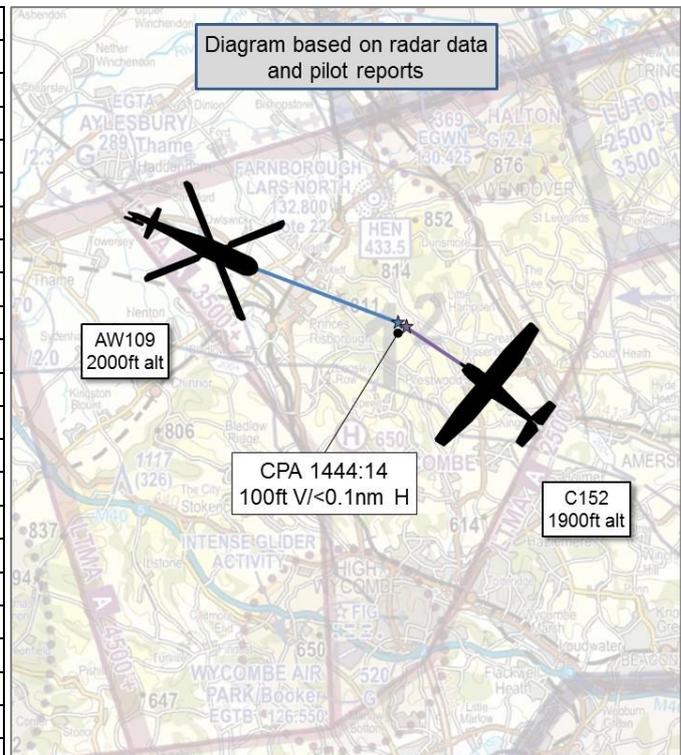


AIRPROX REPORT No 2019056

Date: 25 Mar 2019 Time: 1444Z Position: 5143N 00046W Location: 1.5nm E Princes Risborough

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AW109	C152
Operator	Civ Helo	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Traffic	Basic
Provider	Farnborough	Not known
Altitude/FL	2000ft	1900ft
Transponder	A, C, S	A, C
Reported		
Colours	Green, Silver	White, Red, Blue
Lighting	Strobe, Anti-Col, Nav	Landing, Nav
Conditions	VMC	VMC
Visibility	>10km	Not reported
Altitude/FL	2100ft	2100ft
Altimeter	QNH (1032hPa)	QNH
Heading	110°	290°
Speed	150kt	85kt
ACAS/TAS	TAS	Not fitted
Alert	TA	N/A
Separation		
Reported	100ft V/500m H	10ft V/100m H
Recorded	100ft V/<0.1nm H	



THE AW109 PILOT reports that he was initially given a Basic Service due radar coverage when he was at the NW edge of Aylesbury. He then requested and received an upgrade to a Traffic Service at the SE edge of Aylesbury. Upon receiving the Traffic Service, the controller, speaking very quickly, notified him of 3-4 contacts in the area. He also had representation on his TAS of contacts in the area. He doesn't remember receiving any further Traffic Information relating to the Airprox aircraft in his 12 o'clock, but he did have a TAS icon at around 4nm dead ahead and 300+ft above, seemingly moving from 12 to 1 o'clock. Soon after, the TAS contact showed as within 3nm, descending and maintaining in the 12 o'clock. At this point he focused on looking out/scanning ahead and saw the aircraft in the 12 o'clock at close range. He broke right, as did the other aircraft, and avoided any further incident. He immediately informed the controller of the Airprox, soon after which he heard the ATS contacting an aircraft to establish his Pressure Setting, Altitude and Squawk. He does not know if this was the aircraft involved in the Airprox or not.

He assessed the risk of collision as 'High'.

THE C152 PILOT reports that the other aircraft was first sighted as a dot, he thought Benson advised him that there was an aircraft reciprocal heading indicating the same altitude [UKAB note: the C152 pilot had probably mis-recalled this from another flight because he was not in communication with Benson or Brize Norton at the time of the Airprox]. The dot grew into the helicopter. As the distance between the two aircraft reduced, both aircraft altered course to their right. For information, he did consider submitting an Airprox report but because he had the helicopter in view for some seconds he decided not to.

He assessed the risk of collision as 'Low'.

THE FARNBOROUGH CONTROLLER reports that he was working LARS North and East Banded. The AW109 pilot called him at about OAKLEY requesting a Traffic Service, the Farnborough controller declined the service as the AW109 was outside his service area and agreed a Basic Service. Before the Farnborough controller had the opportunity to upgrade the service the AW109 pilot called him, about 5nm later, and requested to upgrade to a Traffic Service (TS), the Farnborough controller agreed and gave the AW109 pilot a TS reduced due to the proximity of local airfields. He passed Traffic Information on 3 contacts that were within 5nm. He then had a few aircraft free-call and told one of them to standby as he updated the AW109 pilot on traffic opposite direction same altitude range 1nm. Once clear of the traffic, the AW109 pilot advised him that he was going to file an Airprox which he acknowledged but no details of the conflicting aircraft were given. The AW109 was later handed over to SVFR North.

