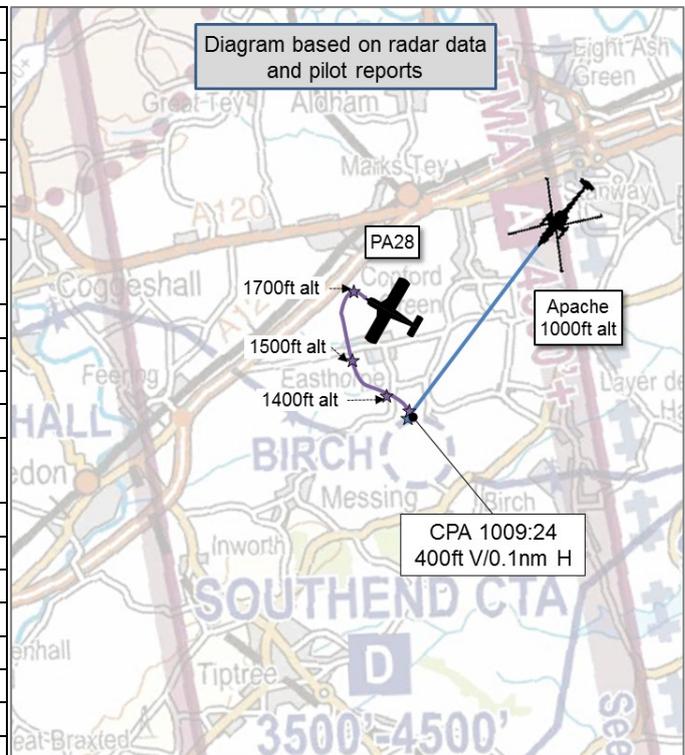


**AIRPROX REPORT No 2018293**

Date: 07 Aug 2018 Time: 1009Z Position: 5150N 00046E Location: Birch

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	Apache	PA28
Operator	HQ JHC	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Listening Out
Provider	Wattisham	Andrewsfield Radio
Altitude/FL	1000ft	1300ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Green	Blue
Lighting	Strobes, Nav, Landing	LED, Landing
Conditions	VMC	VMC
Visibility	30km	>10km
Altitude/FL	1500ft	NK
Altimeter	NK	NK
Heading	225°	NK
Speed	115kt	NK
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	50ft V/100ft H	Not seen
Recorded	400ft V/0.1nm H	



**THE APACHE PILOT** reports departing the airfield via the southern sector. He climbed to 1500ft and decided to take the opportunity to conduct some simulated IF. He was looking at the instruments in the back seat when he heard the pilot in the front seat state that they had a fixed-wing aircraft converging from the 3 o'clock position. Once he looked up the fixed-wing aircraft seemed to be 50ft higher than them and looked like it would pass behind them by 100ft, at no point did the fixed-wing aircraft alter its course. The front-seat pilot reported the Airprox to Wattisham Approach and they elected to continue the sortie. The fixed-wing aircraft appeared to be coming from Earls Colne. No information was passed to them about the fixed-wing traffic prior to the Airprox. They, as a crew, discussed if they could have done anything that could have helped to prevent the Airprox. One thing they discussed was that they could have upgraded to a Traffic Service due to the fact one of them was eyes-in conducting IF.

He assessed the risk of collision as 'Medium'.

**THE PA28 PILOT** reports that he has no recollection of the incident because it occurred over 3 months prior to him being informed. Since then he has flown over 100 hours. He commented that the sighting of Apache helicopters is quite common near to Wattisham and he has no recollection of having an Airprox with one. If he had been informed earlier, he might have been able to provide more information.

**THE WATTISHAM CONTROLLER** reports that the Apache departed for a VFR flight southbound. On first contact with Approach at 1001, the Apache pilot was given a Basic Service as requested and the Wattisham QNH. At 1008, a flight of 4 x F15s called abeam Southwold for a Traffic Service as they routed south along the coast from Norwich. As he was identifying the F15s, the Apache called changing frequency en-route, and squawking 7000 at 1008. He acknowledged the Apache pilot who then immediately stated he wished to file an Airprox for time 1009, 8km south of Earls Colne; a blue light-aircraft passed within 100ft/200m. The Apache was in good VMC at the time.

## Factual Background

The weather at Wattisham was recorded as follows:

EGUW 070950Z 21005KT CAVOK 28/12 Q1008 BLU NOSIG

## Analysis and Investigation

### UKAB Secretariat

The Apache and PA28 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>. If the incident geometry is considered as converging then the Apache pilot was required to give way to the PA28<sup>2</sup>.

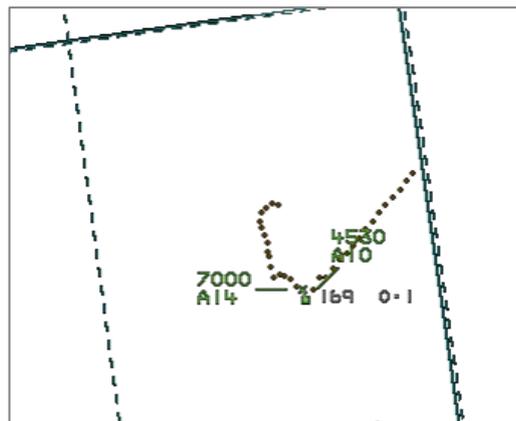


Figure 1: Apache (4530) and PA28 (7000) at CPA

### Wattisham Apache Operating Authority

The following extracts from the AHF Flying Order Book have already been put in place to prevent recurrence:

- Prior to conducting Simulated Instrument Flying captains are to request a radar-based ATC service when available, ensure a robust lookout and fly altitudes and routes to minimise the mid-air collision risk
- Aircrew should operate the FCR in Air Surveillance mode when not using it for target acquisition or engagement (see note 1). Aircrew should assess the potential reduction in situational awareness if the FCR becomes unserviceable (either pre-launch or in-flight) (See note 2). Aircrew should brief mitigations and any residual risks to the Authorising Officer for a planned flight without a serviceable FCR.

