/S] squawking three seven zero one approximately eight miles to the north east of Oxford descending to low level to route inbound to field eleven charlie for a reverse charlie delta back to Benson	15:40:31	
Brize Zone	Chinook	[Chinook C/S] roger reset squawk three seven zero seven just confirm aircraft type and altitude Brize QNH one zero three four	15:40:44	
?	Brize Approach	Brize Approach Brize Approach	15:40:51	Landline
Chinook	Brize Zone	[Chinook C/S] is a C H forty seven and just passing one thousand eight hundred feet one zero three four squawking three seven zero seven.	15:40:56	Unintelligible
R44 [Not involved in Airprox]	Brize Zone	Brize helicopter [R44 C/S] good afternoon	15:41:05	
Oxford	Brize Approach	??	15:41:05	Landline unintelligible Overlapping R44 transmission

From	To	Speech Transcription	Time	Remarks
Brize Approach	Oxford	Brize Approach Traffic information	15:41:07	Landline
Oxford	Brize Approach	Three seven zero seven what was? intentions on him	15:41:09	Landline unintelligible
Brize Approach	Oxford	Affirm he's just popped up err I have him at altitude err two thou one thousand five hundred feet descending err he's routing field eleven then a reverse charlie delta cross	15:41:11	Landline
Brize Zone	Chinook	[Similar but incorrect Chinook C/S] traffic right two o' clock one mile converging indicating two hundred feet above.	15:41:21	
Oxford	Brize Approach	?????	15:41:25	Landline unintelligible
Chinook	Brize Zone	Err [Chinook C/S] is visual with that traffic	15:41:26	
Oxford	Oxford Tower	??? Hi Tower err can you just tell three six there's traffic to his left hand side half a mile twelve hundred feet working Brize just popped up	15:41:28	Landline unintelligible
Oxford	Oxford Tower	Roger??	15:41:36	Landline unintelligible
R44	Brize Zone	Helicopter [R44 C/S]???	15:41:38	Overlapping landline conversation
Brize Approach	Oxford Radar	?? might have err might have been speaking on the back box and clearly hasn't	15:41:39	Landline unintelligible
Brize Approach	Chinook	[Similar Chinook C/S] you are under a Basic Service	15:42:18	
Chinook	Brize Approach	Basic service [Chinook C/S]	15:42:21	
Brize Approach	Chinook	Confirm call sign is it [Chinook C/S] or [Similar Chinook C/S]	15:42:24	
Chinook	Brize Approach	[Chinook C/S]	15:42:28	
Brize Approach	Chinook	[Chinook C/S] roger	15:42:30	

The radar analysis shows the relative positions of the PA34 and the Chinook at pertinent times. The radar utilised was the Bovingdon, therefore does not represent the picture seen by the Brize Zone controller.

At 15:40:15 (Figure 6), the Chinook pilot first called Brize Zone requesting a Basic Service. He was instructed to squawk 3701.



Figure 6: Geometry at 15:40:15 (PA34 4501; Chinook 3620).

At 15:40:37 (Figure 7), the Chinook's SSR changed to 3701 part-way through the pilot's transmission of route and intentions. Once the Brize Zone controller knew the intentions, the Chinook pilot was asked to reset squawk to 3707.



Figure 7: Geometry at 15:40:37 (PA34 4501; Chinook 3707).

At 15:41:21 (Figure 8), the Brize Zone controller passed Traffic Information to the Chinook pilot on traffic right, 2 o'clock, 1nm, converging, indicating 200ft above. The incorrect call sign was used; however, the pilot reported that he was visual with the traffic.