Factual Background

The weather at Benson was recorded as follows:

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METAR EGUB 251350Z 36008KT 9999 FEW045 10/01 Q1033 BLU
METAR EGUB 251450Z 35006KT 9999 FEW048 12/01 Q1032 BLU NOSIG
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Analysis and Investigation

UKAB Secretariat

The AW109 and C152 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right².

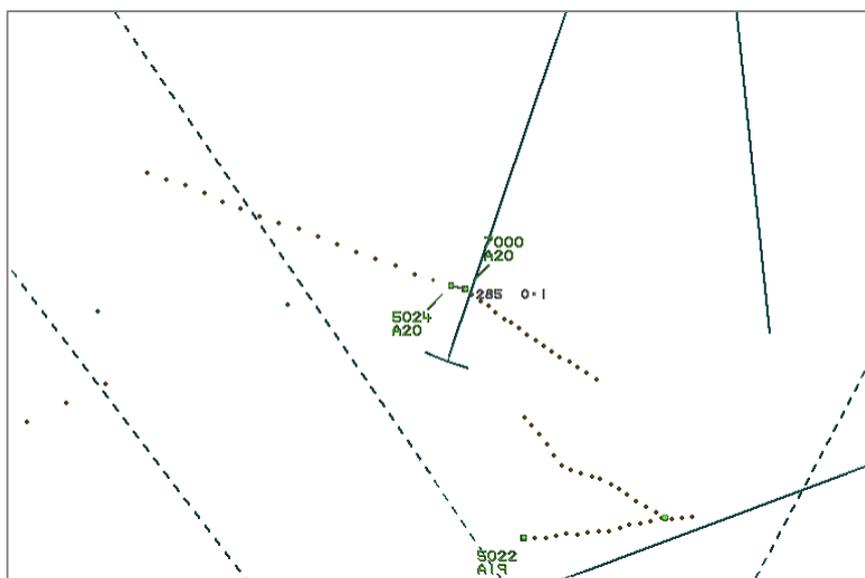


Figure 1: 1444:14 C152 (code 7000) and AW109 (code 5024)

Summary

An Airprox was reported when an AW109 and a C152 flew into proximity about 1.5nm east of Princes Risborough at 1444hrs on Monday the 25th of March 2019. Both pilots were operating under VFR in VMC, the AW109 pilot in receipt of a Traffic Service from Farnborough and the C152 pilot reports receiving a Basic Service from Benson or Brize he thought [UKAB note: neither agency was working the C152 immediately preceding or at the time of the Airprox].

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(1) Approaching head-on.

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 controller 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.

The Board began by looking at the actions of the AW109 pilot. He had requested a Traffic Service (TS) but he was initially outside of the Farnborough radar cover due to his altitude and location and was offered a Basic Service. When he was within range, he was upgraded to a TS and the Farnborough controller quickly passed Traffic Information (TI) on a number of conflicting contacts. One of these contacts was also displaying on the AW109's TAS which prompted the pilot to increase his lookout until he was visual with the conflicting aircraft in his 12 o'clock; by now the other aircraft was at close range **(CF4)** and he broke right to avoid. The Board agreed that the AW109 pilot had requested an appropriate service and had tried to receive a TS as soon as practicable. That being said, members wondered whether he could have acted sooner on receipt of both the TI and TAS information **(CF2 & 3)**. Although sensible to increase his lookout ahead, members opined that an early change in altitude would have immediately increased the vertical separation to improve matters. Nevertheless, he had seen the C152, albeit late, and had turned to avoid **(CF5)**.

The Board then turned to the actions of the C152 pilot. He had recalled that he was under a service with either Benson or Brize Norton but this was not the case and it could not be established that the C152 pilot was in contact with any ATC unit **(CF1)**. That being said, the C152 pilot saw the AW109 at a good range (as a dot) but GA members were concerned that he did not then immediately alter course to the right in accordance with the rules of the air in order to increase the separation **(CF2 & 5)**. Instead, the C152 pilot carried on as the dot grew ahead to reveal the AW109 before he then turned when he would have been better served by taking action at an earlier stage.

