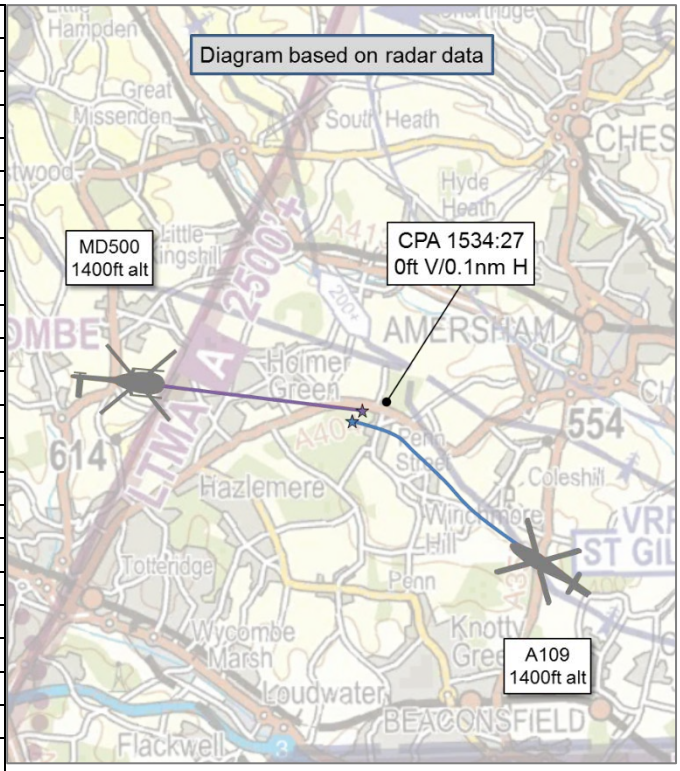
AIRPROX REPORT No 2019001

Date: 06 Jan 2019 Time: 1534Z Position: 5139N 00040W Location: NE High Wycombe

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A109	MD500
Operator	Civ Helo	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic[1]	None
Provider	Farnborough	
Altitude/FL	1400ft	1400ft
Transponder	A, C, S	A, C, S
Reported		Not Reported
Colours	Black	
Lighting	HISL, Landing	
Conditions	VMC	
Visibility	10km	
Altitude/FL	1477ft	
Altimeter	NK	
Heading	315°	
Speed	140kt	
ACAS/TAS	TCAS I	
Alert	TA	
Separation		
Reported	0ft V/30m H	'Not seen'
Recorded	0ft V/0.1nm H	



THE A109 PILOT reports that he departed from Denham Aerodrome and climbed to 1500ft QNH, routing outbound via the St Giles VRP. He set a course of 315° for Bicester. On approaching Holmer Green village he was alerted by a TA on his TCAS 1 and looked up to see a Hughes 500 in the 11 o'clock position range of around 100ft. Avoiding action was taken, but the conflicting aircraft continued on its course without deviation. He believed the conflicting traffic was partly obscured by the cockpit and pillar of the aircraft. No lights were seen on the other aircraft and communication was not possible because it was not on the Farnborough North frequency. He opined that had he not been alerted by TCAS, a collision would have been a likely.

He assessed the risk of collision as 'High'.

THE MD500 PILOT declined to file a report but mentioned in a conversation with a UKAB Inspector that he had not seen the A109.

THE FARNBOROUGH LARS NORTH CONTROLLER reports that the A109 had called on frequency for a service, then immediately told the controller to 'standby'. Moments later he called back and reported he had had to take avoiding action against a MD500 helicopter and wanted to report an Airprox. The controller asked for details and issued a squawk and Basic Service. The pilot advised that the MD500 was on a reciprocal track at the same altitude (1500ft) and made no attempt to avoid. The A109 pilot asked whether the other pilot was on frequency, it wasn't, but the controller could see two aircraft behind the A109 with a 7000 squawk.

[1] Reported by the pilot, but in fact he had only called on the frequency when the Airprox occurred.

Factual Background

The weather at Benson was recorded as follows:

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METAR EGUB 061450Z AUTO 28003KT 9999 // OVC032/// 09/06 Q1036=
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Analysis and Investigation

UKAB Secretariat

Although the A109 pilot had just established contact with Farnborough North, neither pilot was receiving an ATS. The Airprox could be seen on the NATS radars. Figure 1 shows the aircraft at 2.8nm apart, with both squawking 7000; the A109 is on a north-westerly heading and the MD500 easterly. Figure 2 shows the two aircraft at the same level and 0.1nm apart at CPA, which was just after the A109 had taken avoiding action by turning left.

