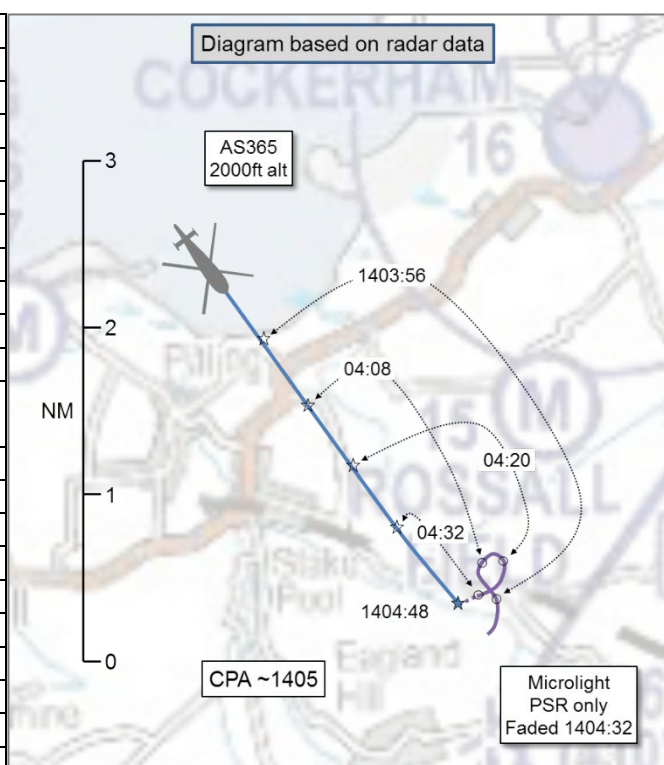


AIRPROX REPORT No 2019304

Date: 23 Oct 2019 Time: 1405Z Position: 5355N 00252W Location: 10NM NE Blackpool

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AS365	Weight-shift M/L
Operator	HEMS	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	NK
Service	Basic	NK
Provider	Warton Approach	NK
Altitude/FL	2000ft	NK
Transponder	A, C, S	None
Reported		Not reported
Colours	White, yellow, green	
Lighting	Nav, landing, HISL	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	2000ft	
Altimeter	QNH (1009hPa)	
Heading	150°	
Speed	140kt	
ACAS/TAS	TCAS I	
Alert	None	
Separation		
Reported	200ft V/0m H	NK
Recorded	NK	



THE AS365 PILOT reports that he was operating a HEMS flight under an Alpha callsign, flying in the right seat with a paramedic crewman in the left seat, on route to Preston Hospital. They were monitoring 2 aircraft on TCAS. One indicating 2500ft above at approximately 5NM in the left 9 o'clock position, the other was an intermittent contact 500ft below in the 10-11 o'clock at approximately 2-3NM. The AS365 pilot did not consider that either of these aircraft were the Airprox aircraft. The paramedic called 'Aircraft 12 o'clock descend'. The pilot saw a green and yellow weight-shift microlight at about the same level at a range of about 0.5NM crossing the nose from left to right. He initiated a descent and passed directly below it. He did not observe any manoeuvre from the microlight. The pilot stated that, due to the perpendicular converging tracks of the two aircraft, he believed his view of the microlight from the right seat was obscured by the centre post of the windshield until the last seconds. Had the paramedic not seen the other aircraft then he believed they would have come into extremely close proximity.

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

THE MICROLIGHT PILOT could not be traced at any of the microlight airfields in the vicinity of the Airprox.

THE WARTON CONTROLLER reports that the AS365 had been placed under a Basic Service by the previous controller on console, and was transiting inbound to Preston hospital. Whilst routing near to Cockerham, to the east of Fleetwood by 6 miles, the AS365 pilot reported visual sighting with a Tutor aircraft operating in his vicinity but 2000ft above and showing on TCAS, which the controller acknowledged. This was followed by a question over further traffic operating to the east, 500ft below and again showing on TCAS. As the AS365 was under a Basic Service in Class G airspace, and neither aircraft was considered to be at risk of collision, these were not called, however the Tutor, under a Traffic Service, was provided with Traffic Information. Shortly after this the AS365 pilot reported an

Airprox with a microlight in his vicinity, approximately 300ft above, and advised he would be filing an Airprox report. The conflicting traffic was not showing on the radar display nor speaking to Warton Radar.

