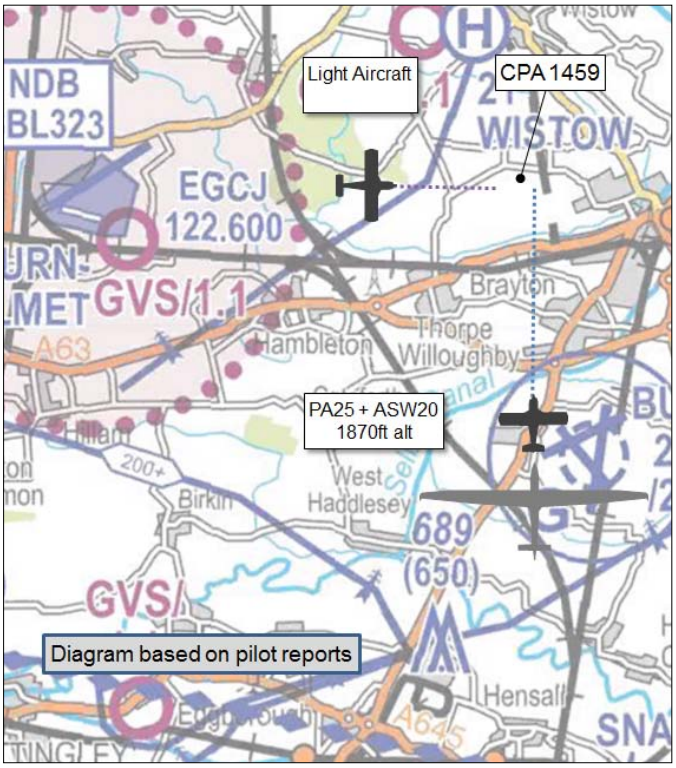
AIRPROX REPORT No 2016115

Date: 25 Jun 2016 Time: 1459Z Position: 5347N 00106W Location: Burn

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASW 20/PA25	Untraced Light Aircraft
Operator	Civ Club	Unknown
Airspace	Lon FIR	Lon FIR
Class	G	G
Rules	VFR	
Service	None	
Altitude/FL	NK	
Transponder	Not Fitted	
Reported		
Colours	White, Red Nose	
Lighting	Wing tip, Tail, Headlights, Strobes	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	1870ft	
Altimeter	NK	
Heading	360°	
Speed	60kt	
ACAS/TAS	Not fitted	
Alert	N/A	
Separation		
Reported	50ft V/0m H	
Recorded	NK	



THE ASW20 PILOT reports taking off from Burn using an aero-tow heading north towards active cumulus clouds situated NE of Selby, whilst avoiding Selby town and Sherburn ATZ. There was a large number of slow-moving cumulo nimbus clouds in the area at the time, cloud bases varied between 3000 and 4500ft. As the aero-tow progressed north towards the cumulus clouds, the glider pilot suddenly noticed a light-aircraft approaching rapidly from the left heading directly towards the tug. A split second from impact it pulled up and turned hard left (to the north) and then away to the west. As soon as he saw the aircraft he radioed the tug shouting 'light aircraft closing from left' but by the time the call had been made the aircraft had passed over the top of the tug in a climbing left turn. He believed that had the other aircraft not pulled up at the last minute, there would have been a mid-air collision right in front of him. The incident took place at 1559.04, he called Burn base and asked that the Airprox be reported immediately. The tug and glider continued for another minute, releasing at 2200ft agl in a left-hand turn. As the turn continued, he believed he saw the Airprox aircraft orbiting left before heading off to the east. He noted that there is currently a NOTAM in place highlighting a permanent change in winch launch ceiling at Burn from 2000 to 3000ft, effective from 1/04/16 until such time as the 1:500000 map is re-issued.

He assessed the risk of collision as 'High'.

THE PA25 (TUG) PILOT reports that he was conducting a normal aero-tow, with an experienced glider pilot on tow. After clearing the village of Burn he took the glider to the north to an area where the cumulus activity seemed to be at its best. The cloud-base was about 3000ft and he was alerted to the other aircraft by the glider pilot; about the same time, he saw the light-aircraft climbing away from him, it appeared to have come from the west, from the Sherburn area. The glider was released at 2200ft and, after it released, he banked sharply right and down. A few days later he was at

Sherburn to discuss this and other incidents with staff there. They confirmed that the Burn gliding activity and the 3000ft winch height was briefed to their pilots and to visitors.

He assessed the risk of collision as 'High'.

THE LIGHT-AIRCRAFT PILOT could not be traced. Although in the vicinity of Sherburn, it was by no means certain that the aircraft came from there, and Sherburn did not have a record of anyone getting airborne at that time.

Factual Background

The weather at Leeds Bradford was recorded as follows:

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METAR EGNM 251450Z 30013KT 9999 -TSRA FEW020 SCT032CB 13/10 Q1016=
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Analysis and Investigation

UKAB Secretariat

The Glider/Tug combination and light aircraft 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]. The light aircraft pilot was required to give way to the Glider/Tug[2].

