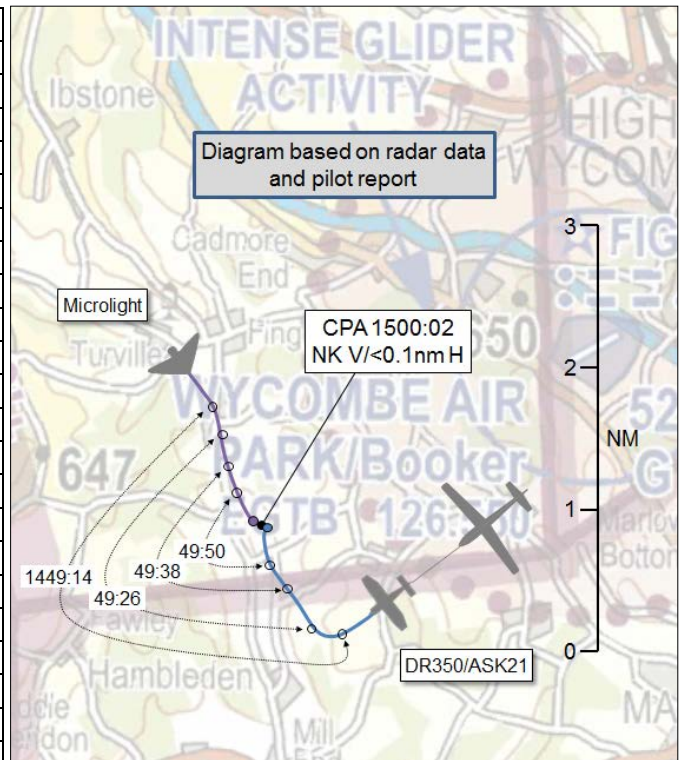


AIRPROX REPORT No 2017208

Date: 25 Aug 2017 Time: 1500Z Position: 5135N 00052W Location: 3nm SW Booker

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Robin DR350	Microlight
Operator	Civ Club	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	
Service	None	
Provider	N/A	
Altitude/FL	NK	
Transponder	Not fitted	
Reported		Not reported
Colours	White/blue/red	
Lighting	Strobe	
Conditions	VMC	
Visibility	20km	
Altitude/FL	1950ft	
Altimeter	QFE (NK hPa)	
Heading	300°	
Speed	70kt	
ACAS/TAS	PowerFLARM	
Alert	None	
Separation		
Reported	0ft V/150m H	NK
Recorded	NK V/<0.1nm H	



THE DR350 PILOT reports that he was towing gliders from Wycombe Air Park (Booker) and that this was his 16th launch of the day, towing an ASK21 with one person onboard. His intention was to tow the glider to an area southwest of the Wycombe (West) noise abatement zone (NAZ). The tow pattern from Booker RW24 is complicated by the noise avoidance areas, the need to ensure separation between the gliding and power traffic, and the proximity of the 2500ft base of the London TMA. This required a left-hand turn as soon as was convenient after take-off, a southeasterly climb-out followed by a gradual turn to the northwest and, when sufficient height had been gained to pass safely over the power traffic climb-out track, to proceed to an area upwind of the airfield where the glider pilot might chose to release. The flight proceeded without incident until nearing 2000ft QFE, adjacent to the southern-most corner of the NAZ, when he saw a white and possibly blue flex-wing microlight almost directly ahead on a reciprocal heading and a very similar height at a range of about 250m. He made an immediate steep descending turn to the right. The glider pilot did not see the microlight at this time, but realised that a significant event had upset the tug, so he released the tow rope before turning left. Only once he had reversed direction did the glider pilot see the microlight as it passed into the distance. The DR350 pilot lost sight of the microlight as soon as he turned, and saw it again in the distance once he had recovered to level flight and established that the glider was safe. The DR350 pilot stated that it appeared that the microlight had not deviated from its original track or height. He also observed that the day had been notable for the number of aircraft passing along a line approximately from the Stokenchurch Mast to White Waltham. The DR350 pilot stated he was at a loss to explain why he didn't see the microlight sooner. It was heading almost directly towards him so there was probably little differential movement. The sun was in about the 10 o'clock position so there may have been some windscreen glare to contend with. Also he had been looking to the right to ensure that the way was clear when passing over the Wycombe RW24 climb out path. Nevertheless he had been looking forward for a few seconds when the microlight 'appeared' directly ahead.

