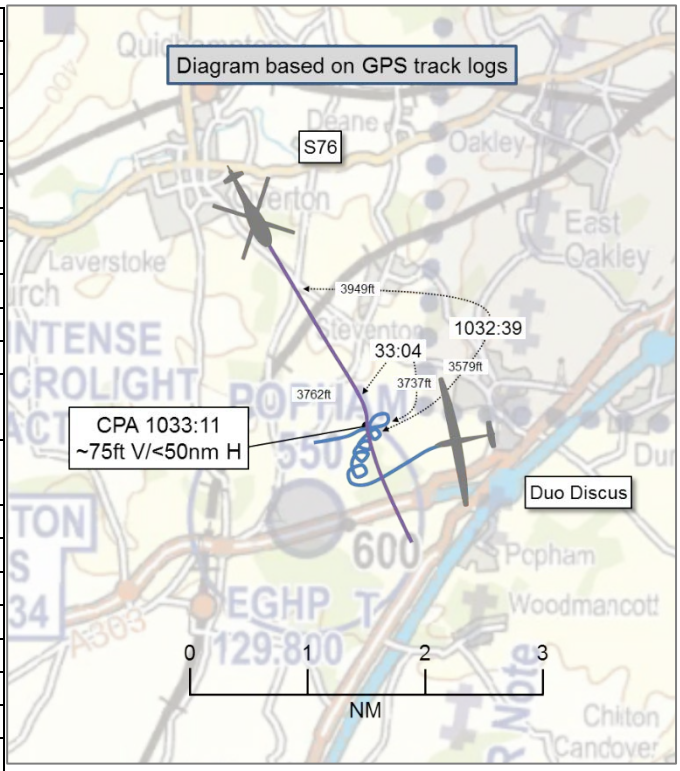
AIRPROX REPORT No 2018188

Date: 28 Jul 2018 Time: 1033Z Position: 5112N 00114W Location: ivo Popham airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Duo Discus	S76
Operator	Civ Gld	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Solent Radar
Altitude/FL	~3673ft	~3747ft
Transponder	SSR off	A,C,S
Reported		
Colours	White, high viz stripe on tail fin	Green, white, yellow
Lighting	Nil	Nav, red strobes, HISLs
Conditions	VMC	VMC
Visibility	>10km	10nm
Altitude/FL	3723ft	3735ft
Altimeter	QNH	QNH
Heading	255°	150°
Speed	55kt	140kt
ACAS/TAS	FLARM	TAS
Alert	None	None
Separation		
Reported	150ft V/100m H	300ft V/0.5nm H
Recorded	~75ft V/<50m H	



THE DUO DISCUS GLIDER PILOT reports thermaling in the vicinity of Popham Airfield, climbing from 2800-3723ft (GPS height) when he became aware of the sound of a powered aircraft. As he turned, he saw a helicopter approaching at high-speed, at a similar height. He immediately took evasive action by diving left to avoid a collision. The helicopter passed overhead by no more than 150ft and he noticed no discernible change in its direction or height which left him to believe that its pilot had not seen him. On return to his airfield 3hrs later he spoke to the CFI, who suggested that he file an Airprox report.

He assessed the risk of collision as 'High'.

THE SIKORSKY S76 PILOT reports that he saw a glider 30° degrees left of his helicopter in a turn at a range of about 1nm. He banked right to give a wider berth and then resumed his track for HANKY.

He assessed the risk of collision as 'Low'.

Factual Background

The weather at Southampton was recorded as follows:

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METAR EGHI 281020Z 22018KT 190V260 9999 FEW030 SCT035 18/07 Q1007=
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Analysis and Investigation

UKAB Secretariat

The Duo Discus and S76 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]. If the incident geometry is considered as converging then the S76 pilot was required to give way to the glider[2].

Comments

BGA

It would seem from the track information provided that the helicopter pilot saw a different glider to that involved in the Airprox. Gliders will frequently congregate in areas of good conditions; if you see one, look particularly carefully for others.