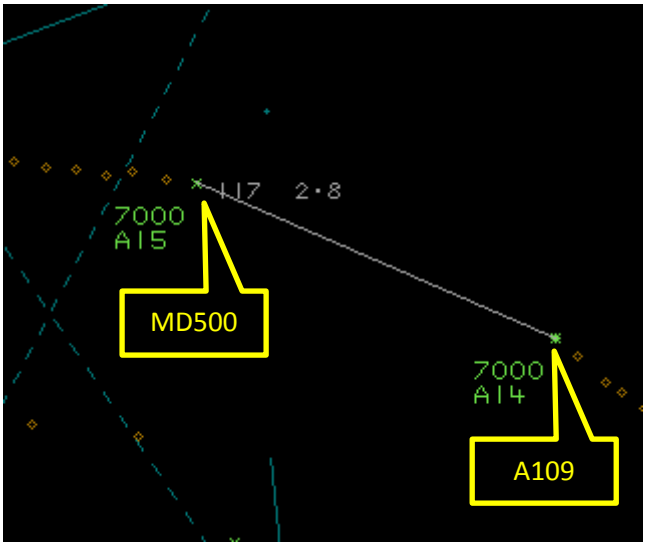


Figure 1 1533:49

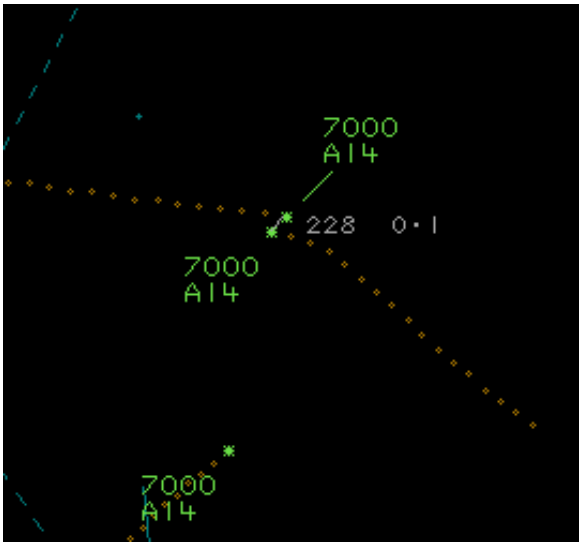


Figure 2 1534:27 (CPA)

The A109 and MD500 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[2]. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right[3]. If the incident geometry is considered as converging then the MD500 pilot was required to give way to the A109[4].

Summary

An Airprox was reported when an A109 and an MD500 flew into proximity near High Wycombe at 1534hrs on Sunday 6th January 2019. Both pilots were operating under VFR in VMC, the A109 pilot had called Farnborough ATC but was not yet in receipt of an ATS, the MD500 was not believed to be in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and reports from the air traffic controllers involved. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

[2] SERA.3205 Proximity..
[3] SERA.3210 Right-of-way (c)(1) Approaching head-on.
[4] SERA.3210 Right-of-way (c)(2) Converging.

The Board first looked at the actions of the A109 pilot. He climbed out of Denham and members familiar with flying in the area noted that when departing Denham, pilots had to keep below the London TMA (base height 2500ft) but needed to be above 1500ft before Farnborough could provide a Traffic Service. Depending on aircraft type, this meant that during their climb there was likely to be a period of time when getting radar derived Traffic Information was not likely. To compound matters, the area around High Wycombe is often very congested with transit traffic all trying to squeeze between Booker ATZ, Halton ATZ and the Luton and London CAS. Members wondered if the A109 pilot could have called Farnborough earlier and asked for a Traffic Service; depending on controller workload, they may have been able to give him Traffic Information prior to identifying him (**CF1**). Furthermore, he was unlikely to receive any Traffic Information when receiving a Basic Service and so he would have been better placed in seeking a Traffic Service when he did call them. Noting that the pilot reported that the MD500 was obscured from his view by the cockpit and aircraft pillars (**CF3**), members highlighted the importance of ensuring that look-out took any such obscurations into account. Ultimately, the Board noted that the aircraft's TAS had alerted the pilot to the MD500 (**CF2**), and because of this the pilot had managed to spot the other aircraft at the last minute and take avoiding action (**CF5**).

Turning to the MD500 pilot, the Board were disappointed that he had not provided a full report, without which it was harder to draw safety lessons and themes. However, from his conversation with the UKAB Secretariat they knew that he was not receiving an ATS (**CF1**) and, for the reasons outlined above, they wished to remind pilots of the advantages of calling ATC, if only to receive generic situational awareness; even if he had only asked for a Basic Service, he may have heard the A109 call Farnborough on his climb-out. As it was, the MD500 pilot had no situational awareness on the A109 (**CF2**) and he reported that he did not see it at all (**CF4**).