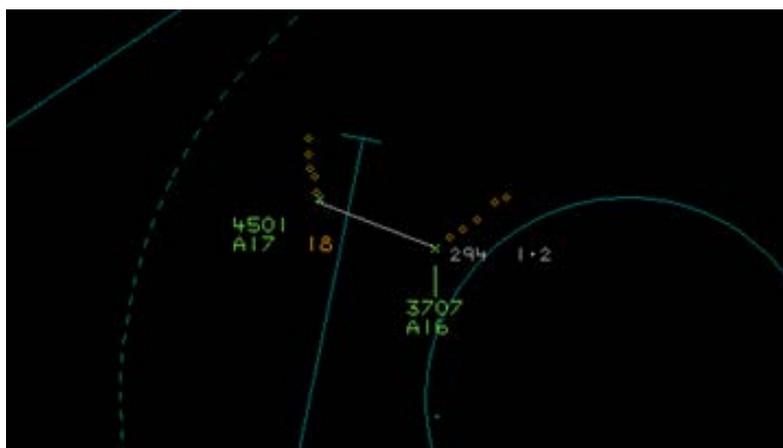


Figure 8: Geometry at 15:41:21 (PA34 4501; Chinook 3707).

At 15:41:53 (Figure 9), the 2 aircraft were at CPA of 0.1nm horizontally and 800ft vertically. It was another minute before the Brize Zone controller agreed a type of service with the Chinook pilot.



Figure 9: Geometry at 15:41:53 (PA34 4501; Chinook 3707).

Due to the time between the occurrence and the controller being notified, his recollection of the event was not clear. He reported that he was operating bandboxed, additionally carrying out the Approach and Director tasks, when the Chinook called up for a Basic Service and transit of the Brize CTR. Once a squawk was applied, he noticed that the aircraft was in the Oxford approach lane. He attempted to call Oxford ATC by direct landline, ignoring the ringing 'SWB' line, which could be any external number, and passed Traffic Information to the Chinook pilot as he believed there to be risk of collision. It was subsequently found that Oxford ATC had been calling, but not on the direct line, hence their call was not recognised or prioritised.

The time between the Chinook pilot squawking 3701, with position report, and the Airprox was just over one minute; therefore, the Brize Zone controller had very little time to assimilate the information and act upon it. Traffic Information was passed in accordance with CAP 774 because the controller believed there was a risk of collision; the Chinook pilot was visual with the PA34.

The Brize Zone controller's attempts to contact Oxford ATC were above the requirement and demonstrated good teamwork. Direct landlines are provided to facilitate efficient communications with adjacent agencies; in particular, they can be answered on any console, enabling another controller or the Supervisor to intervene, whereas the SWB line used could only be answered by the specific console targeted. Unfortunately, the 'crossed' calls meant that Traffic Information could not be passed to Oxford ATC.

Although there was no DASOR, nor associated transcripts from Benson ATC, subsequent enquiry found that the Benson Approach controller had fairly high workload, working bandboxed as Director with traffic in the Radar Training Circuit (RTC). The Chinook was on the Approach frequency (but not being actively monitored) when the pilot stated that the aircraft would be leaving the LFA to the north. Nothing further was heard for approximately 25 minutes, at which stage the Chinook pilot reported being north of Bicester and changing en route. Free-calling from Benson to Brize Zone while on a course to cross the Oxford approach lane was perhaps not wise when a handover would have facilitated a continuous service or the traffic could have been transferred to Oxford ATC. However, it is Class G airspace and, at the time of the transfer, the Chinook was approximately 1000ft above the Oxford inbound traffic.

UKAB Secretariat

The PA34 and Chinook pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard. Because the incident geometry is considered as converging then the Chinook pilot was required to give way to the PA34¹, which he did. 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 operation².

The UK AIP³ states:

Aerodromes located outside Controlled Airspace, for which Instrument Approach Procedures (IAP) are published, are identified by a 'cone' symbol on the Aeronautical Charts ICAO Scale 1: 500 000 United Kingdom and the Topographical Air Charts of the United Kingdom Scale 1:250 000. Portrayal on these charts is provided in order to assist pilots of VFR flights to avoid conflict with IFR traffic at these aerodromes. Pilots are urged to take this information into account in their pre-flight planning.

Oxford is marked on the civil aeronautical charts with these symbols for both runways as shown in Figure 10 below.

¹ SERA.3210 Right-of-way (c)(2) Converging.

