

AIRPROX REPORT No 2023196

Date: 26 Aug 2023 Time: 0916Z Position: 5107N 00105E Location: 3.5NM NW Folkestone

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AW169	Spitfire
Operator	Civ Helo	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Procedural	Listening Out
Provider	Lydd Approach	Headcorn Radio
Altitude/FL	3100ft	2900ft
Transponder	A, C, S+	A, C, S
Reported		
Colours	White, teal	Green, grey
Lighting	Strobe, nav, anti-col, landing	None
Conditions	IMC	NR
Visibility	<5km	NR
Altitude/FL	3200ft	NK
Altimeter	QNH	NK
Heading	210°	"east"
Speed	110kt	NK
ACAS/TAS	TCAS II	SkyEcho
Alert	TA	Information
Separation at CPA		
Reported	0ft V/0.75NM H	300ft V/1000m H
Recorded	200ft V/1.1NM H	



THE AW169 PILOT reports that, during an Operator Proficiency Check, they finished an RNP approach at Lydd and were setting up for the ILS on RW21. They had just completed the turn onto the final approach track and called 'localiser established' on Lydd Approach 120.705MHz. They were flying at 3200ft, on the Final Approach Track, in IMC. TCAS showed pop-up traffic in the 12 o'clock position at the same altitude, and showed a location trend that indicated that the traffic was on an opposite track, about 0.75NM in front of them. As the traffic was seemingly moving very quickly, but sporadically, on TCAS, they decided to initiate a descending right turn to increase horizontal and vertical clearance (no RA had been generated at that point).

After the traffic had cleared to their 8 o'clock to the north-east, they re-captured the localiser and glideslope and informed ATC of the traffic, who notified them that they had been unaware of any traffic within their procedure area. They completed the approach and flew VFR [to their destination airfield] without any issues. Upon investigation after landing, FlightRadar24 showed that the traffic had been a Spitfire, which appeared to have been flying at high speeds (180-250kt) with high rates of descents and climbs within short periods at the same location and altitude as their location on the Lydd ILS approach path.

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

THE SPITFIRE PILOT reports that they were in the vicinity of Lyminge at 0916. They had flown 7 similar sorties that day (and 27 sorties over a 4 day period) and had no recollection of anything that would constitute an Airprox. They always fly with SkyDemon and [an EC device that transmits ADS-B] and have a vague recollection of seeing a helicopter on [their EC device] during a gentle descent from approximately 3000ft, and remaining above a helicopter that they had become visual with, and had passed in front of, by approximately 1000 yards and maybe 300ft above. However, they cannot be

certain that this was the same helicopter (or even the same day) as there was no risk of collision. They believe they had been listening-out on Headcorn Radio 122.210MHz.

The pilot assessed the risk of collision as 'None'.

THE LYDD CONTROLLER reports that [the pilot of the AW169] was flying practice instrument approaches to RW21 at Lydd under a Procedural Service (radar was not available) on Lydd APP 120.705MHz and squawking 7067.

At 0915, the pilot reported another aircraft in close proximity as they were establishing on the localiser at 3200ft. None of the aircraft working Lydd APP were in that location so they advised the pilot that the traffic was unknown. [The pilot of the AW169] continued on the ILS and, after a missed approach at 0923, continued VFR to [their destination airfield] and changed to London Information 124.6MHz at 0927.

A subsequent review of FlightRadar24 revealed that a Spitfire had been in the vicinity of the ILS procedure at the time of the incident. [The pilot of the Spitfire] did not contact Lydd APP for an ATS and, therefore, Traffic Information could not have been provided.

THE HEADCORN AIR/GROUND RADIO OPERATOR reports that Headcorn operates an AGCS on 122.210MHz and apart from take-off, landing and for flights within the Lashenden/Headcorn ATZ, no 'service' is provided to pilots operating in the open FIR (i.e the location of this Airprox). Pilots are responsible their own arrangements and traffic information.

Whilst on frequency, [the pilot of the Spitfire] would only have been given relevant information for take-off and landing, which is generally limited to runway in use, surface wind and QFE/QNH, or any other relevant safety information pertaining to the aerodrome and ATZ only.

Factual Background

The weather at Lydd was recorded as follows:

METAR EGMD 260920Z 23014KT 9999 SCT015 SCT022 BKN044 18/15 Q1009

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be positively identified from Mode S data (see Figure 1).



Figure 1 – CPA at 0916:12

The diagram was constructed and the separation at CPA determined from the radar data.

