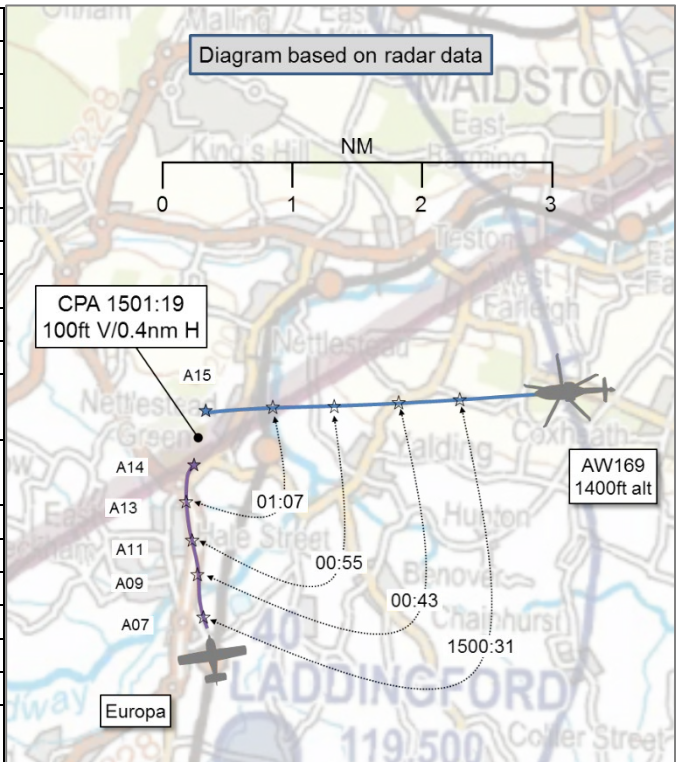


AIRPROX REPORT No 2018300

Date: 05 Nov 2018 Time: 1501Z Position: 5114N 00024E Location: 5nm SW Maidstone

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AW169	Europa
Operator	HEMS	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Listening Out
Provider	Farnborough	Safetycom
Altitude/FL	1500ft	1400ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, turquoise, grey	White, blue, red
Lighting	Position, anti-col, strobes	Wingtips and tail strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1400ft	1600ft
Altimeter	QNH (1003hPa)	NK
Heading	260°	360°
Speed	130kt	90kt
ACAS/TAS	TCAS II	PilotAware/FLARM
Alert	RA	Alert
Separation		
Reported	400ft V/0.5nm H	2-300ft V/500m H
Recorded	100ft V/0.4nm (740m) H	



THE AW169 PILOT reports returning to base after being stood-down from a HEMS task when ‘pop-up’ traffic caused a TCAS TA, shortly followed by an RA to climb. A low-wing aircraft was seen in the left 10 o’clock position at a range of 2nm, converging and at a similar level. As they were complying with the RA, Farnborough passed Traffic Information regarding the conflict. The crew noted that they had not seen proximate traffic displayed on TCAS prior to the TA.

He assessed the risk of collision as ‘Medium’.

THE EUROPA PILOT reports that he had just taken off from a local airfield and was in the climb to the north when a warning of proximate traffic was seen on 3 displays (SkyDemon with FLARM; SkyDemon with PilotAware; and PilotAware in radar mode). The warnings showed a helicopter transiting from east to west at 90° across his intended flight path and above. He lowered the nose to acquire the helicopter visually and, with it in sight, continued, to pass below and behind it. He noted that the Airprox took place in proximity to his aerodrome of departure, and that the helicopter’s flight path had been even lower and closer to the aerodrome on its previous eastbound leg some 10 mins earlier. The pilot stated that he conducted the whole flight on Safetycom because he was remaining within 9nm of base.

He assessed the risk of collision as ‘High’.

THE FARNBOROUGH CONTROLLER reports that he received notification that [HEMS C/S] had an Airprox with an unknown aircraft 14 days previously. The controller confirmed that he was working Farnborough LARS North and East banded but was not aware of the [HEMS C/S] aircraft reporting an Airprox on frequency. He noted that the HEMS aircraft had a very poor, often unreadable, radio.

Factual Background

The weather at Gatwick was recorded as follows:

METAR EGKK 051450Z 06005KT CAVOK 15/13 Q1003=

Analysis and Investigation

UKAB Secretariat

The AW169 and Europa 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 converging then the Europa pilot was required to give way to the AW169². TCAS proximate traffic is normally displayed when within 6nm and 1200ft of the 'target' aircraft.

Summary

An Airprox was reported when an AW169 and a Europa flew into proximity near Maidstone at 1501hrs on Monday 5th November 2018. Both pilots were operating under VFR in VMC, the AW169 pilot in receipt of a Basic Service from Farnborough and the Europa pilot listening out on Safetycom.

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.