² SERA.3225 Operation on and in the Vicinity of an Aerodrome.

³ ENR 1.5-4 (28 May 2015) ENR 1.5 HOLDING, APPROACH AND DEPARTURE PROCEDURES

Comments

THE PA34 OPERATING COMPANY reports that this conflict occurred in Class G airspace outside the Oxford ATZ whilst the PA34 pilot was conducting a practice instrument approach onto RW19 and had been transferred from Approach to the Tower frequency. Although the student under training in the left-hand seat was wearing an instrument hood, VMC prevailed and, in addition to the instructor in the right-hand seat, a rear-seat student observer was present, who could also assist with look-out. The aircraft was also equipped with a Traffic Advisory System (TAS), which should provide warning of conflict with transponding aircraft. In the event, the action of the Oxford Aerodrome controller to alert the crew of the PA34 to the manoeuvring of the Chinook helicopter proved to be the most effective 'safety barrier'. Cued by this warning (which originated from radar-equipped ATC staff in Approach), the instructor gained visual contact with the helicopter, took control and arrested the rate of descent, allowing the descending helicopter to pass (almost directly) beneath. Neither unaided look-out nor TAS had proved to be effective safety barriers on this occasion. They understood from subsequent discussion with Oxford ATC that the Chinook was squawking, so it is not clear why no TAS alert was triggered. (A TAS functional test is part of the standard post-start checks on the PA34 and the crew reported that this equipment was generating Traffic Information earlier in the sortie so they are investigating this aspect further.) Although the conflict occurred outside the ATZ, the PA34 was effectively flying down the 'feathered arrow' which is marked on civil aeronautical charts to show the presence of an Instrument Approach Procedure at this busy commercial training airfield. This occurrence reinforces the need for an effective look-out even during the busy training phase of an instrument approach and will be used as an example during their safety management training. Further to their initial internal investigation into the circumstances of the occurrence at reference, additional information has come to light regarding awareness of the presence of Instrument Approach Procedures (IAP) here at Oxford. Unlike the UK CAA 500,000 VFR charts, it seems the military equivalents (screenshots attached of both 250,000 (Figure 11) and 500,000 (Figure 12) scale military charts) do not depict the presence of an IAP using something equivalent to the 'feathered arrow' symbol used on the CAA charts. Obviously, something like this would improve military aircrews' awareness of the presence of an instrument procedure in Class G airspace. They understood that when this issue had been raised in the past a decision was made not to do this on military charts in order to reduce clutter. They believe, as further investigation of this incident may show, that there would now be merit in reconsidering the safety management value of such chart-marking as an additional 'barrier' particularly for depiction on military charts of civil training aerodromes in Class G airspace where intense instrument training takes place in all weathers.

