AIRPROX REPORT No 2016125

Date: 02 Jul 2016 Time: 0926Z Position: 5226N 00103W Location: Husbands Bosworth

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASK21	C152
Operator	Civ Club	Civ Trg
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Cranfield
Altitude/FL	NK	NK
Transponder	NK	S
Reported		
Colours	White	White
Lighting	NK	Nav
Conditions	VMC	VMC
Visibility	NK	25km
Altitude/FL	1200ft	2250ft
Altimeter	QFE (993hPa)	QNH (1011hPa)
Heading	270°	122°
Speed	70kt	85kt
ACAS/TAS	FLARM	Not fitted
Alert	Unknown	N/A
Separation		
Reported	200ft V/50m H	Not Seen
Recorded	NK	

THE ASK21 PILOT reports that he was carrying out a normal winch launch on a day when conditions should give an expected winch-launch height of about 1500-1600ft. At about 1000ft he saw the other aircraft [to the right of his instrument panel] and immediately identified it as a threat. He abandoned the launch, released the cable, and put the glider into a dive to prevent further height gain and increase separation. He noted that as is normal he was at relatively high speed and nose high from the winch launch as he released from the cable.

He assessed the risk of collision as 'High'.

THE C152 PILOT reports that he had pointed out to his student that they were in an area of intense gliding activity but that if they kept a good lookout and were prepared to take appropriate avoiding action there should be no risk of collision. He did not see the glider.

THE BGA INSTRUCTOR ON THE GROUND reports that the launch was instigated with no sign of any conflicting traffic. When the glider was at approximately 500ft agl, an aircraft was spotted on a course that would overfly the winch that was carrying out the winch launch. The aircraft carried on with no deviation to the flight path. If the glider had not abandoned the launch the risk of a mid-air would have been very high.

Factual Background

The weather at Coventry was recorded as follows:

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METAR EGBE 020820Z 24014KT 210V270 9999 SCT028 14/08 Q1011
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Analysis and Investigation

UKAB Secretariat

The ASK21 and C152 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1]. An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation[2].

Comments

BGA

It is disappointing to find an instructor that has seemingly not understood the frequent messages regarding the hazards of overflying winch launch sites. Given the rate of climb of a winch-launching glider approaching at a steep angle from underneath, it is highly unlikely that the C152 would have been able to take effective avoiding action, even if the pilot had seen the glider. We commend the glider pilot for their effective lookout and prompt action in a high-workload phase of flight.

Summary

An Airprox was reported when an ASK21 and a C152 flew into proximity at 0926 on Saturday 2nd July 2016. Both pilots were operating under VFR in VMC, the ASK21 pilot was listening out on the Husband Bosworth Gliding frequency and the C152 pilot in receipt of a Basic Service from Cranfield.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Board members began by first looking at the actions of the C152 pilot. The instructor had helpfully included a copy of their intended route with their report and it was clear that in their pre-flight planning they had planned to route away from the glider launch site, had taken into account the prevailing SW wind across their track (250°/25kts), and that the instructor had briefed the student about the high intensity of gliding activities. GA members were, however, disappointed that the C152 instructor had then allowed his student to fly through an active glider site. Although there were circumstances where it is good teaching practice to allow a student to make their own errors as a method of reinforcing a particular training point, this must not result in the detriment of safety, as had happened in this instance when, assuming that the instructor knew where he was, the student had flown some 2nm north of track presumably either as a result of a slack turn just prior to the incident or his not adequately accounting for the crosswind on that track. Another GA member continued on this theme to comment that although the instructor had clearly been aware of the fact that they were in a marked area of intense gliding activity, it would have been appropriate for him to have been more diligent in ensuring that they did not fly over the gliding site itself, especially below the marked winch-launch maximum altitude. The Board noted that the C152 pilot did not see the glider (or presumably the gliding site) and therefore the potential for a collision was high given that the glider would have been approaching rapidly from below the nose of the C152.

[1] SERA.3205 Proximity.
[2] SERA.3225 Operation on and in the Vicinity of an Aerodrome.

The Board then turned to the actions of the ASK21 pilot and agreed that he was in a particularly invidious position in having to abandon his launch in a critical phase of flight where there were few options available and a high risk of losing control of his aircraft. Members commended him for his sharp lookout in spotting the C152, especially because he would have been focusing on maintaining a correct launch angle and parameters at a time where his high nose attitude would obscure aircraft approaching from ahead. Members agreed that in abandoning his launch and putting the glider into a dive, the ASK21 pilot had prevented this incident from becoming more serious than it actually was; if the ASK21 pilot had not carried out these avoidance actions the aircraft would have been very close indeed, with high collision potential.

The Board then looked at the barriers that were contributory to this Airprox and decided that the key factors were:

- **Flight Crew Operational Threat Awareness and Management** had been **ineffective** because the C152 pilot had not assimilated that they were flying over the glider site.
- **Flight Crew Electronic Warning System and Resolution Action** was **not available** because, although the ASK21 had FLARM fitted, the C152 did not have any electronic warning system fitted.
- **See-and-Avoid** was **effective** because, although the C152 pilot did not see the glider, the glider pilot had seen and avoided the C152.