He assessed the risk of collision as 'High'.

THE MICROLIGHT PILOT could not be traced.

Factual Background

The weather at Benson was recorded as follows:

METAR EGUB 251450Z 19002KT 9999 FEW042 23/12 Q1016 BLU NOSIG=

Analysis and Investigation

CAA ATSI

Neither the DR350 nor the unknown microlight could be positively identified on area radar replay because neither were transponding. However, the screenshots are believed to give an accurate representation of the Airprox based on the report from the DR350 pilot.

The contact believed to be the DR350 was first observed intermittently on radar at 1458:40. At 1459:21, and consistent with the pilot’s report, the aircraft was observed to turn to the northwest. The other aircraft had been observed maintaining a south-southeasterly track for a sustained period of time prior to this (Figure 1). Figure 2 shows the situation at 1459:46.

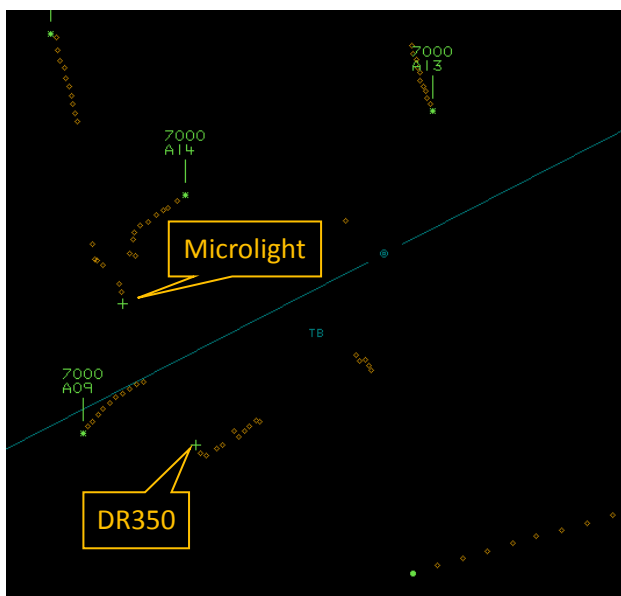


Figure 1 – 1459:21

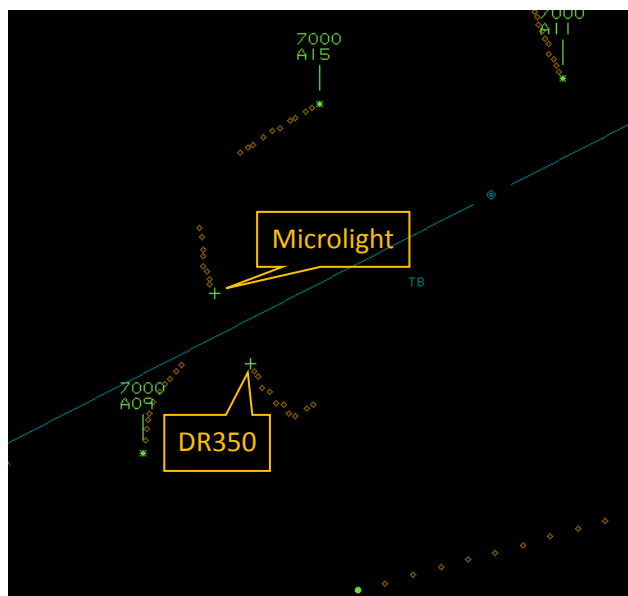


Figure 2 – 1459:46

CPA took place at 1500:03 (Figure 3). Only the lateral distance could be measured (<0.1nm).