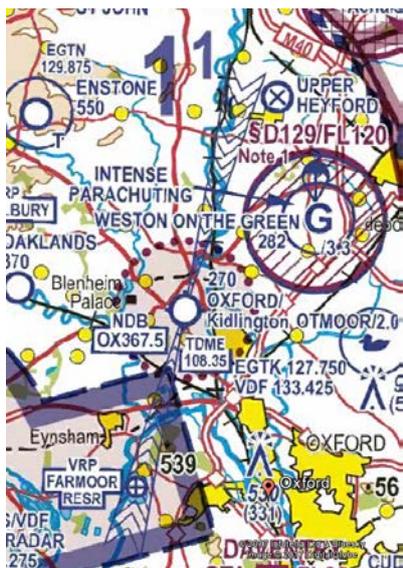


Figure 10 CAA 1:500,000 chart

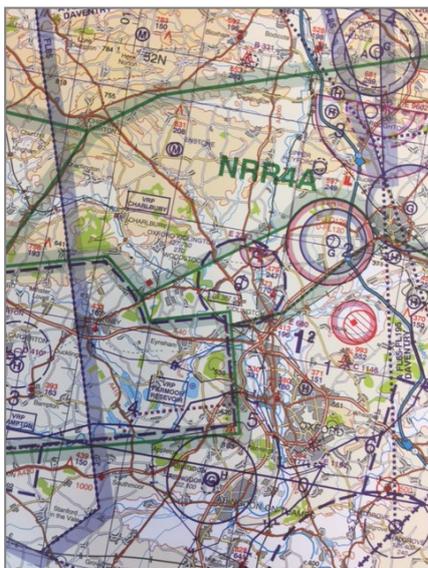


Figure 11 Mil 1:250,000 chart



Figure 12 Mil 1:500,000 chart

JHC

It is incumbent on all parties to understand their responsibilities when operating in different classes of Airspace. On this occasion, both pilots were flying in Class G and therefore both were responsible for separation. However, it is also incumbent on crews to be cognisant of where they are manoeuvring in respect to other ATC operations. Particular attention is required when planning flights that pass close to ATZs as crews should be mindful of the potential to conflict with Instrument patterns; particularly procedural patterns that are displaced from the ATZ. It is understood that Military charts are cluttered and as such instrument approach lanes have been removed so therefore extra vigilance is required by our crews when conducting flights in these areas. Unfortunately, the Chinook flew too close to a published instrument approach, which then brought about the conflict. It is reassuring that the JHC aircraft's TAS equipment operated effectively and the crew were made aware of the other aircraft and thus could take avoiding action. However, the same cannot be said for the PA34, who because of their [possibly] unserviceable equipment had to rely on the Traffic Information provided by the ATC Unit at Oxford, which proved successful. Coordination of airspace in such a congested area is always difficult and crews rely heavily on the sound cooperation between neighbouring units, in this instance the attempt was made but perhaps not as effectively as it could have been.

Summary

An Airprox was reported when a PA34 and a Chinook flew into proximity at 1542 on Thursday 5th January 2017. The PA34 pilot, in receipt of an Aerodrome Service, was carrying out a practice NDB approach to RW19 at Oxford under IFR in VMC. The Chinook pilot was operating under VFR in VMC, in receipt of a Basic Service from Brize. The PA34 pilot was given Traffic Information about the Chinook and obtained visual contact at about 1nm. The Chinook pilot obtained a TA at about 1-1.5nm and then obtained visual contact.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, the controllers concerned, area radar recordings and reports from the appropriate ATC and operating authorities.

The Board first began by discussing the actions of the Chinook pilot. They noted that he was routeing VFR, under VMC, overflying the Bicester area to operate in a field near Brize. The Board was advised that the run-in for this position started near the north-west corner of the Oxford ATZ. At the time of the Airprox, which had occurred 3.5nm north-east of Oxford airport, the Chinook pilot was in receipt of a Basic Service from Brize. The Board members considered that, in view of the flight operating close to Oxford's airspace, it would have been prudent for the Chinook pilot to have been in receipt of a service from Oxford. However, if this had not been possible because of his task, a courtesy call on his second radio would at least have alerted Oxford ATC to his presence, even if this call had been made at an early stage, for example as the Chinook was passing Bicester. This action was thought to be especially pertinent given that the Chinook was routeing towards the active Instrument Approach path to RW19. The Board considered that the fact that the Chinook pilot flew towards the Oxford Approach path without calling Oxford ATC was therefore a contributory factor to the Airprox. A military member commented that the pre-brief for the flight should have addressed the fact that the Chinook was routeing close to Oxford and potentially towards an Instrument Approach; he would have expected appropriate mitigations to have been addressed at that stage. Notwithstanding, members noted that the Chinook pilot received a TA on the PA34 at a range of 1-1.5nm, about the same time that the Brize controller had passed him Traffic Information. He had obtained visual contact and had descended to pass underneath the PA34.

The PA34 pilot, operating under IFR in VMC, was carrying out an NDB approach to RW19 at Oxford and, at the time of the Airprox, was in receipt of an Aerodrome Control Service. The Aerodrome controller, becoming visually aware of the Chinook converging with the PA34, issued Traffic Information to the PA34 pilot. Although he passed the relative position of the Chinook incorrectly, the PA34 pilot was able to acquire visual contact with the helicopter. The Board considered that the

PA34 pilot took appropriate and timely action by levelling off, because the Chinook was below him and descending.