The Board then considered the cause of the Airprox. Mindful of the fact that the student was flying the C152, they agreed that the instructor should have had full situational awareness regarding the aircraft's position and any threats that were pertinent; with this in mind, they unanimously agreed that the cause was that the C152 instructor flew over a promulgated and active glider site, below the maximum winch launch altitude, and into conflict with the ASK21. Turning to the risk, some members thought that there had been a serious risk of collision due to the short timeframe available to the glider pilot to make his decision and act, and that this should therefore be assessed as Category A incident. However, a majority agreed that the ASK21 pilot's quick actions to avoid the C152 had materially increased the separation and that, although safety had been much reduced below the norm, this had prevented an actual collision occurring. The risk was therefore agreed as Category B.

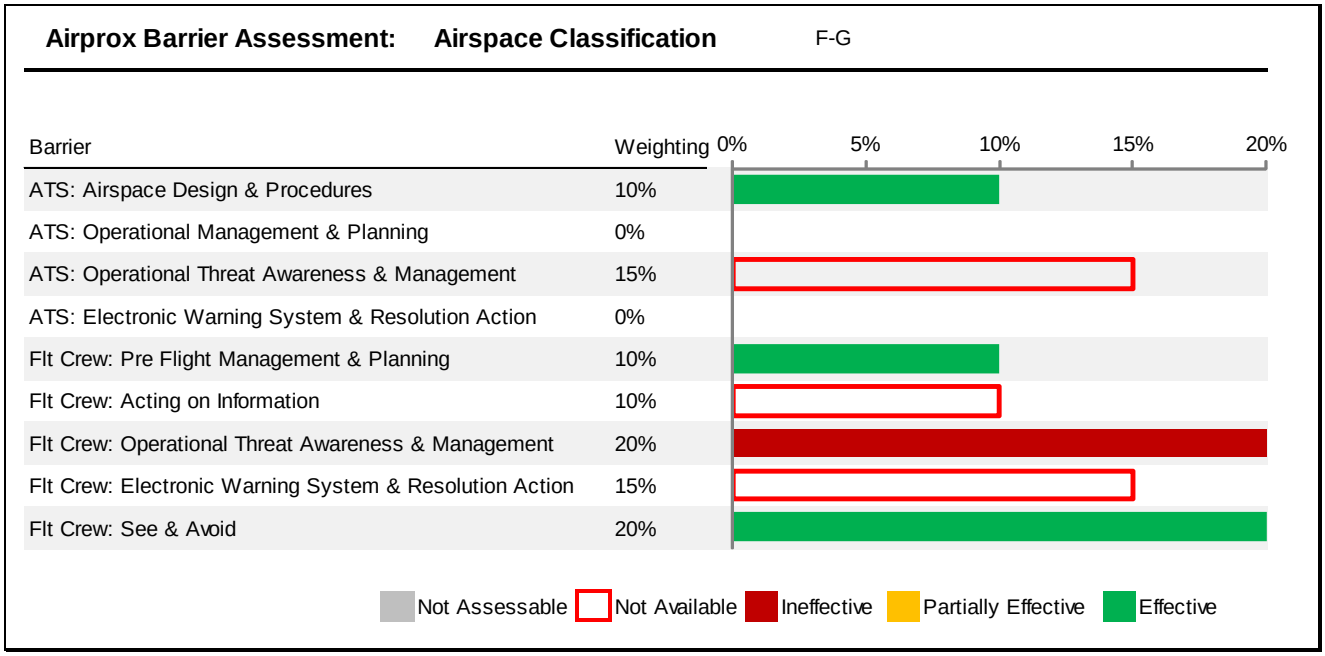
PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The C152 instructor flew over a promulgated and active glider site, below the maximum winch launch altitude, and into conflict with the ASK21.

Degree of Risk: B.

Barrier Assessment:

Modern safety management processes employ the concept of safety barriers that prevent contributory factors or human errors from developing into accidents. Based on work by EASA, CAA, MAA and UKAB, the following table depicts the barriers associated with preventing mid-air-collisions. The length of each bar represents the barrier's weighting or importance (out of a total of 100%) for the type of airspace in which the Airprox occurred (i.e. Controlled Airspace or Uncontrolled Airspace).[3] The colour of each bar represents the Board's assessment of the effectiveness of the associated barrier in this incident (either Fully Effective, Partially Effective, Ineffective, Not Available, or Not Assessable). The chart thus illustrates which barriers were effective and how important they were in contributing to collision avoidance in this incident.



[3] Barrier weighting is subjective and is based on the judgement of a subject matter expert panel of aviators and air traffic controllers who conducted a workshop for the UKAB and CAA on barrier weighting in each designation of airspace.