Summary

An Airprox was reported when a PA25 (towing an ASW20) and a light-aircraft flew into proximity at 1459 on Saturday 25th June 2016. The aero-tow combination were operating under VFR in VMC and not in receipt of an ATS. The light-aircraft could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of the glider and tug aircraft.

The Board first looked at the actions of the glider-tug combination. It was clear that the glider pilot had seen the situation developing before the PA25 pilot, but that by the time he was able to issue a warning, the light-aircraft had merged and then manoeuvred away. Members agreed that, in Class G airspace, see-and-avoid is the main mitigation against mid-air-collision, but the Board also noted that the fitment of an electronic collision warning system to the PA25 (e.g. PilotAware or P-FLARM or similar) might have given the tug pilot more notice that the light aircraft was there (and vice-versa) if it had cooperative systems installed.

Turning to the light-aircraft pilot, the Board noted that all aircraft were flying in Class G airspace at the time, and that, although the light-aircraft pilot was required to give way to the glider-tug combination, this relied on the other pilot seeing the glider and tug in good time. Without the light-aircraft pilot's report, it was not possible to know whether he had seen the glider and tug late and had taken avoiding action, or whether he was coincidently just turning anyway. The Board also commented that, although it appeared to the glider pilot that the light-aircraft had come out of Sherburn, it could just as easily have simply been overflying that ATZ, or have could even have come from the north and turned over the woods to the east of Sherburn before coming into proximity.

In assessing the barriers in this incident, the Board noted that many of the barriers were not available: in particular, an ATS was unlikely to have been practicable, and the lack of a CWS on either the Glider or the PA25 meant that this was another absent barrier. See-and-avoid had become the last line of defence, which the Board thought had only been partially effective in that it had been a

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(2) Converging.

late/non-sighting by the glider/tug pilots, and probably a late sighting by the light-aircraft pilot based on his apparently last-ditch manoeuvre.

Turning to the cause of the Airprox, the Board therefore quickly agreed that this was a late sighting by the glider/tug pilots and a probable late sighting by the light-aircraft pilot. Members then debated the risk at some length. Some members opined that this was a very close call that was more due to providence than the light-aircraft pilot's manoeuvre, and therefore a Category A. However, in the end (and noting that the glider pilot hadn't felt it necessary to emergency disconnect from the aero-tow), it was agreed by a majority that, although safety had been much reduced, the light-aircraft pilot's manoeuvre had seemed to materially increase separation at CPA; therefore, the Board agreed that this was Category B incident.

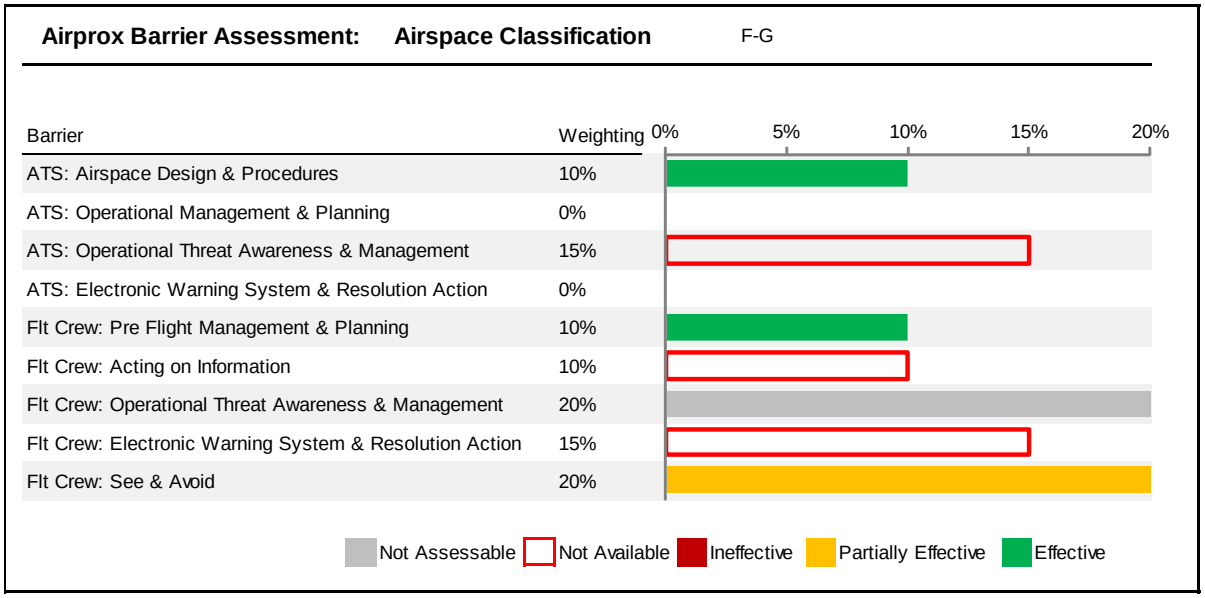
PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by the glider/tug pilots and probably a late sighting by the light aircraft pilot.

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.