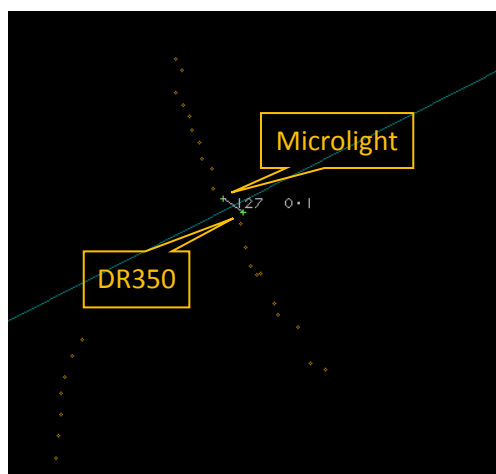


Figure 3 – CPA 1500:03

Glider operations at Wycombe are autonomous. The ATZ in these circumstances is effectively split into north/south halves, based on the 24/06 grass strip, which runs parallel to, and is south of, the hard runway. Gliding takes place unrestricted on the south side of the airfield. Gliders and tugs flying over the north side must be above a height of 1400ft.

The DR350 was acting as a glider tug, and, in accordance with local procedures, would only be required to make a downwind call to ATC on returning to land having released the glider. No other calls are required. The Aerodrome controller would then confirm that a taxiway, which crosses to the east of the gliding site, was secure, but no Traffic Information would be passed. All powered aircraft operating outside of the gliding area, and gliders and tugs within the gliding area are responsible for their own collision avoidance.

ATSI were not able to determine the exact service being provided to the DR350 pilot but felt that it was akin to an A/G service. The aerodrome controller would not have been aware of the other aircraft, and would not have been providing any Traffic Information to the DR350 pilot on other traffic in or outside the ATZ. The other aircraft was not apparently in receipt of any ATC service, and remained clear to the west of the Wycombe ATZ by approx 0.5nm. Because both aircraft were operating in Class G airspace, the pilots were responsible for their own collision avoidance.

UKAB Secretariat

The DR350/ASK21 pilots and the microlight pilot 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 head-on or nearly so then all pilots were required to turn to the right².

Summary

An Airprox was reported when a DR350/ASK21 tug-glider combination and an unknown microlight flew into proximity at 1500 on Friday 25th August 2017. The tug-glider combination pilots were operating under VFR in VMC, not in receipt of a Service.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the DR350 pilot, radar photographs/video recordings and a report from the appropriate ATC authority.

Members first discussed the microlight pilot's choice of routing and agreed that he was entitled to be there, had given Wycombe ATZ a reasonable degree of lateral separation, and that he could not be expected to know the 'glider tow pattern' at Booker. The DR350 pilot had seen the microlight, albeit at a late stage, and was able to take avoiding action, although further risk had been apparent due to the fact that he was towing a glider. The Board noted that the glider pilot had also reacted to the tug pilot's avoiding action by releasing the tow cable and manoeuvring. Considering the available barriers to MAC, the lack of electronic conspicuity of the microlight had resulted in see-and-avoid being the only barrier available. Some members commented that whilst see-and-avoid remained the basis of deconfliction in Class G, for little cost and effort it would be possible to improve situational awareness and therefore visual detection rates by fitting a means of electronic conspicuity. Other members pointed out that several relatively inexpensive systems were now available but that some were not compatible with others. Nevertheless, it was agreed that, even so, some warning was better than none.

Turning to cause and risk, the Board quickly agreed that the late sighting by the DR350 pilot, and probably a late or even non-sighting by the microlight pilot had been the cause. Members were less certain of the risk given the lack of available narrative from the microlight pilot, with some opining that

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(1) Approaching head-on.

there was insufficient information to make an assessment (Category D). After further discussion it was agreed that the Board did have enough information to determine the risk based on the DR350 pilot's description of events, along with the available radar data, and, as such, it was agreed that safety had been much reduced below the norm.