The Board commented that it was unfortunate that the Brize Radar controller had only been able to file a shortened report because he had not been aware that an incident had taken place until one week after the event. Nevertheless, he was able to report that he had noted that the Chinook was crossing the Oxford RW19 approach lane and had telephoned Oxford ATC on the direct line to inform them about the presence of the helicopter. Believing that there was the possibility of a risk of a collision, he had appropriately issued the Chinook pilot with Traffic Information about the PA34. Having not received a response to his call to Oxford on the direct line, he later found out that Oxford had been trying to contact him, but on a switchboard line. If he had realised that this was a call from Oxford he would have answered it but there was no indication of the caller on this line and ATC members confirmed that he was correct to prioritise his direct line. ATSI subsequently reported that they had listened to the recording of the telephone and Brize could be heard answering a call from Oxford but without success and so the controller had disconnected, suggesting that Oxford had rung the direct line initially but for whatever reason it never connected.

The Board then turned its attention to the cause and risk of the Airprox. Members acknowledged that because both pilots were operating in Class G airspace it was ultimately their responsibility to 'see and avoid' each other irrespective of ATC involvement. With this in mind, members initially deliberated whether the cause had been a conflict in Class G resolved by both pilots, or whether the Chinook pilot had flown into conflict with the PA34 for which he was required to give way. However, after much debate, the majority of the Board came to the opinion that there had in fact not been a conflict because the Chinook pilot was already descending below the PA34. Consequently, in the end, members agreed that the incident was best described as the PA34 pilot being concerned by the proximity of the Chinook. This led to an equally lengthy discussion about the risk of the Airprox, and in particular whether it should be assessed as Category C (safety degraded but no risk of collision) or Category E (normal safety standards and procedures pertained). Several members thought that it should be Category C because, in their opinion, safety had been degraded because of the relative positions of the two aircraft and the fact that the Chinook had flown through the Oxford approach path without contacting them. Additionally, although the action taken by the Chinook pilot had prevented the possibility of a collision, they opined that it had resulted in the PA34 pilot not being able to continue his procedure because he had to stop his descent on his Instrument Procedure. They therefore opined that this was not normal operating practice. However, other members thought that, notwithstanding both aircraft had manoeuvred, the encounter was a normal feature of Class G see-and-avoid operations; the Chinook pilot had seen the PA34 and had descended, and the PA34 had also obtained visual contact and had stopped his descent. They further commented that, in the event, the CPA was 1000ft vertically as they passed each other and so this was well within the bounds of normal Class G operations. Because of the split in the Board's opinion of the risk, the Chairman decided that a vote was necessary to establish the Board's view. Although not unanimous, the majority of the Board voted that the risk should be assessed as Category E.

The Board noted the comments made by the PA34's operating company about the difference between military and civil charts in depicting whether an instrument approach existed at civil airfields outside CAS. The HQ JHC member commented that the Chinook crew were based at Benson and would have been well aware of the Instrument Approach paths at Oxford. As a result, on this occasion, the Board felt that the absence of a feathered display on the military chart was not directly pertinent. However, prompted by this incident, the HQ Air Training member undertook to contact the military Aeronautical Information Documents Unit (AIDU) to seek their opinion as to whether the addition of such annotations to the military map would be feasible.

Several members wondered whether Oxford were aware of the position of the various farmer's fields that are used by Chinook pilots on a regular basis. As a result of this Airprox the HQ JHC member reported that he would liaise with Benson, Odiham and Oxford to provide any appropriate information to Oxford that might assist their awareness of such operations.

PART C: ASSESSMENT OF CAUSE, RISK AND SAFETY BARRIERS

Cause: The PA34 pilot was concerned by the proximity of the Chinook.