The AW169 and Spitfire pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.¹ If the incident geometry is considered as converging then the AW169 pilot was required to give way to the Spitfire.²

Summary

An Airprox was reported when an AW169 and a Spitfire flew into proximity 3.5NM north-west of Folkestone at 0916Z on Saturday 26th August 2023. The pilot of the AW169 had been operating under IFR in IMC, in receipt of a Procedural Service from Lydd Approach. The pilot of the Spitfire had been operating under VFR in VMC, not 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 a report 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 first discussed the actions of the pilot of the AW169. Members noted that they had been operating under a Procedural Service from the Lydd controller whilst in IMC. Members were keen to highlight that the responsibility for the avoidance of other aircraft remained with the pilot. It was agreed that to have operated under a 'non-surveillance' service whilst in IMC, had placed an increased reliance on their situational awareness to have been gleaned from pertinent Traffic Information from the controller or from their on-board detection systems. Members noted that the TCAS fitted to the AW169 had alerted the pilot to the presence of the Spitfire in the vicinity. It was appreciated that the Traffic Alert had concerned the pilot of the AW169 and had prompted them to have discharged their responsibility for collision avoidance by manoeuvring to increase separation. Members noted that the pilot of the AW169 had not visually acquired the Spitfire and surmised that cloud had obscured their view.

Turning their attention to the pilot of the Spitfire, members were surprised that they had remained on the Lashenden/Headcorn frequency and had not re-tuned their radio to the Lydd frequency whilst nearby. Indeed, members emphasised the guidance provided on VFR charts that 'Pilots are strongly recommended to contact the aerodrome ATSU before flying within 10NM of any aerodrome marked with instrument approach feathers'. Members were keen to point out that, had the pilot of the Spitfire made contact with the Lydd controller, and had they passed details of their transit through the area, the Lydd controller could have passed details to them of the AW169 helicopter, or any other known traffic, that they may encounter along their route. Similarly, such a call would also have been to the benefit of the situational awareness of the AW169 pilot and other pilots on the Lydd Approach frequency. Notwithstanding, members noted that it had been the case that the pilot of the Spitfire had received an alert to the presence of the AW169 from their EC device, and it was agreed that that had provided generic situational awareness of nearby traffic.

The actions of the Lydd controller were next considered. Members agreed that they had not had situational awareness of the presence of the Spitfire. As such, it had not been possible for them to have provided Traffic Information to the pilot of the AW169, or to have passed a caution to them regarding the transit of the Spitfire through the area.

Concluding their discussion, members agreed that the pilot of the AW169 had taken sufficient action to increase the separation between the aircraft such that no risk of collision had existed. The Board assigned Risk Category E to this event. Members agreed on the following contributory factors:

CF1. The Lydd controller had not had situational awareness of the presence of the Spitfire.

¹ (UK) SERA.3205 Proximity.

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

- CF2.** The pilot of the Spitfire had not contacted the Lydd controller.
- CF3.** The pilot of the Spitfire had generic situational awareness of the presence of the AW169.
- CF4.** The pilot of the AW169 had been concerned by the Traffic Alert from the TCAS fitted to the AW169.
- CF5.** The TCAS fitted to the AW169 provided an alert to the presence of the Spitfire.
- CF6.** The EC device fitted to the Spitfire provided an alert to the presence of the AW169.
- CF7.** The pilot of the AW169 did not visually acquire the Spitfire.
- CF8.** The Spitfire had been obscured from the view of the AW169 pilot.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2023196				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Ground Elements				
• Situational Awareness and Action				
1	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
Flight Elements				
• Tactical Planning and Execution				
2	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
• Situational Awareness of the Conflicting Aircraft and Action				
3	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
4	Human Factors	• Unnecessary Action	Events involving flight crew performing an action that was not required	Pilot was concerned by the proximity of the other aircraft
• Electronic Warning System Operation and Compliance				
5	Contextual	• ACAS/TCAS TA	An event involving a genuine airborne collision avoidance system/traffic alert and collision avoidance system traffic advisory warning triggered	
6	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
• See and Avoid				
7	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
8	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other

Degree of Risk: E.

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:

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

Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **ineffective** because the Lydd controller had not been aware of the presence of the Spitfire.

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because it may have been prudent for the pilot of the Spitfire to have contacted the Lydd controller.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the pilot of the Spitfire had had generic situational awareness of the presence of the AW169.

