

AIRPROX REPORT No 2017160

Date: 13 Jul 2017 Time: 1115Z Position: 5145N 00044W Location: SW Halton

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASK21	AS365
Operator	HQ Air (Trg)	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	None
Provider	Halton	
Altitude/FL		2000ft
Transponder	Not fitted	A, C, S
Reported		
Colours	'Dark'	Blue
Lighting	Strobes	Strobes, Nav, Anti-colls
Conditions	VMC	VMC
Visibility		>10km
Altitude/FL	1800ft	2000ft
Altimeter	QFE (1006hPa)	QNH
Heading	105°	100°
Speed	65kt	140kt
ACAS/TAS	FLARM	TAS
Alert	N/A	None
Separation		
Reported	0m V/50m H	Not seen
Recorded	~0.1nm H	



THE ASK21 PILOT reports that he was the instructor in the rear seat of the glider. During the initial towed climb-out, the student in the front made an observation about a helicopter in their 2 o'clock. The instructor noted the traffic and called 'visual'. He kept a look-out for the helicopter, but the tow-route was a left-hand arc, and the helicopter went behind and out of view. About 50 seconds later, he became aware of rotor noise and looked right to see a helicopter about 50m off the right wing at the same height. The instructor immediately transmitted to the tug-pilot to make sure he was visual and he said he was. They had already started a left turn, taking them away from the helicopter and he judged that it was not necessary to release from the tow.

He assessed the risk of collision as 'Low'.

THE PA25 TUG PILOT reports he was authorised to tow gliders from RAF Halton to 2000ft agl as part of a JSAT gliding course. He took off from RW20 and the first part of the tow was uneventful. On passing 1700ft, heading roughly SE, he received a radio message from Halton Radio to say that a helicopter had been spotted in his 7 o'clock position. He looked, but couldn't see anything, and so continued to tow into known clear airspace ahead, whilst continuing to look for the traffic. About 15-20 seconds later, he looked right and saw a large helicopter at the same height overtaking within 50-80m. Once sighted, he changed course slightly to the left because the risk of collision was reducing.

THE AS365 PILOT reports that he was keeping a good look-out and flying clear of cloud, in good visibility and clear airspace. He was squawking and had all his lights on. He did not try to contact Halton AFIS because he deliberately avoided flying through their ATZ, knowing it was a gliding site, (although he noted that with hindsight contacting them may have made him aware of any potential confliction). He did not see the glider and was not aware of any incident at the time. He opined that it was a pity that the tug was not squawking because it would have alerted on his TAS if it had been.

Factual Background

The weather at Luton was recorded as follows:

METAR EGGW 131050Z AUTO 18004KT 110V230 9999 OVC043 18/08 Q1022=

Analysis and Investigation

UKAB Secretariat

The AS365 and PA25/ASK21 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 overtaking then the tug/glider had right of way and the AS365 pilot was required to keep out of the way of the other aircraft by altering course to the right².

Comments

RAF Halton

The Halton AOB contains the recommended route for noise abatement procedures for any given runway in use. When operating from RW20 or RW25, aerotow operations pass out of the ATZ around the World End Garden centre at 500-800ft. In order to drop the gliders within practical gliding distance back to Halton, a turn is necessary for the glider to release generally in an area SE of Wendover around 2000ft. Traffic routing North or South avoids the Halton ATZ by routing through the 'Wendover Gap', which is to the SE of the airfield. For GA traffic, there are good visual ground clues to aid navigation; the A413 and the Aylesbury to London Rail-link. Unfortunately, this pinch-point coincides with the glider release area and the subsequent Tug recovery.

