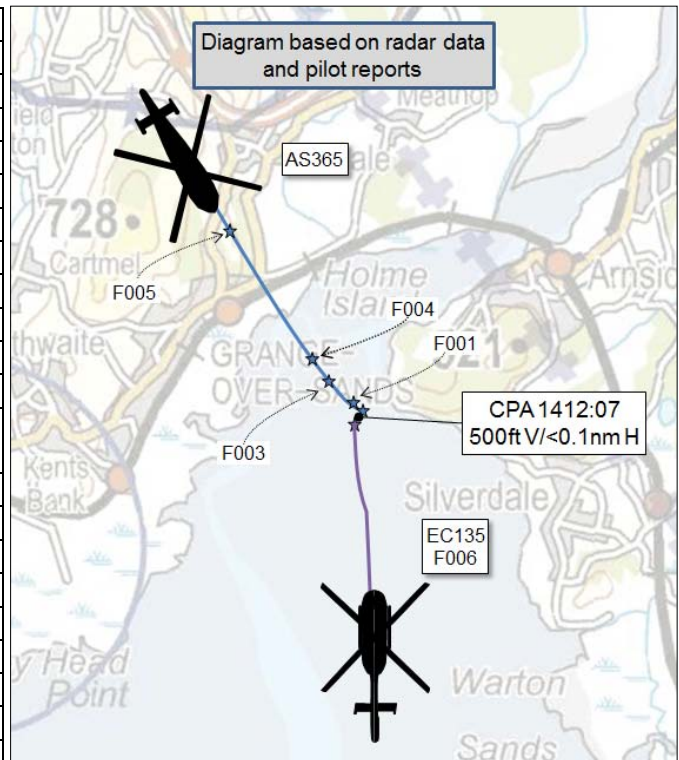


**AIRPROX REPORT No 2017105**

Date: 24 May 2017 Time: 1412Z Position: 5411N 00252W Location: 1nm SE Grange-Over-sands

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	AS365	EC135
Operator	HEMS	HEMS
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Establishing	Traffic
Provider	Warton	Warton
Altitude/FL	F001	F006
Transponder	On/C	On/C
Reported		
Colours	White, Green	Yellow, Blue
Lighting	Strobe, Nav, Landing	Landing, Nav, Strobe
Conditions	VMC	VMC
Visibility	7km	10km
Altitude/FL	700ft	800-900ft
Altimeter	RPS (1021hPa)	QNH
Heading	160°	350°
Speed	140kt	125kt
ACAS/TAS	TCAS I	TAS
Alert	TA	None
Separation		
Reported	200ft V/0.5nm H	300ft V/0.3nm H
Recorded	500ft V/<0.1nm H	



**THE AS365 PILOT** reports that he was transiting with a patient from Cumbria to Preston; the cloud was lower than forecast. He informed over Medical radio that he was encountering poor weather over Morecombe bay. He was just about at IFR fuel so was making an initial call to Warton to ensure their weather was suitable to climb IFR with a cloud break into Preston Hospital. A TCAS icon was noted by the crew 5nm in the 12 o'clock and 200ft above. Once the initial call was made to Warton Radar TCAS called 'Traffic' while Warton Radar was informing him of the EC135 to his 12 o'clock at a similar level and closing. The EC135 was spotted during his descending avoiding action. The EC135 pilot called visual at the same time. He would normally call Warton sooner, but because he was low-level due to cloud he could not hear them on their frequency until at the northern coastline of Morecombe Bay. Very good call from Warton for avoiding action.

He assessed the risk of collision as 'Medium'.

**THE EC135 PILOT** reports that he was routing north to Grasmere. They passed Lancaster and were aware of the AS365 routing south to Preston Hospital due to the communications on the Ambulance radios. The AS365 pilot had informed them the weather in the Lake District was good, allowing them to continue with their task. As he approached the north of Morecombe Bay he became visual with the AS365 at approximately 1nm and it was clear they would pass by each other. No TAS advisory was activated and he passed high and to the left of the AS365.

He assessed the risk of collision as 'Low'.

**THE WARTON CONTROLLER** reports that at 1354 the EC135 pilot called Warton Approach in the Winter Hill area asking for a TS, he was provided with a reduced TS due to the use of Radar Suppression. As the EC135 was approaching the Northern part of Morecombe Bay, the AS365 pilot

called requesting a TS. Unfortunately, the AS365's RT was weak, barely readable due to his low altitude (800ft Mode C) and his range from Warton. He asked the AS365 pilot to 'say again' and then began to realise that he was probably the 0020 squawk that was an SSR contact only climbing out of low-level into conflict with the EC135. Without time to formally identify the AS365, and before he was placed under any Air Traffic Service, he chose to use the 'traffic believed to be you' format to warn him that he had traffic 12 o'clock, one and a half miles, opposite direction, similar level' at which point the AS365 pilot reported descending, visual with the EC135 and a TCAS contact. He then passed traffic information to the EC135 pilot that he had conflicting traffic 12 o'clock, one mile, opposite direction, similar level and descending that was visual with him. The EC135 pilot reported 'visual with the AS365, flying over the top of him'.