Summary

An Airprox was reported when a Duo Discus and an S76 flew into proximity near Popham at 1033hrs on Saturday 28th July 2018. Both pilots were operating under VFR in VMC, the Duo Discus pilot was not in receipt of an ATS and the S76 pilot was in receipt of a Basic Service from Solent Radar.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Members first discussed the Duo Discus pilot's actions and noted that, although his aircraft was transponder equipped, he had turned it off. GA members commented that this was not unusual in a glider, where often-limited battery capacity means that the pilot must make a prioritisation decision for its use. They went on to say that a pilot might wish, for example, to save the glider's battery for use when returning to a busy circuit to power the radios; to only operate the transponder near controlled airspace; or possibly to ensure the ability to deploy a sustainer retractable engine (as in the Duo Discus). The Board acknowledged these constraints but noted that the lack of glider SSR in this incident had effectively removed one of the barriers available to assist in preventing a collision because the S76's TAS would not be able to detect the presence of the glider without it squawking. Lack of SSR would also mean that there would not be an SSR return showing on a radar display. Although the Solent Radar controller was only providing a Basic Service to the S76, with no requirement to provide Traffic Information, it was possible that if he had realised the close proximity of the two aircraft he could have decided to provide Traffic Information under a duty of care. Some members wondered if the Duo Discus pilot was required under SERA regulations to select his transponder on but although SERA.13001 states that when an aircraft carries a serviceable SSR transponder the pilot shall operate the transponder at all times during flight, SERA.13001(c) contains a caveat that aircraft without 'sufficient electrical power supply' are exempted from this requirement. Although it was not considered unreasonable that the Discuss pilot would have to turn off his transponder at certain times, the Board agreed that the fact that he had selected it off was a contributory factor to the Airprox.

Turning to the actions of the S76 pilot, the Board noted that he was in receipt of only a Basic Service from Solent Radar. From experience, controller members commented that primary returns from gliders in the vicinity of Popham often show on their radar display, and they opined that the S76 pilot would have been better served by obtaining a radar service, preferably a Traffic Service, from Farnborough LARS. Noting the disparity between the glider and S76 pilots' descriptions of the incident, the Board wondered whether the S76 pilot had seen a different glider to the one involved. He had reported initially seeing a glider at 1nm and then passing with a separation of about 300ft vertically and 0.5nm horizontally. Fortunately, the Board were able to take advantage of the fact that both aircraft had GPS flight logs available which showed that the separation at CPA was actually about 75ft vertically and less than 50m horizontally. This led the Board to conclude that the S76 pilot had not seen the Duo Discus

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

because it was unlikely that he would misperceived the separation to such a great extent. A helicopter member commented that the view from an S76 cockpit is not ideal and could explain why the S76 pilot might not have seen the Duo Discus manoeuvring in front of him. Furthermore, the Duo Discus pilot reported that he had believed that the S76 pilot had not seen his aircraft because he had not noticed any discernible change in its direction or height, whereas the S76 pilot had reported that he had banked right for a glider. Ultimately, it was not known if other gliders were operating in the area, and none were shown on the radar recording available to the Board. However, because of the thermal activity in the area, it was a distinct possibility that there were other gliders in the vicinity.

The Board then turned to the cause and the risk. Members noted that the Duo Discus pilot first became aware of the presence of the S76 when he heard it and, on turning, saw the S76 very close and dived away. Noting that the S76 pilot had said he had seen the glider at 1nm, some members thought that if this had been the case then it would have meant that the S76 pilot had flown into conflict with the Duo Discus. Given the deductions outlined in the paragraph above, the Board concluded that the S76 pilot had not seen the Duo Discuss and so they therefore agreed that the situation represented a late sighting by the Duo Discus pilot and probably a non-sighting by the S76 pilot. Turning to the risk, members agreed that because the Duo Discus pilot had only seen the S76 at a very late stage he had only been able to take immediate emergency avoiding action to avert a collision at the last moment; even then the separation between the aircraft had been reduced to a bare minimum. Bearing in mind that the S76 pilot had probably not seen the glider, the Board assessed that the incident had been close enough that there had been a serious risk of a collision; risk Category A.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by the Duo Discus pilot and probably a non-sighting by the S76 pilot.

