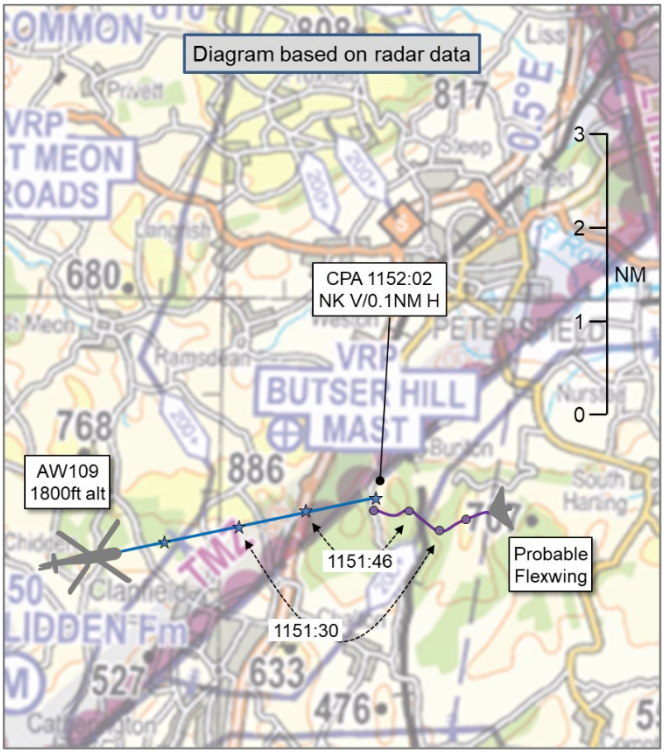
AIRPROX REPORT No 2024259

Date: 13 Oct 2024 Time: 1152Z Position: 5058N 00057W Location: 2NM SW of Petersfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AW109	Flexwing
Operator	Civ Comm	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	Untraced
Service	None[1]	
Provider	(Farnboro' Radar)	
Altitude/FL	1800ft	
Transponder	A, C, S	Nil
Reported		
Colours	Dark grey	Untraced
Lighting	Anti-col, position, landing	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	1800ft	
Altimeter	QNH (1020hPa)	
Heading	078°	
Speed	152kt	
ACAS/TAS	TAS	
Alert	None	
Separation at CPA		
Reported	300ft V/50m H	NK
Recorded	NK V/0.1NM H	



THE AW109 PILOT reports a late spot of a Flexwing as it passed below and slightly to their left. The AW109 pilot had requested a Traffic Service from Farnborough Radar who were very busy and hadn't come back to them [at that time]. The Flexwing was somewhat masked in amongst the ground clutter beneath them, and the pilot had been aware of two TAS contacts which they had been trying to identify [and] which might have reduced their lookout closer to the aircraft. The AW109 pilot did not believe the aircraft had a transponder as approximately 15sec after they had passed the Flexwing they were given a reduced Traffic Service and no mention was made of the contact by the controller. The AW109 pilot noted that they can't say for certain if the Flexwing [pilot] had seen their aircraft but it appeared to be manoeuvring as they had passed it, possibly to increase separation.

The pilot assessed the risk of collision as 'Medium'.

Unfortunately, despite significant effort, **THE FLEXWING PILOT** could not be traced.

THE FARNBOROUGH WEST/ZONE CONTROLLER reports that the AW109 pilot had retrospectively reported an Airprox. The controller had been acting as an OJTI. They have no recollection of the event.

Factual Background

The weather at Southampton Airport was recorded as follows:

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METAR EGHI 131150Z 00000KT 9999 FEW015 10/04 Q1020=
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[1] Pilot was in the process of establishing a service with Farnborough LARS at the time of the Airprox.

Analysis and Investigation

Farnborough Unit Investigation

The AW109 pilot reported onto the LARS West frequency and requested a Traffic Service. The LARS West controller under training subsequently issued the pilot with a Traffic Service with reduced Traffic Information due to radar performance. The pilot subsequently notified the UK Airprox Board of an Airprox with a Flexwing on their left-hand side below their position. The Flexwing had not been shown on the LARS West radar display and therefore no Traffic Information had been passed relating to the confliction.

Description of the event

At 1149:51 the AW109 pilot reported onto the Farnborough LARS West frequency maintaining 1800ft and requested a Traffic Service. The LARS West controller under training (U/T) issued the pilot squawk 0435 and QNH 1020, which was read back correctly.