He perceived the severity of the incident as 'Low'.

## Factual Background

The weather at Warton was recorded as follows:

METAR EGNH 241350Z 31008KT 9999 FEW015 18/14 Q1026

## Analysis and Investigation

### CAA ATSI

The AS365 was operating out of Keswick on a VFR flight to Preston. At the time of the Airprox an ATC service had not yet been established because the AS365 had only just called Warton Radar. The EC135 was on a reduced Traffic Service being provided by Warton Radar.

At 1354:02 the EC135 called Warton Radar and requested a Traffic Service. A Traffic Service was agreed although this was limited by Warton due to radar suppression. At 1402:33 the EC135 advised Warton that they had been re-tasked and would be routing to Ambleside. At this time, the EC135 was coming up east abeam of a known Para-dropping site at Cockerham.

At 1411:04 the AS365 called Warton Radar and requested a Basic Service (Figure1). The AS365 was at the Morecombe Bay estuary which is approximately 26nm north of Warton. The AS365 was approximately 600ft and therefore the radio reception was poor. Warton were, however, able to observe the SSR code associated with the AS365 although formal radar identification was not made at the time. Whilst this was taking place, the controller recognised that the EC135 was a potential conflict being opposite direction and, before an ATC service could be agreed, the controller issued Traffic Information to the AS365 about the EC135, 12 o'clock, approximately 1.5nm away. Reciprocal Traffic Information on the AS365 was passed to the EC135.

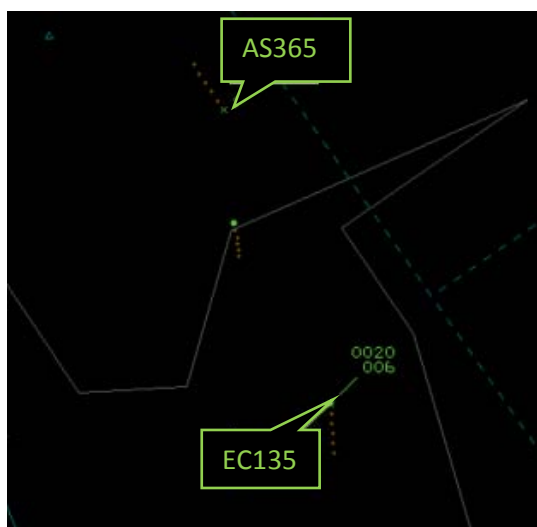


Figure 1 – 1411:02

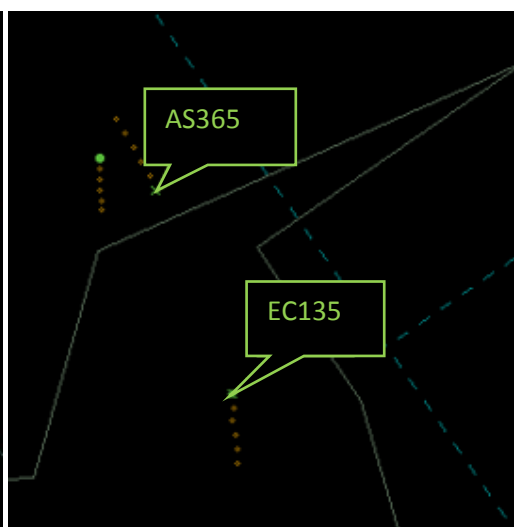


Figure 2 – 1411:35

Heights indicated are in Flight Level. The northbound EC135 equated to 950ft (QNH) and the southerly AS365 equated to 850ft. Traffic information began to be passed by Warton during the RTF exchange at approximately 1411:35 (Figure 2)

CPA occurred between 1412:02 and 1412:06. Figure 3 depicts the closest measurable distance (0.1nm) although the aircraft had passed each other by this time.

Due to the range from Warton that the AS365 called, and the relatively low-level, both the RTF and radar coverage was not optimum and so the controller had little time to react. Under a Basic Service a controller is not required to monitor a flight and would only pass Traffic Information if they believed a definite risk of collision exists. In the circumstances of this Airprox the controller issued the appropriate Traffic Information in as much time as was available, which appeared to have assisted the pilots acquiring visual contact on each other. Both pilots also reported receiving TCAS advice around the time that the Traffic Information was provided. Under both a Basic Service and a Traffic Service pilots remain responsible for their own collision avoidance.