HQ Air Command

Halton airfield operates a mixture of powered aircraft and gliders; local procedures are in place to keep these aircraft apart when operating within the ATZ. When coupled with the noise abatement requirements in the local area, this leads to the aero-tows being obliged to exit the ATZ in the SW corner to avoid Wendover village before re-entering the ATZ to release the gliders in the vicinity of Wendover Woods. The gliding instructors and tug pilots are aware of the potential for conflict with transiting traffic in this area and consequently maintain an enhanced lookout whenever operating to the W and SW of Wendover. In the absence of other viable barriers, crews have to rely on their lookout, and this ultimately permitted the glider crew to spot the passing helicopter, albeit quite close, and ensure that separation was maintained without the need to release from the tow.

The investigation into this incident has led to a recommendation that the local flying orders be reviewed to understand if there may be an alternative routing that a combination can take to avoid this known choke point, though local airspace structure and noise abatement restrictions make any change unlikely. Furthermore, it was also noted that whilst the tug aircraft are FLARM-equipped, they do not carry transponders. This denies any possible interaction with a TCAS or TAS-equipped aircraft and it has therefore also been recommended that aero-tow aircraft be fitted with transponders.

Summary

An Airprox was reported when a PA25/ASK21 combination and an AS365 flew into proximity at 1115 on Thursday 13th July 2017. Both pilots were operating under VFR in VMC; neither were in receipt of an ATS.

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(3) Overtaking.

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 and radar photographs/video recordings.

The military member first briefed the Board on the airspace and glider arrangements at Halton, explaining that with mixed glider and powered aircraft operations, they operated a 'glass-wall' circuit with gliders operating on one side and powered aircraft on the other. Coupled with the noise abatement procedures and the need to avoid the built-up areas of Aylesbury and Wendover, the glider operations are funnelled into a very small area. Additionally, as they generally teach ab-intio gliding students, there is a requirement to release the glider from the tug within gliding distance of Halton. As stated in the HQ Air Command comment, these procedures will be reviewed to see whether there is a better solution to avoid the pinch-point and leaving the ATZ, and the Board were heartened to hear it.

Looking at the actions of the glider/tug combination, the Board noted that the glider pilot and his student had seen the helicopter earlier on climb-out and some members thought that, notwithstanding that they were turning away, they could have called it to the tug pilot at that point because it might have cued him to look for it earlier. In the end, Halton radio alerted the PA25 pilot to the presence of the helicopter, but, because he was already turning towards clear airspace, he did not see it until it overtook from behind. Noting that the PA25 had FLARM fitted, but not a transponder, the Board thought that this was an missed opportunity for electronic conspicuity to act as a barrier because the AS365 had been fitted with a TCAS, which did not interact with FLARM, but would have picked up a transponder. As a result, the Board resolved to make a recommendation to HQ Air Command that the RAFGSA should only use transponder-equipped tugs.

Turning to the AS365 pilot's action, the Board noted that the HEN beacon was something of a choke point in the area, with aircraft routing towards it in order to proceed further in towards the LTMA whilst remaining clear of controlled airspace. Some members opined that he could have by sought an ATS from Farnborough who, under a Traffic Service may have given him Traffic Information on the glider if they could see it on their radar, and also on other traffic in the area. Moreover, they agreed with his own observation that an information call to Halton as he was passing would have been beneficial to all involved. Members also thought that he would have been better served by giving Halton a wider berth to ensure that he was well clear of anything departing. Having discarded an ATS as a barrier, and with the TCAS ineffective due to the lack of a transponder on the PA25, the last remaining barrier to prevent mid-air collision was look-out, and this too failed because the AS365 pilot did not see the glider/tug combination.

The Board attributed the AS365 pilot's non-sighting as the cause of the Airprox because the PA25 pilot could not have seen the AS365 approaching from behind. Because of this lack of sighting by either pilot until effectively CPA, and because neither pilot took any effective avoiding action as a result, the Board assessed the risk as Category A, providence had played a major part in events.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A non-sighting by the AS365 pilot.

Degree of Risk: A.

Recommendation: HQ Air Command considers mandating that the RAFGSA only use transponder-equipped tug aircraft.