Turning to the risk, the Board agreed that both pilots had had enough information to have acted sooner to increase separation but had effectively carried on until they had had to take avoiding action. The Board agreed that this inaction by both pilots had resulted in there being a risk of collision where safety margins being much reduced below the norm; risk Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Contributory Factors:

2019056-Barriers			
CF	Factor	Description	Amplification
	Flight Elements		
	• Tactical Planning and Execution		
1	Human Factors	• Communications by Flight Crew with ANS	Appropriate ATS not requested by pilot
	• Situational Awareness of the Conflicting Aircraft and Action		
2	Human Factors	• Lack of Action	Pilot flew into conflict despite Situational Awareness
	• Electronic Warning System Operation and Compliance		
3	Human Factors	• Interpretation of Automation or Flight Deck Information	CWS misinterpreted or not optimally actioned
	• See and Avoid		
4	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots
5	Human Factors	• Lack of Action	Pilot flew into conflict

Degree of Risk: B.

Safety Barrier Assessment³

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

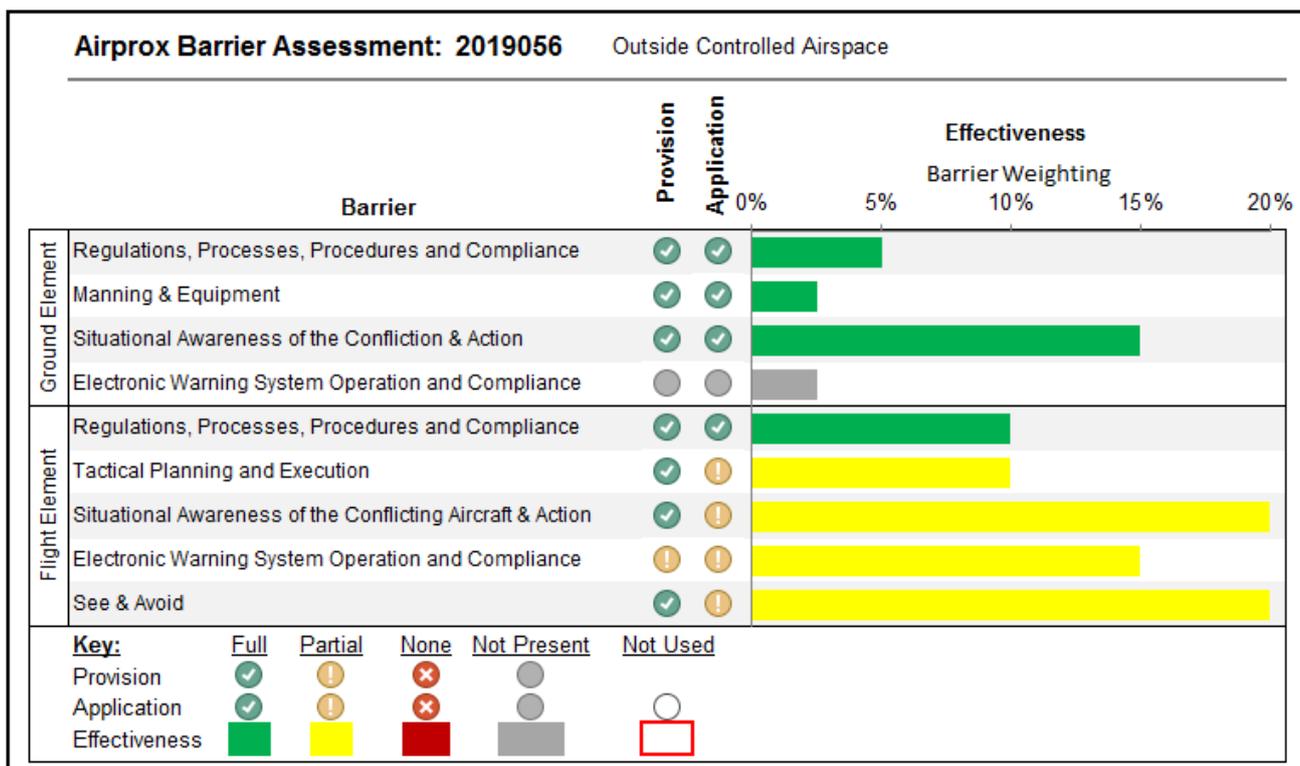
Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the C152 may not have been under a service. In that area it would have been better if he had requested a service from Farnborough LARS.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the AW109 pilot should have acted on his TAS information sooner than he did.

Electronic Warning System Operation and Compliance were assessed as **partially effective** because although the AW109 pilot increased his lookout he did not act to resolve the conflict.

See and Avoid were assessed as **partially effective** because the C152 pilot saw the AW109 early but did not alter course until the 2 aircraft were closer and the AW109 pilot saw the C152 late; both pilots had to carry out emergency avoiding action.



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