Factual Background

The weather at Warton was recorded as follows:

METAR EGNO 231420Z 17011KT 140V200 9999 FEW021 13/08 Q1009=
 METAR EGNO 231350Z 17010KT 9999 FEW020 12/08 Q1009=

Analysis and Investigation

UKAB Secretariat

The AS365 and microlight 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 microlight pilot was required to give way to the AS365².

Summary

An Airprox was reported when an AS365 and a weight-shift microlight flew into proximity near Garstang Marina at about 1405Z on Wednesday 23rd October 2019. Both pilots were operating in VMC, the AS365 pilot under VFR and in receipt of a Basic Service from Warton Approach. It was not possible to trace the microlight pilot.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the AS365 pilot, 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments. Although not all Board members were present for the entirety of the meeting and, as a result, the usual wide-ranging discussions involving all Board members were more limited, sufficient engagement was achieved to enable a formal assessment to be agreed along with the following associated comments.

The Board first discussed the controller's actions and agreed that because the microlight did not appear on his radar display and its pilot had not requested a FIS with associated routing information, he had had no SA on its position (**CF1**) and therefore could not have detected the collision risk with the AS365. Members felt that the microlight pilot should have requested a FIS in such a congested portion of airspace but acknowledged that his aircraft may not have been fitted with a radio. Although the AS365 was equipped with TCAS, it was not compatible with the non-transponding microlight (**CF3**) so neither pilot had SA on the position and converging track of the other (**CF2**). In the absence of all barriers to mitigate collision risk, apart from see-and-avoid, the Board agreed that this event had amounted to a conflict in Class G airspace (**CF4**). The see-and-avoid barrier had functioned, albeit at a much later stage than desirable (**CF5**), and the AS365 pilot was able to take avoiding action. The Board commended the paramedic for his lookout whilst also under a heavy cockpit work-load. A civilian helicopter member also briefed the Board that the AS365 operating company had added a requirement to their Operations Manual not to use a Basic Service if possible whilst engaged in an 'Alpha' call. Although this would not have affected the outcome of this incident, the Board commended such an

¹ SERA.3205 Proximity.

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

approach in general, especially given the high cockpit workload of HEMS taskings. Turning to the risk, members felt that although the AS365 pilot had seen the microlight at a late stage, he had been able to materially increase separation at CPA, albeit with a final separation that indicated that safety had not been assured.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2019304		
CF	Factor	Description	Amplification
	Ground Elements		
	• Situational Awareness and Action		
1	Contextual	• Situational Awareness and Sensory Events	Generic, late, no or incorrect Situational Awareness
	Flight Elements		
	• Situational Awareness of the Conflicting Aircraft and Action		
2	Contextual	• Situational Awareness and Sensory Events	Generic, late, no or incorrect Situational Awareness
	• Electronic Warning System Operation and Compliance		
3	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
	• See and Avoid		
4	Contextual	• Near Airborne Collision with Aircraft, Balloon, Dirigible or Other Piloted Air Vehicle	A conflict in the FIR
5	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: B.

Recommendation: Nil.

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:

Ground Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **not used** because the AS365 was not in receipt of a FIS that required it to be monitored and the microlight aircraft was not visible on the controller's radar or in receipt of a FIS.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because each pilot had no SA on the other converging aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the microlight was not transponding and therefore not compatible with the AS365 TCAS.

See and Avoid were assessed as **partially effective** because the AS365 pilot saw the microlight at a late stage and the microlight pilot, who presumably did not wish to fly into close proximity with the AS365, had either seen the AS365 too late to give way or not at all before CPA.

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

Airprox Barrier Assessment: 2019304		Outside Controlled Airspace		Effectiveness				
Barrier		Provision	Application	Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Manning & Equipment	✓	✓					
	Situational Awareness of the Confliction & Action	✗	○					
	Electronic Warning System Operation and Compliance	●	●					
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Tactical Planning and Execution	✓	✓					
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓					
	Electronic Warning System Operation and Compliance	✗	✓					
	See & Avoid	⚠	⚠					
Key:		Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	⚠	✗	●				
Application	✓	⚠	✗	●	○			
Effectiveness								