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:

ANSP

Situational Awareness & Action was assessed as **fully effective** because Halton radio had given the PA25 pilot information about the AS365.

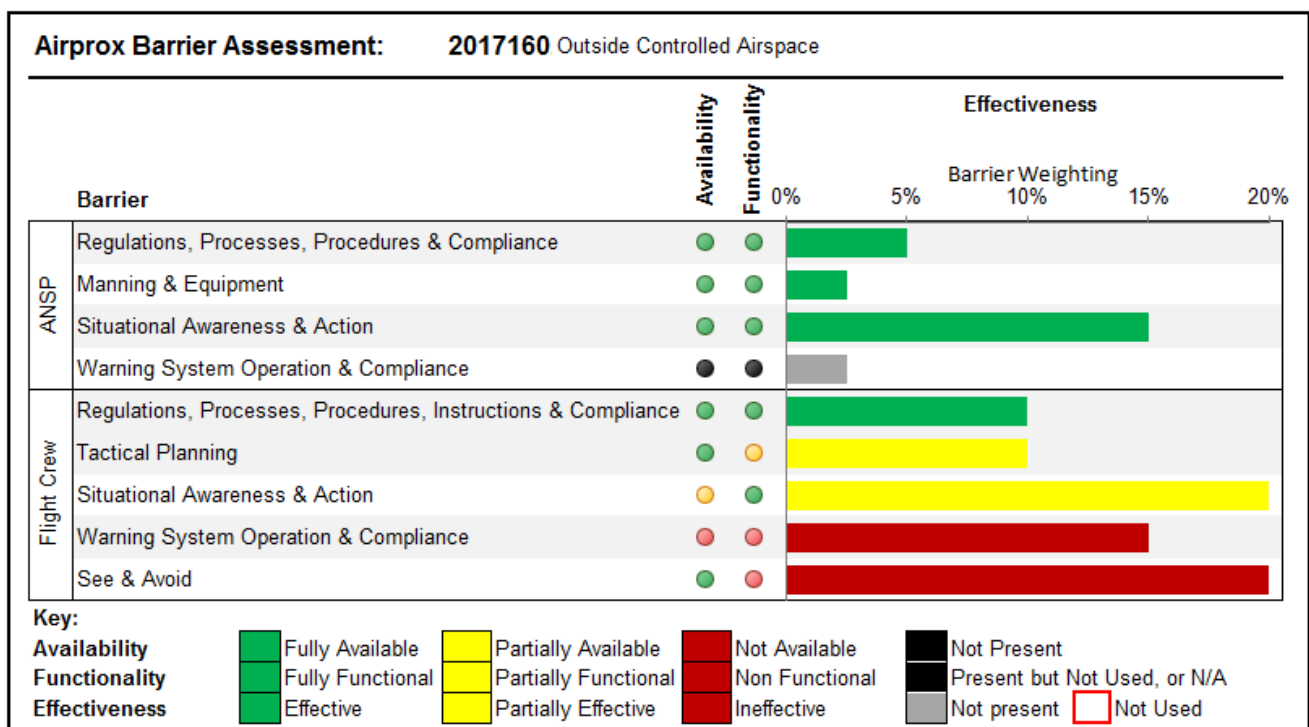
Flight Crew

Tactical Planning was assessed as **partially effective** because the AS365 pilot did not call Halton as he passed by, and could have given Halton a wider berth.

Situational Awareness & Action was assessed as **partially effective** because although the PA25 pilot had received generic Traffic Information on the helicopter at a late stage, the AS365 pilot had not known about the glider-tug combination.

Warning System Operation and Compliance was assessed as **ineffective** because the PA25 was not fitted with a transponder and so the AS365's TAS wasn't alerted to its presence.

See and Avoid was assessed as **ineffective**; the AS365 pilot had not seen the glider-tug combination and the PA25 pilot had not seen the AS365 in time to take any effective avoiding action.



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