Note 1 - The FCR is not certified as a collision warning system and cannot be relied upon to detect conflicting traffic.

Note 2 - This means an informal risk assessment assessing routing, congestion, workload, mutual support, weather, airspace and availability of ATSOCAS.

<sup>1</sup> SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

<sup>2</sup> SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.

## Comments

### JHC

This Airprox highlights the importance of an appropriate ATS and the chosen activity under that service. Due to a lack of investigation, it is unknown if the simulated activity was a prebriefed activity but the logic behind it appears flawed. The comment of not being told about the traffic also highlights an apparent lack of knowledge of service provision. It is also unknown if the Apache Helicopter (AH) force has any Local Area knowledge to suggest that this disused airfield is used regularly by local GA. It may have been useful if the PA28 had been under receipt of a service especially since the traffic was squawking. It is unfortunate that the FCR again did not pick up on the traffic, particularly since the PA28 pilot did not see the AH. Following other recent AH Force Airprox events, a concerted amount of activity by the AH Force to publicise what constitutes an appropriate ATS has been ongoing. This work has been formally documented across the force including an addition to local orders ref simulated IF flying.

## Summary

An Airprox was reported when an Apache and a PA28 flew into proximity near Birch disused airfield at 1009hrs on Tuesday 7<sup>th</sup> August 2018. Both pilots were operating under VFR in VMC, the Apache pilot in receipt of a Basic Service from Wattisham and the PA28 pilot listening out on the Andrewsfield AGCS frequency.

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

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate operating authorities.

The Board began by looking at the actions of the Apache crew and noted that the Apache pilot had submitted the Airprox report nearly three months after the incident took place. The Board emphasised that delays in reporting seriously hamper the amount of information that can be satisfactorily gathered because radar and R/T recordings are typically only kept for 30 days. Furthermore, late, or impossible, tracing of other aircraft and agencies involved results in obvious difficulty in remembering pertinent details due to the time between the incident and the request for information. Turning to the incident itself, members agreed that the Apache pilot would have been better placed in seeking a Traffic Service whilst conducting simulated Instrument Flying (IF) training to mitigate the associated increased in-cockpit workload and reduced lookout of at least one of the crew. In this respect, the Board were heartened to hear that the Apache Helicopter Force (AHF) had amended their Flying Order Book to instruct pilots to request a radar-based service when simulating Instrument-Flying. The Board agreed that the Apache pilot had seen the PA28 later than desirable and that this, accompanied by probable startle-factor, may have resulted in the Apache crew believing the PA28 was closer than it actually was (their estimate being 50ft separation as opposed to the 400ft separation noted on the radar recordings). The military helicopter member commented on the use of the Apache Fire Control Radar (FCR) in air-to-air mode as a means of detecting other aircraft, and members noted that there had been a number of Apache Airprox where the FCR had not detected the other aircraft. This led the Board to wonder as to its value as an effective barrier to MAC, and whether the Apache operating authority and JHC had any data as to its likely performance and optimum procedures for use in such circumstances.

Turning to the actions of the PA28 pilot, the Board noted that he had only been notified of the Airprox more than three months after the incident. Understandably, he had little recollection of this incident, and with 400ft vertical separation it was perhaps likely that the encounter would not have registered as a significant event given that he was used to regularly seeing Apache helicopters in the area.

Finally, members noted that the Apache pilot was operating with Wattisham ATC and the PA28 pilot was listening out on the Andrewsfield frequency. The Board were unanimous in agreeing that both pilots would have been better served by obtaining a surveillance-based Traffic Service from Southend whilst operating in that location.

The Board then looked at the cause and risk of the Airprox. Uncertain as to whether the PA28 pilot had seen the Apache, members were only able to positively agree that the Apache crew at least had seen the PA28 late and that this had been the cause of the Airprox. Turning to the risk, the Board noted that although the Apache crew had perceived that the aircraft were very close, the radar replay showed that they were in fact separated by 400ft vertically. Some members wondered whether the radar replay was of the correct incident, but there were no other aircraft visible in that area at that time and so it could only be concluded that the Apache crew had perhaps been somewhat startled by the incident and had probably underestimated the separation. Supported by the fact that the Apache crew had not felt the need to take emergency avoiding action at any point as the PA28 flew behind, the Board therefore concluded that although safety had been reduced, there had been no risk of collision. Accordingly, they assessed the risk as Category C.

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

Cause: A late sighting by the Apache pilot.

Degree of Risk: C.

Safety Barrier Assessment<sup>3</sup>

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

#### **Flight Crew:**

**Tactical Planning** was assessed as **partially effective** because the Apache crew would have been better served by requesting a Traffic Service when operating under reduced see-and-avoid conditions, and both the Apache crew and the PA28 pilot would have benefitted from seeking a suitable ATS from Southend in that area.

**Situational Awareness and Action** were assessed as **ineffective** because neither pilot had any SA about the other aircraft.

**See & Avoid** was assessed as **fully effective** on the assumption that the PA28 pilot had likely seen the Apache and had not needed to react, despite it being a late sighting on behalf of the Apache crew. If it had transpired that the PA28 pilot had not seen the Apache, then the barrier could have been assessed as partially effective to take account of the Apache crew's late sighting.

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<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