The U/T controller informed the AW109 pilot that they were identified at 1152:35, issued them with a Traffic Service and advised it would be with "*reduced Traffic Information due to radar performance, traffic may be on transponding aircraft only*".

The U/T controller subsequently issued Traffic Information at 1152:46 on "*traffic right one o'clock, range three miles crossing right-to-left ahead, indicating altitude two thousand one hundred feet*" the pilot replied, "*visual with that traffic and reduced Traffic Service*".

At 1153:42 the U/T controller issued the AW109 [pilot] with Traffic Information on an aircraft squawking 4572 in their "*left eleven o'clock, range three miles converging, altitude indicating two thousand two hundred feet*". The pilot had replied, "*visual with that traffic thanks* [AW109 C/S]*, just starting gentle descent to* [their destination landing site] *and happy to downgrade to a Basic* [Service] *passing fifteen hundred feet*". The U/T controller responded, "*passing altitude one thousand five hundred feet, radar service terminates, Basic Service*", which was read back correctly by the AW109 pilot.

The U/T [controller] instructed the AW109 pilot to squawk conspicuity and free-call enroute at 1158:20, which was read back correctly by the pilot. There had been no recorded report of an Airprox by the AW109 pilot on the LARS West frequency.

Investigation

The LARS West and Zone functions were being operated in a bandboxed configuration by a controller under training (U/T) and OJTI controller. The NATS4118 described the traffic as 'medium to high, but manageable' with VFR weather at the time of the event.

At 1150:28, the SSR Mode A code for the AW109 changed to their assigned squawk of 0435. The associated radar return displayed as an 'X'[2] for the AW109, as well as for two other aircraft operating to the north and south; this indicated the radar performance in that location and the associated altitudes had been limited to SSR only.

After the aircraft had been identified, validated and verified, the U/T controller issued the AW109 pilot with a Traffic Service with reduced Traffic Information due to limited radar performance. The NATS4118 described this as a 'standard reduction used on LF LARS when aircraft returns are SSR only' due to the possibility of 'no warning of non-transponding aircraft'.

The AW109 pilot retrospectively reported that an Airprox had occurred at 1151 with an aircraft described as a Flexwing, positioned 'below and slightly left' of their location, prior to being issued a

[2] Farnborough MATS Part 2 EQP 2.2.8 Position Symbols described that the display of an X symbol for a radar return indicated an SSR only target.

reduced Traffic Service. At the time of the reported event, the LARS West radar display showed no aircraft in this relative position to the AW109.

Causal Factors

The AW109 pilot had been operating outside controlled airspace and had reported onto the Farnborough LARS West frequency requesting a Traffic Service. Prior to being issued a service, the AW109 came into confliction with another aircraft that was not displayed on radar. The pilot subsequently reported an Airprox to the UK Airprox Board.

The LARS West controller under training subsequently issued the pilot with a Traffic Service with reduced Traffic Information, where Traffic Information may be on transponding aircraft only due to limited radar performance.

