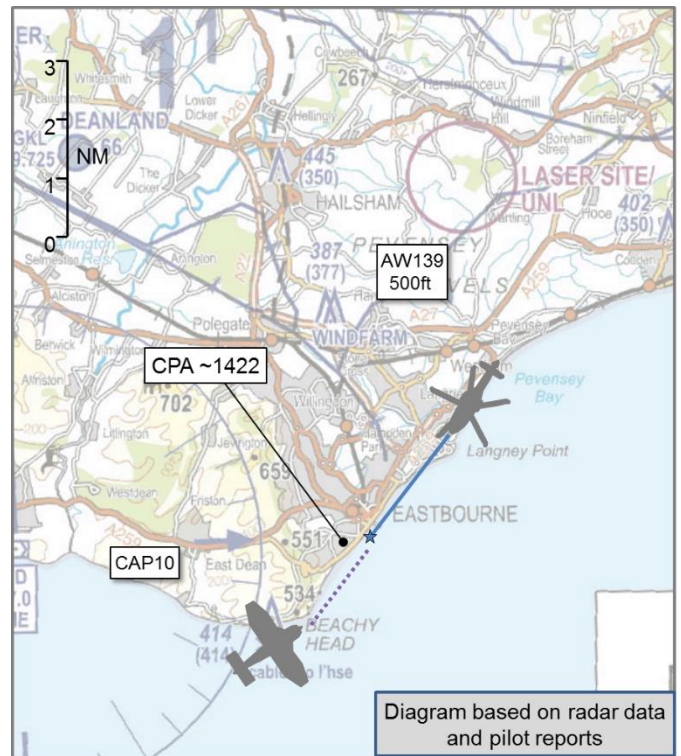


## AIRPROX REPORT No 2017266

Date: 19 Nov 2017 Time: 1422Z Position: 5045N 00017E Location: Eastbourne

### PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AW139	CAP10
Operator	SAR	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	None
Provider	Lydd	
Altitude/FL	500ft	NK
Transponder	A, C, S	A, C, S
<b>Reported</b>		
Colours	White, Red	Red, White, Blue
Lighting	Nav, Beacon, Landing	NK
Conditions	VMC	VMC
Visibility	>10km	10km
Altitude/FL	500ft	500ft
Altimeter	QNH	NK
Heading	230°	045°
Speed	135kt	135kt
ACAS/TAS	TCAS II	Not fitted
Alert	TA	N/A
<b>Separation</b>		
Reported	50ft V/3m H	150ft V/>500m H
Recorded	NK	



**THE AW139 PILOT** reports that he was cruising 0.5nm off-shore, abeam the town of Eastbourne, when the crew were alerted to a TA by the TCAS II system. The Capt immediately looked inside the cockpit at the nav display to confirm the advisory call. The system showed traffic on the nose of the aircraft, 200ft below. The Capt tried to spot the aircraft but, heading west into the setting sun, the visibility was reduced and he couldn't see it. None of the other crew members could see it either until at the last possible moment when the Capt saw the other aircraft and took avoiding action by breaking right. The traffic was then seen by all crew members and was confirmed to be heading east. The other aircraft was estimated to be within 100ft and did not appear to take avoiding action. It was a small fixed-wing aircraft with low wings and red, blue and white in colour.

He assessed the risk of collision as 'High'.

**THE CAP10 PILOT** reports that he was on a local VFR flight. He was conducting the flight generally at 2000ft, but he took the advantage of flying at 500ft over the sea from Seaford following the coastline feature on his left. After rounding Beachy Head and approaching Eastbourne Pier, both he and his passenger saw a helicopter higher, and out to their left. He could see that it was going to pass down their left-hand side at a higher level so he didn't feel the need to take avoiding action, knowing that he could always turn right if he needed to. As it passed to the left he tried to read the registration but it was too far away; it circled around behind him, then carried on down the coast. The visibility was 'perfect', there was no turbulence, and he didn't consider the sighting to be an Airprox, so he didn't report it.

He assessed the risk of collision as 'None'.

## Factual Background

The weather at Lydd was recorded as follows:

METAR EGMD 191420Z 28006KT 250V310 CAVOK 08/02 Q1023=

## Analysis and Investigation

### UKAB Secretariat

Unfortunately the incident did not show on the NATS area radars. The AW139, squawking 7066, can be seen routing SE following the coast line at 500ft. Figure 1 is a screen shot taken at 1422:04, thought to be approximately the time of the Airprox. The CAP10 is not showing on the radar at this time. A few seconds later, at Figure 2, an aircraft appears wearing a 7000 squawk, NE bound, indicating 400ft, this is believed to be the CAP10. The AW139 can be seen to conduct an orbit, as described in the CAP10 pilot's report.