Members first considered the actions of the pilots and noted that both aircraft had been fitted with systems that used electronic conspicuity to provide traffic awareness at range, albeit that the Europa appeared as 'pop-up' traffic on the AW169 TCAS (the reason for which members were unable to resolve but some speculated that this might have been a result of aerial blanking as the Europa got airborne and climbed to the same level as the AW169). The Board commended the Europa pilot on his decision to use (multiple) TAS, with the proviso that care should be taken to ensure that numerous displays did not detract from the primary responsibility for lookout. An airline member commented that GA TAS was still in development, that it could be assembled piecemeal, and that pilots should attempt to ensure that TAS was used as an integrated package whenever possible. In this respect, it was noted that regulation often precluded permanent integrated fitment of TAS without significant cost and equipment compliance overheads.

Some members wondered whether the Europa pilot should have contacted Farnborough rather than remaining on SafetyCom, even on a short sortie, but accepted that in this case it would probably not have affected the outcome given that the Europa would likely not have painted on the Farnborough controller's radar much earlier than it did. That being said, had the Europa pilot made a transmission on Farnborough's frequency then the AW169 pilot may have assimilated that he was in the same location at an earlier juncture to receiving a TA and RA. Finally, although the Europa pilot had appropriately seen-and-avoided the AW169 in the VFR context, the Board commented that this incident highlighted a growing problem where pilots could greatly ease potential concerns in other aircraft by trying not to point their aircraft's flight vector at close range towards other aircraft which might be TCAS-equipped.

For his part, the AW169 pilot was returning from a cancelled task and members wondered whether the pilot's choice of transit altitude could have been improved. In particular, they opined that a higher transit altitude would at least have taken the AW169 above airfield circuit patterns, thereby removing the need for the AW169 pilot to monitor his position with respect to local airfields to remain clear of traffic at them. Although the Europa pilot was not in the circuit pattern at his home airfield at the time of the

¹ SERA.3205 Proximity.

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

Airprox, a higher transit altitude for the AW169 pilot would also keep him clear of aircraft arriving and departing from local airfields.

Although in this incident his Traffic Information had come after the AW169 pilot was aware of the Europa, the Board also commended the Farnborough controller for providing this Traffic Information to the AW169 pilot, fulfilling his duty of care under a Basic Service. Some members commented that because he was simply in transit, it may have been more appropriate for the AW169 pilot to have requested a Traffic Service, thereby ensuring more likelihood that he would receive Traffic Information in such circumstances. In this respect, they wondered what the HEMS operator’s operating manual recommended as an ATS for transit flights.

Members discussed the cause and agreed that in this instance the Airprox was best characterised as a conflict in Class G which had been resolved by both pilots. Turning to risk, some members initially felt that a TCAS RA denoted that safety had been reduced and that a risk rating of Category C was applicable (i.e. safety had been at issue at some stage but that TCAS had provided sufficient information for the AW169 pilot to remove the risk). Other members felt that all the available mitigations had worked, that the Europa pilot had used the SA from his TAS to visually acquire the AW169, and had then given way to it whilst maintaining an adequate safety margin under VFR. The fact that the AW169 TCAS had issued an RA was entirely due to the design of TCAS as a deconfliction barrier of last resort for CAT aircraft operating in CAS and, as such, it was not necessarily compatible with accepted and safe visual deconfliction under VFR. The latter reasoning prevailed, and the Board unanimously agreed that normal procedures, safety standards and parameters had pertained.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict in Class G resolved by both pilots

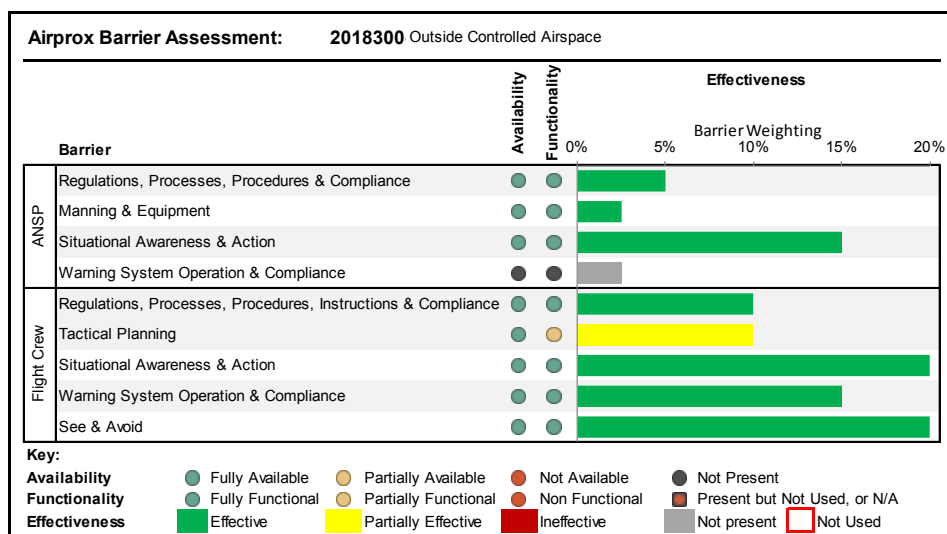
Degree of Risk: E.

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:

Flight Crew:

Tactical Planning was assessed as **partially effective** because the HEMS crew chose to transit at a level that potentially put them into conflict with traffic arriving and departing at local circuit patterns.



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