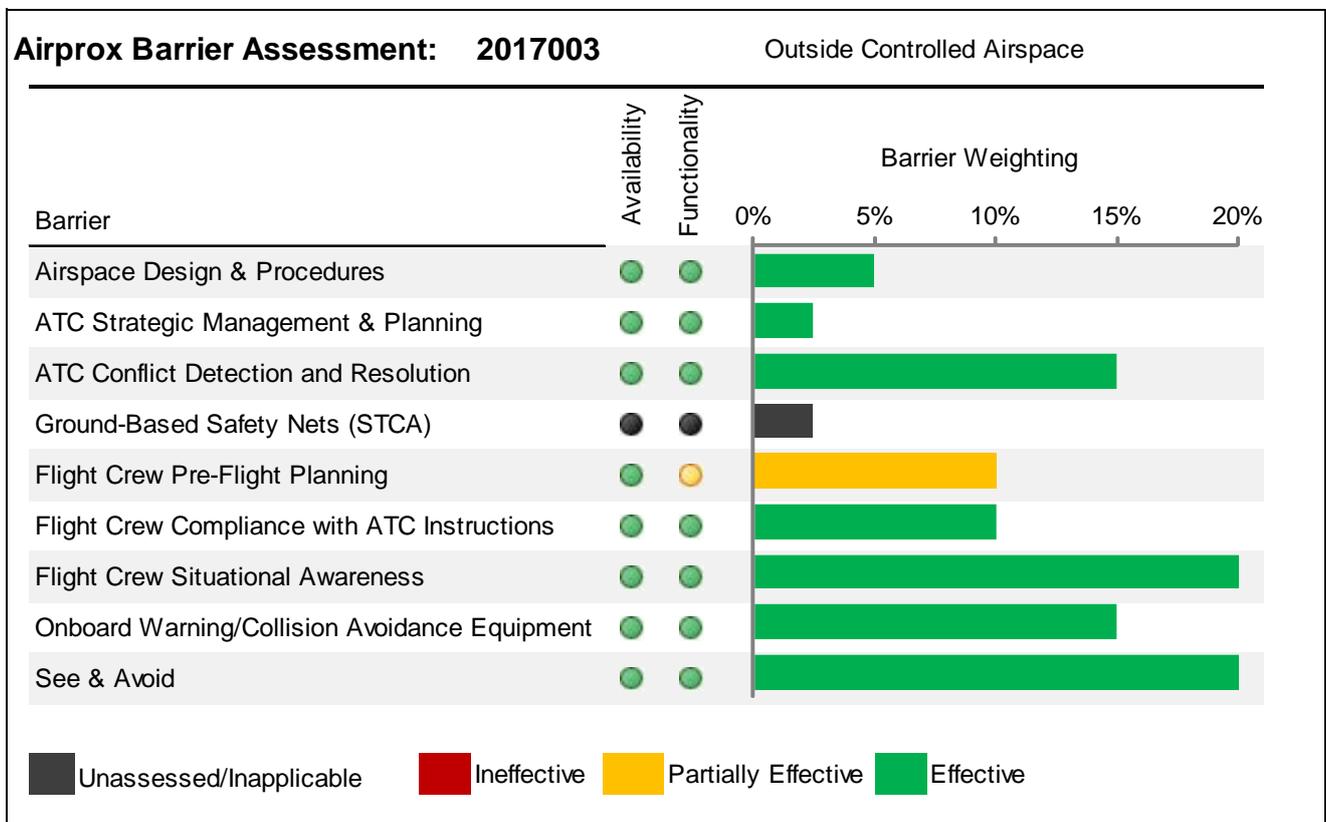
Contributory Factor: The Chinook pilot flew towards the Oxford Approach Path without calling Oxford ATC.

Degree of Risk: E.

Safety Barrier Assessment⁴

The Board decided that the following key safety barriers were contributory in this Airprox:

Flight Crew Pre-Flight Planning was only **partially effective** because the Chinook pilot's pre-brief for the flight should have addressed the fact that he was routeing close to Oxford and potentially towards an Instrument Approach. Consequently, it would have been prudent for him to have contacted Oxford's frequency to advise them of his presence or ensure other mitigations were in place.



⁴ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).