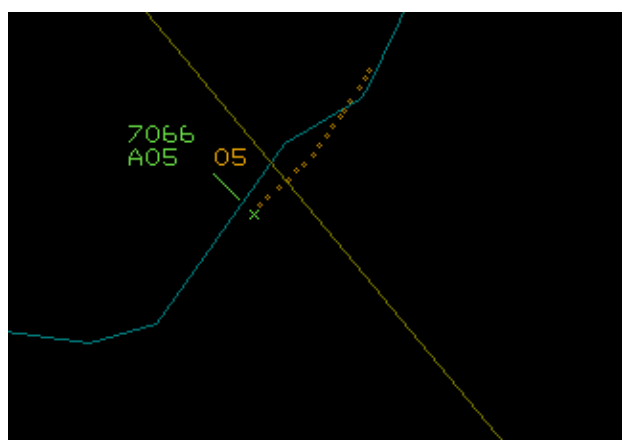


Figure 1: 1422:04

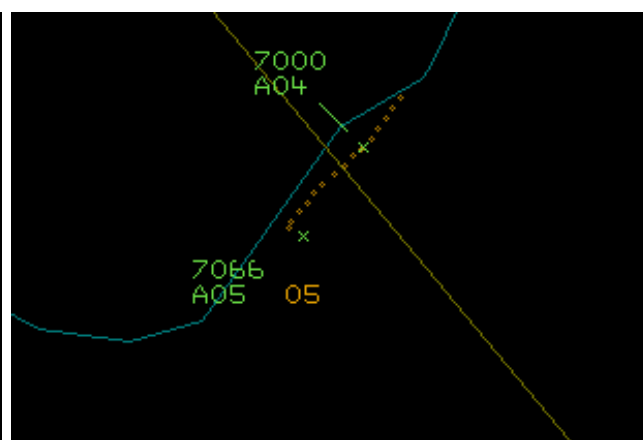


Figure 2: 1422:22

A TCAS modelling tool indicated that, at the reported speeds, the TA on the AW139's TCAS would have occurred at a range of about 1.5nm, approximately 20secs before CPA.

The AW139 and CAP10 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>1</sup>. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right<sup>2</sup>.

## Summary

An Airprox was reported when a AW139 and a CAP10 flew into proximity at 1422hrs on Sunday 19<sup>th</sup> November 2017, near Eastbourne. Both pilots were operating under VFR in VMC, the AW139 pilot in receipt of a Basic Service from Lydd and the CAP10 pilot not in receipt of an ATS.

## PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft and radar photographs/video recordings.

The Board first looked at the actions of the AW139 pilot. Although he was operating a SAR helicopter, it was not thought to be on active duties at the time and so the Board wondered whether he would have been better advised to have routed further out from the coastline in anticipation that other pilots might be using the right-hand rule (i.e. keeping line features to the left) as they transited in the other direction. Although this rule has been removed from SERA, it is still recommended by the CAA, and it was clear

<sup>1</sup> SERA.3205 Proximity.

<sup>2</sup> SERA.3210 Right-of-way (c)(1) Approaching head-on.

that the CAP10 was adhering to it. Members noted that the AW139 was flying into sun, which was making forward visibility difficult, and that the first indication of conflict had been the TCAS indication of traffic 12 o'clock and 200ft below. Although it would be natural to search for the other aircraft ahead in these circumstances, some members wondered whether a more appropriate reaction might have been to have immediately initiated a climb to increase separation as they looked out. TCAS is known to have accuracy errors in azimuth, and so it is generally not recommended to alter course in response to a TCAS TA. However, elevation indications are accurate and a climb of a few hundred feet would have provided more separation; given that it was likely that he had received the TCAS indication at about 1½nm separation (20 secs), he had plenty of time to take action. Members noted that the assessment of separation by both pilots was greatly different, but thought that having struggled to see the aircraft in the opposite direction, once the AW139 pilot did see the CAP10 he may have been startled by it. Coupled with the fact that having the sun behind it could have magnified the CAP10, this may have caused the AW139 pilot to assess it as being closer than it actually was.

For his part, the CAP10 pilot was in Class G airspace and entitled to fly along the coastline as he was, keeping it to his left. Notwithstanding, members commented that Beachy head was a very popular place to fly, and they also noted that there was often SAR rescue helicopters in the area, so pilots should ensure they are maintaining a robust lookout when flying in the vicinity. The CAP10 pilot reported being visual with the AW139 from some distance and that he was happy with the separation. Nevertheless, the Board recommended that pilots ensure that they avoid other aircraft by a good margin in case the other pilot should make an unexpected change of course. Noting that the CAP10 pilot said he knew he could have turned right at any point, the Board commented that if he had given the other aircraft a wider berth he would have avoided startling the other pilot.

In determining the cause of the Airprox, the Board quickly agreed that this had been a simple conflict in Class G where both pilots had seen each other as early as could be expected in the prevailing conditions, noting that there was a contributory factor that the AW139 pilot was flying into sun, which hampered his lookout. In assessing the risk, the Board noted that the CAP10 pilot had been visual with the AW139 at all times, and therefore agreed that, although safety was degraded, there was no risk of collision, Category C.

### **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: A conflict in Class G.

Contributory Factor: The low sun hindered the AW139 pilot's lookout.

Degree of Risk: C.

#### Safety Barrier Assessment<sup>3</sup>

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

#### **ANSP:**

**Situational Awareness and Action** were assessed as **not used** because Lydd are not radar equipped.

#### **Flight Crew:**

**Tactical Planning** was assessed as **partially effective** because the AW139 did not follow the CAA recommendation that a line feature should be kept on the left.

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

**Situational Awareness and Action** were assessed as **ineffective** because, other than focus his lookout, the AW139 pilot did not effectively respond to the TCAS TA.

**Warning System Operation and Compliance** were assessed as **partially effective** because although the AW139 pilot received a TCAS TA, he didn't act upon it.

**See and Avoid** were assessed overall as **effective** because the CAP10 pilot was visual with the AW139 throughout, although it was assessed as **partially available** because the AW139 pilot was flying into sun.