PART C: ASSESSMENT OF CAUSE, RISK AND SAFETY BARRIERS

Cause: A late sighting by the DR350 pilot and probably a late or non-sighting by the microlight pilot.

Degree of Risk: B.

Safety Barrier Assessment³

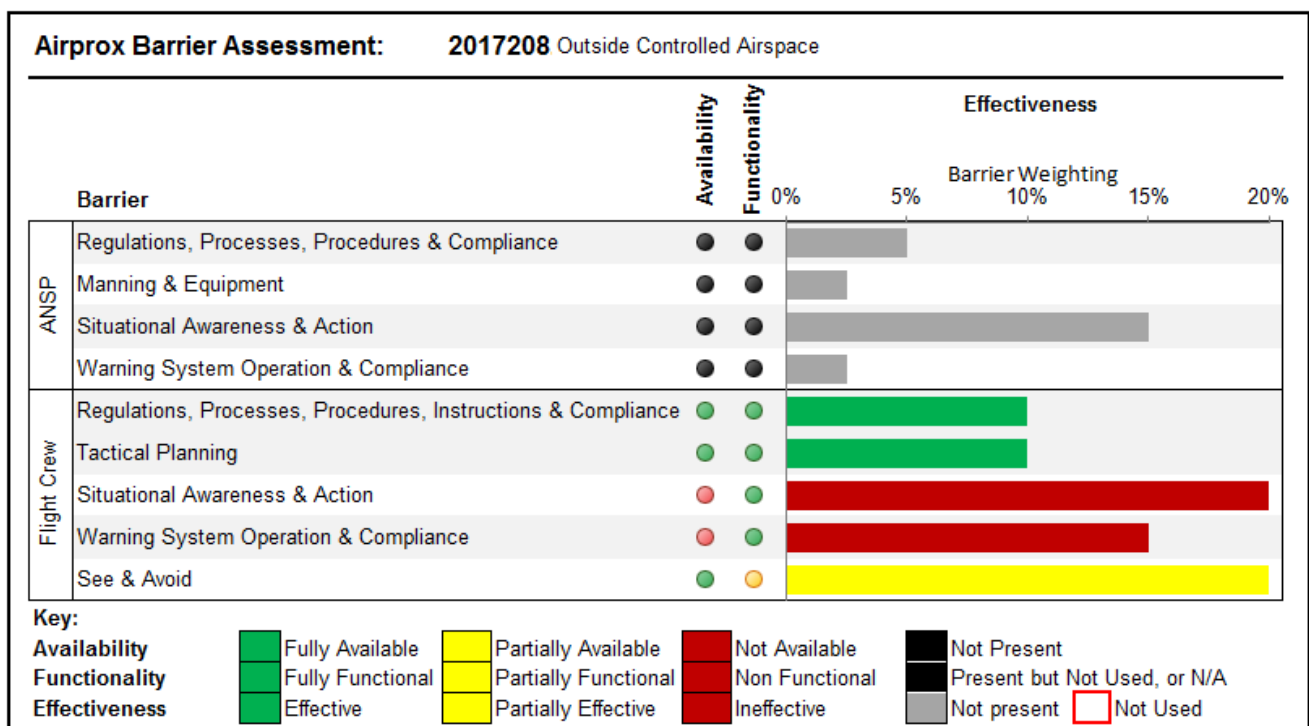
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Crew:

Situational Awareness and Action were assessed as **ineffective** because neither pilot was aware of the other until at a late stage.

Warning System Operation and Compliance were assessed as **ineffective** because the DR350 PowerFLARM did not detect the microlight, which, given the lack of any secondary radar indications, was considered likely not to have been fitted with any means of electronic conspicuity.

See and Avoid were assessed as **partially effective** because the DR350 pilot at least was able to see the microlight in time to take avoiding action at a late stage.



³ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](http://www.ukab.co.uk).