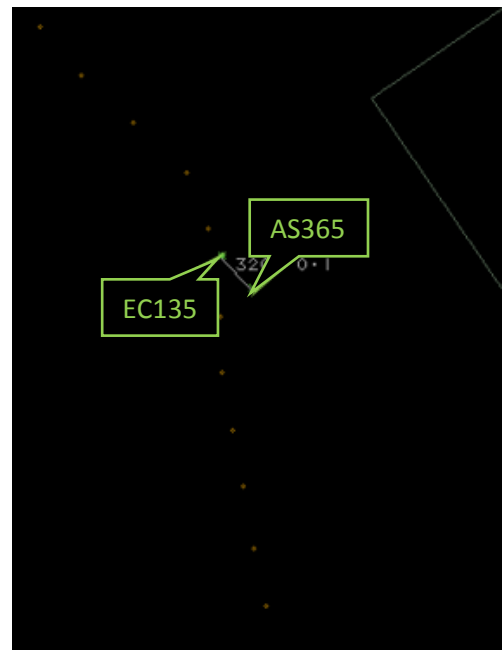


Figure 3 – 1412:06

### UKAB Secretariat

The AS365 and EC135 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 converging then the AS365 pilot was required to give way to the EC135<sup>2</sup>.

### Summary

An Airprox was reported when an AS365 and an EC135 flew into proximity at 1412 on Wednesday 24<sup>th</sup> May 2017. Both pilots were operating under VFR in VMC, the AS365 pilot establishing a Traffic Service from Warton and the EC135 pilot in receipt of a Traffic Service from Warton.

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

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RTF frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board began first by discussing the actions of the Warton radar controller. He had not been able to identify the AS365 on receipt of the pilot's initial call due to the aircraft's low altitude. Regardless of this, the controller passed generic TI to both the AS365 pilot and the EC135 pilot which ensured both pilots were aware of the position, heading and height of the conflicting aircraft. The Board praised the controller's actions which had resulted in significantly increased SA for both pilots.

The Board then turned to the actions of the AS365 pilot. The helicopter Board members noted that HEMS pilots usually have a very comprehensive met briefing each day and opined that the AS365 pilot should have been aware of the low cloud and been able to plan this pre-planned transfer task accordingly; they wondered if he had been somewhat caught out by the weather and was therefore unexpectedly at IFR fuel minimums thereby constraining his options. They went on to note that the AS365 and EC135 pilots were both listening out on the HEMS Medical radio frequency, which

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

<sup>2</sup> SERA.3210 Right-of-way (c)(2) Converging.

afforded them the opportunity to gain updated information on the other aircrafts' routing and task through the Medical radio operator. One member opined that, because of this, the pilots seemed to have missed the opportunity to use the HEMS frequency to actively deconflict with each other. The Board members agreed that, even with the low cloud base and his not yet being in receipt of a radar Service with Warton, the AS365 pilot could have acted sooner on receiving the EC135's TCAS indications at 5nm, especially since the AS365 pilot was required to give way to the converging EC135 on his right. That being said, members were mindful that the TCAS information may not have provided sufficient information to make that interpretation, and that he had nevertheless increased the separation by descending once he received TI from Warton.

The Board then looked at the actions of the EC135 pilot. They noted that the EC135's TAS did not alert, and one member recalled that a recent Airprox with a HEMS EC135 in a similar area (Airprox 2017057) had also resulted in a late alert from the EC135's equipment. They were concerned that this might be an equipment fault if it was the same aircraft. [Post-meeting UKAB note: this has been investigated and it was indeed the same aircraft; the operator is advised to check the serviceability of this aircraft's TAS]. In discussing this possibility, it was mentioned by a helicopter member that the Ground Proximity warning might override the TAS warning in the circumstances of the incident, although the display should still indicate any proximate traffic. The Board agreed that regardless of the lack of traffic alert from the EC135's TAS, the EC135 pilot also had enough information to have acted sooner given that he knew that the AS365 was also transiting towards Morecombe Bay.

The Board then considered the cause and risk of the incident. Members agreed that although the AS365 pilot did pro-actively descend to avoid the EC135, both pilots had sufficient information to have acted earlier to increase their separation from each other. As a result, the Board agreed that both pilots had continued into conflict despite good TI and SA about each other. Notwithstanding, although safety had been degraded, the Board agreed that the pilots had seen each other in sufficient time to ensure that there had been no risk of collision; accordingly, the Board assessed the risk as Category C.

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

Cause: Both pilots continued into conflict.

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 & Action** was assessed as **fully effective** because the Warton controller identified the confliction prior to identifying the AS365 and passed generic TI to the AS365 pilot; this increased the pilots SA and enabled him to descend quickly and increase the separation.

#### **Flight Crew**

**Tactical Planning** was assessed as **partially effective** because given that a patient transfer was a pre-notified task, this meant the AS365 pilot had enough time to check the weather fully prior to departure and adjust his tactical plan accordingly.

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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 & Action** was assessed as **ineffective** because the AS365 pilot could have manoeuvred earlier by changing his route slightly, based on his TCAS indication, and not continue towards the conflicting traffic.

**Warning System Operation and Compliance** was assessed as **partially effective** because the EC135's TAS did not indicate the presence of the AS365.