UKAB Secretariat

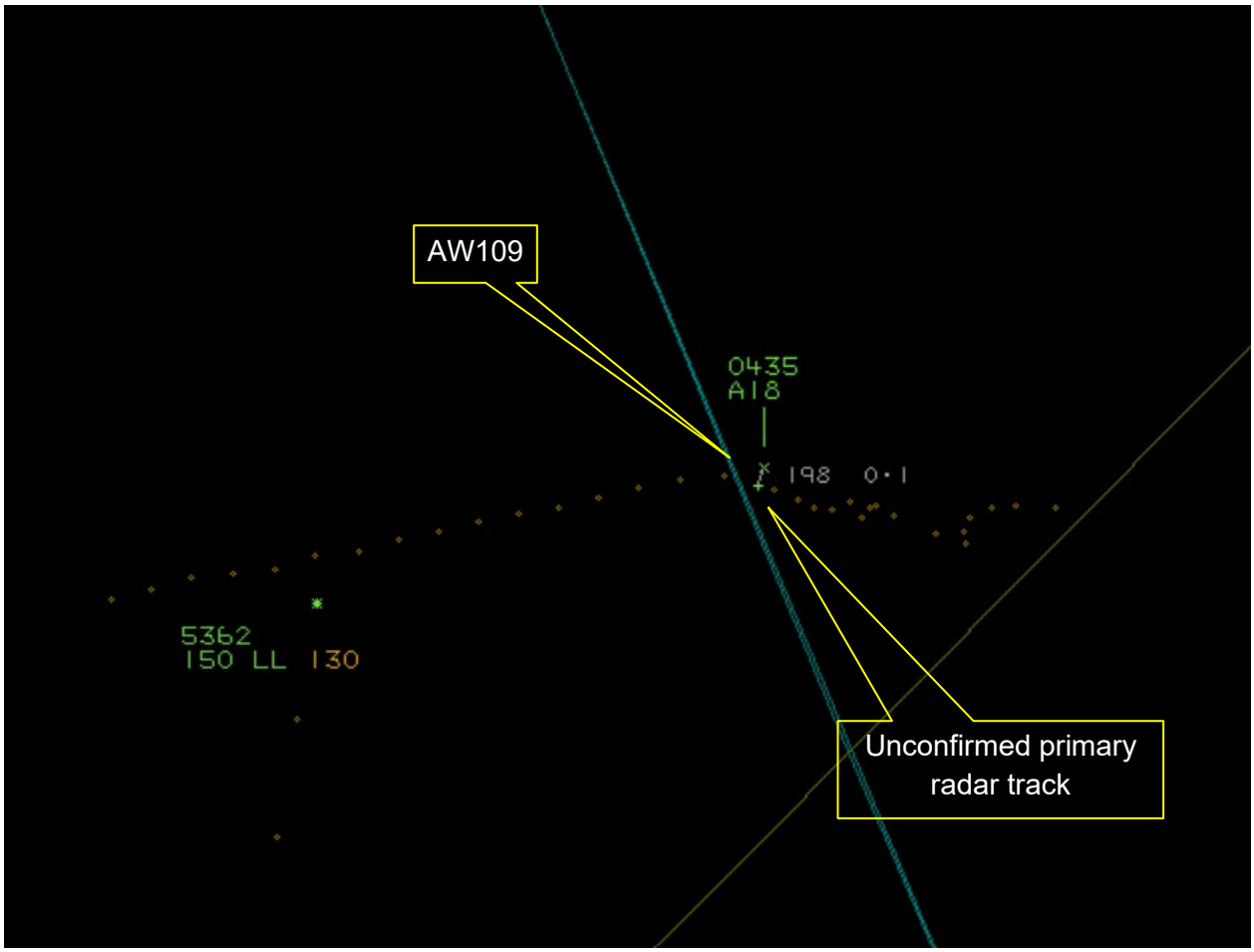


Figure 1: At CPA 1152:02 – NK V/0.1NM H

The radar screenshot at Figure 1 shows the constant bearing and altitude track of the AW109.

The AW109 showed on radar and ADS-B based tracking tools. The Flexwing did not appear on other (ADS-B and MLAT based) tracking tools.

The AW109 and Flexwing pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[3] If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.[4]

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

Summary

An Airprox was reported when an AW109 and a Flexwing flew into proximity 2NM south of Petersfield at 1152Z on Sunday 13th October 2024. The AW109 pilot was operating under VFR in VMC and was establishing a Traffic Service with Farnborough LARS. Unfortunately, despite significant effort, the Flexwing pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the AW109 pilot, radar photographs/video recordings, a report from the air traffic controller involved and a report from the appropriate operating authority. 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 discussed the information available for this event, recognising that that had been limited to the original report from the AW109 pilot, a limited report from the Farnborough West/Zone controller and a subsequent Unit investigation. Members firstly discussed the actions of the AW109 pilot, noting that they had been operating in Class G airspace, under VFR conditions, had been equipped with a Traffic Alerting System and had been in the process of establishing contact with a Flight Information Service provider. As the TAS unit carried by the AW109 had not registered any electronic emissions from the Flexwing (**CF2**), and the pilot had been in a period of establishing contact with Farnborough, the Board agreed that the pilot had not had any situational awareness of the presence of the Flexwing (**CF1**) and had achieved visual contact only at a late stage (**CF3**). Members felt that there had been little more the pilot could have done in this event.

In discussing the contribution from the Farnborough controller, they accepted its brevity, recognising the status of the AW109 pilot in establishing contact and agreeing a service, and that in this case there had been nothing more the controller could have offered.