In assessing the risk, the Board thought that although the A109 pilot estimated the separation to be only 30m, it was likely that he was startled when he looked up and suddenly saw the MD500. The radar separation indicated that although they were indeed at the same level, the avoiding action taken by the A109 pilot had materially affected the situation and, at CPA, they were 0.1nm (185m) apart. Therefore, the Board assessed the risk as Category B, safety had been much reduced below the norm.

PART C: ASSESSMENT OF CAUSE AND RISK

Contributory Factors:

CF	Factor	Description	Amplification
	Flight Elements		
	• Tactical Planning and Execution		
1	Human Factors	• Communications by Flight Crew with ANS	Surveillance-based ATS not requested by pilot
	• Situational Awareness of the Conflicting Aircraft and Action		
2	Contextual	• Situational Awareness and Sensory Events	Pilot had no, or only generic, Situational Awareness
	• See and Avoid		
3	Contextual	• Poor Visibility Encounter	One or both aircraft were obscured from the other
4	Human Factors	• Monitoring of Other Aircraft	Non-sighting by one or both pilots
5	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: B.

Safety Barrier Assessment[5]

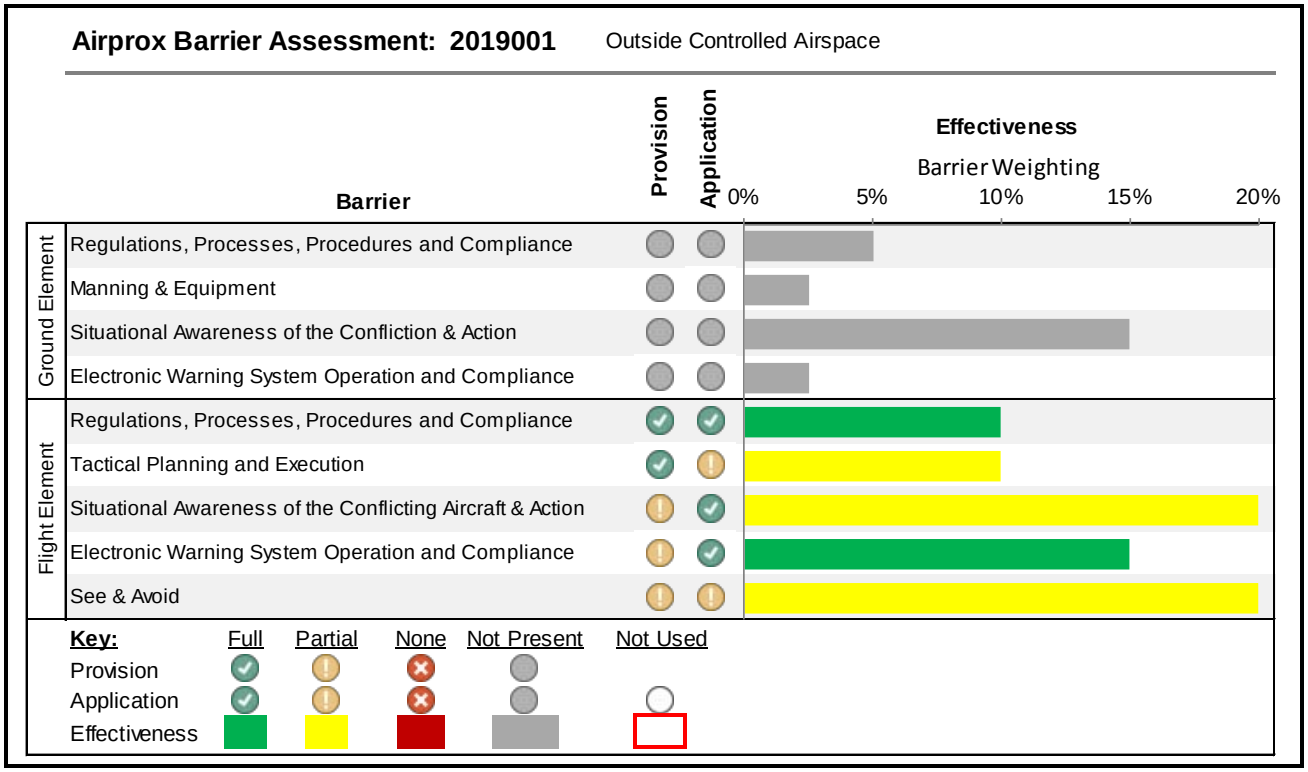
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

Tactical Planning was assessed as **partially effective** because neither pilot was receiving a surveillance based ATS at the time of the Airprox.

Situational Awareness was assessed as **partially effective** because the A109 pilot received a later than ideal indication from his TAS.

See and Avoid were assessed as **partially effective** because the A109 was only able to take last minute avoiding action.



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