Contributory Factor: The Duo Discus pilot selected his transponder off.

Degree of Risk: A.

Safety Barrier Assessment[3]

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

Flight Crew:

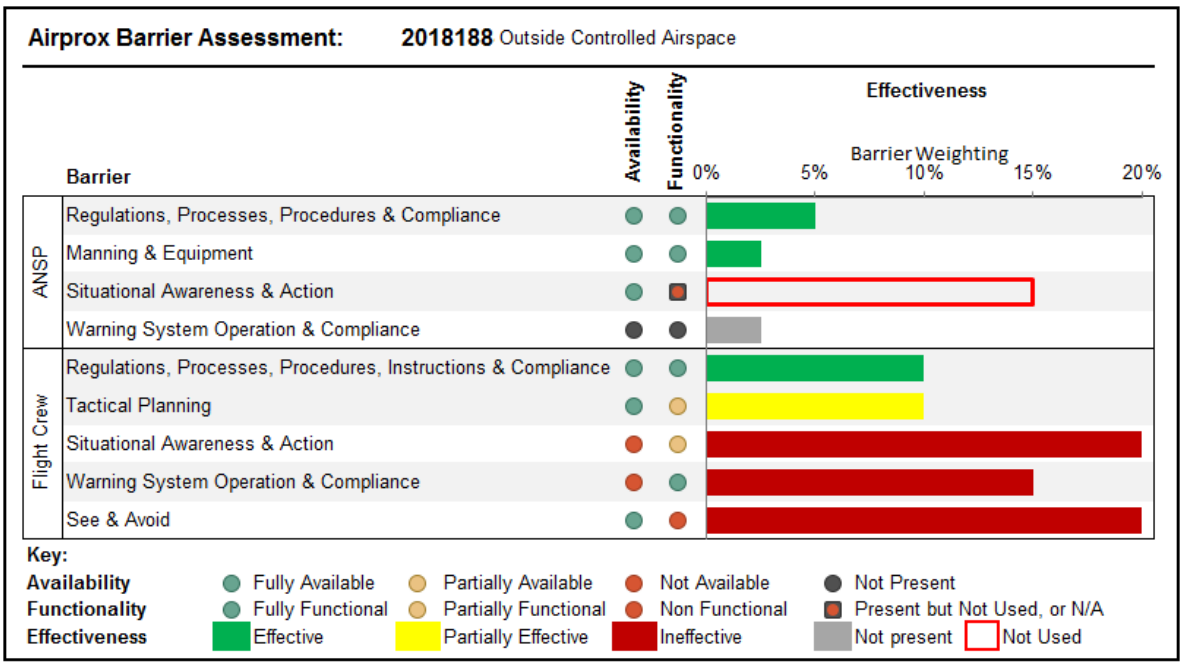
Tactical Planning was assessed as **partially effective** because the Duo Discus pilot had switched off his transponder.

Situational Awareness and Action were assessed as **not available** because neither pilot was in receipt of a service that could provide Traffic Information.

Warning System Operation and Compliance were assessed as **ineffective** because the glider's FLARM was not compatible with the S76's TAS, and the Duo Discus pilot had switched off his transponder thereby effectively rendering the S76 TAS as unavailable.

See and Avoid was assessed as **ineffective** because although he saw the S76 very late and dived away, the Duo Discus pilot probably only managed to minimally increase separation and the S76 pilot probably did not see the Duo Discus.

[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: 2018188 Outside Controlled Airspace
Barrier
Availability
Functionality
Effectiveness
Barrier Weighting
0%
5%
10%
15%
20%
ANSP
Regulations, Processes, Procedures & Compliance
Manning & Equipment
Situational Awareness & Action
Warning System Operation & Compliance
Flight Crew
Regulations, Processes, Procedures, Instructions & Compliance
Tactical Planning
Situational Awareness & Action
Warning System Operation & Compliance
See & Avoid
Key:
Availability
Fully Available
Partially Available
Not Available
Not Present
Functionality
Fully Functional
Partially Functional
Non Functional
Present but Not Used, or N/A
Effectiveness
Effective
Partially Effective
Ineffective
Not present
Not Used