Concluding their discussion, members agreed that it had been unfortunate that it had not been possible to trace the pilot of the Flexwing, and expressed frustration that its pilot had not appeared to be in receipt of an air traffic service, or utilising electronic conspicuity equipment to enhance the visibility of their position to others operating in the vicinity. The AW109 pilot reports having gained visual contact only as the Flexwing had passed and it had been fortunate that the minimum measurable horizontal separation had been in the order of 160m. Members felt that although safety had been degraded, there had been no risk of collision and assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024259			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Situational Awareness of the Conflicting Aircraft and Action			
1	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance			
2	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
	• See and Avoid			
3	Human Factors	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots

Degree of Risk: C.

Safety Barrier Assessment[5]

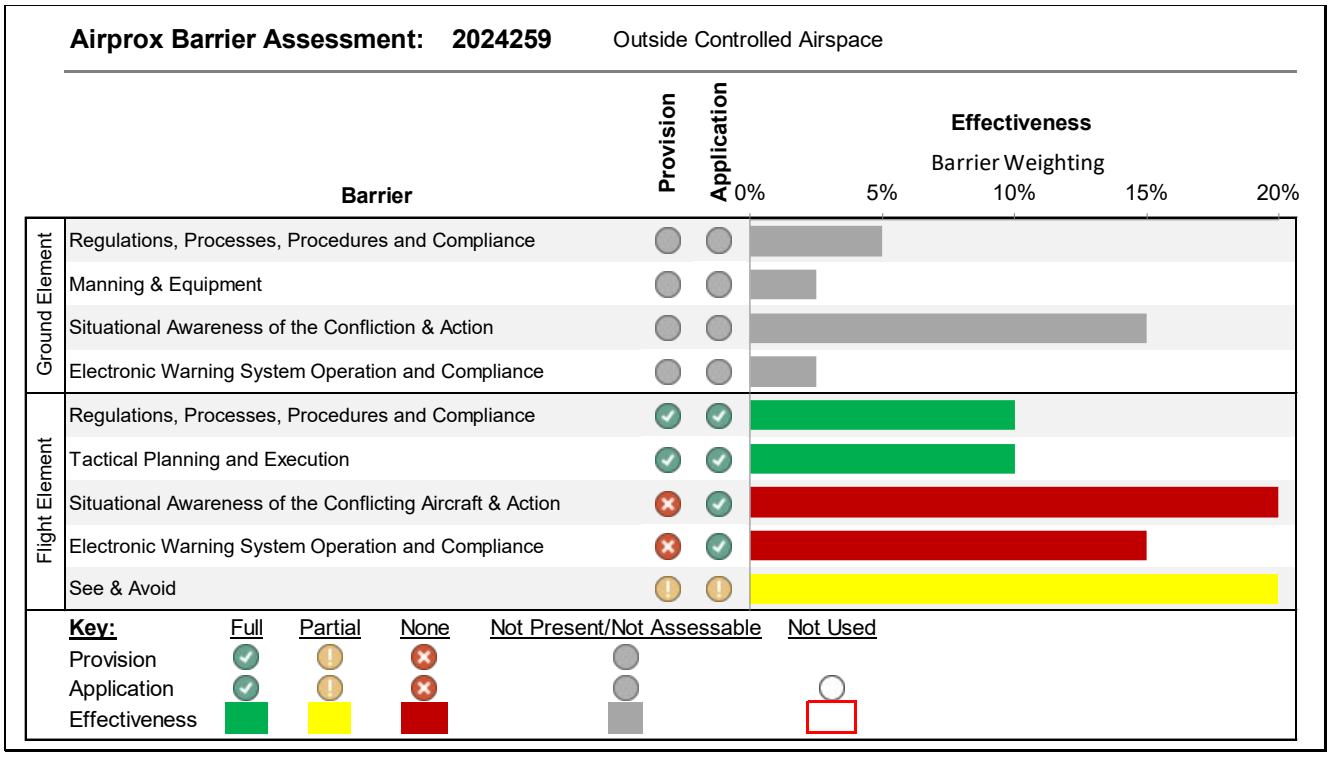
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the AW109 pilot had no situational awareness of the presence of the Flexwing.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the equipment carried by the AW109 registered no electronic emissions from the Flexwing.

See and Avoid were assessed as **partially effective** because the AW109 pilot achieved only a late sighting of the Flexwing.



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