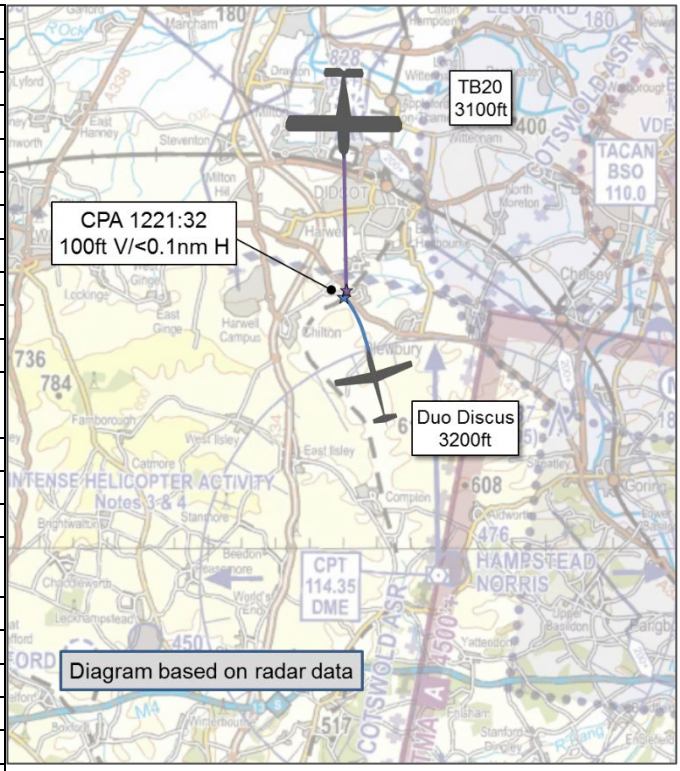
AIRPROX REPORT No 2019122

Date: 25 May 2019 Time: 1221Z Position: 5134N 00115W Location: 7nm SW Benson

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Duo Discus	TB20
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider		Oxford
Altitude/FL	3200ft	3100ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White/Orange wing tips	Green/ White
Lighting	N/K	Nav, Landing
Conditions	VMC	VMC
Visibility	50km	10km
Altitude/FL	3150ft	2800ft
Altimeter	QFE (1000hPa)	QNH (1018hPa)
Heading	345°	180°
Speed	84kt	135kt
ACAS/TAS	FLARM	Not fitted
Alert	Unknown	N/A
Separation		
Reported	175ft V/30m H	Not Seen
Recorded	100ft V/<0.1nm H	



THE DUO DISCUS PILOT reports gliding in a slow descent between thermals about 5km east of West Isley. Visibility was good and the rear-seat handling pilot spotted a light-aircraft coming straight towards them, first sighting was at about 1000ft away. The front-seat pilot saw it at about the same time. The handling pilot took immediate avoiding action, turning away from the light-aircraft. No action was seen to be taken by the other aircraft, so they suspected he hadn't seen the glider.

The pilot assessed the risk of collision as 'High'.

THE TB20 PILOT reports flying straight-and-level with the auto-pilot engaged. He did not see the glider.

Factual Background

The weather at Oxford was recorded as follows:

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METAR EGTK 251250Z 30007KT 250V350 9999 SCT044 20/09 Q1018=
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Analysis and Investigation

UKAB Secretariat

The Duo Discus and TB20 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 head-on or nearly so then both pilots were required to turn to the right[2].

[1] SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.
[2] SERA.3210 Right-of-way (c)(1) Approaching head-on. MAA RA 2307 paragraph 13.

Comments

BGA

We commend the sailplane pilot for their lookout; a head-on aircraft is particularly difficult to spot.

Summary

An Airprox was reported when a Duo Discus and a TB20 flew into proximity 7nm south-west of Benson at 1221hrs on Saturday 25th May 2019. Both pilots were operating under VFR in VMC, the Sailplane pilot was not in receipt of an ATS and the TB20 pilot in receipt of a Basic Service from Oxford.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft and radar photographs/video recordings. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board first looked at the actions of the Duo Discuss pilot who was slowly descending from a thermal when he saw the TB20 ahead. Members noted that Benson were not open to give a LARS service at the weekend and so the glider pilot had been denied the opportunity of gaining situational awareness from that source prior to seeing the other aircraft (**CF3**). Given that the glider was transponder-equipped, some members wondered whether a call to Oxford, Brize or Farnborough might have been advantageous but they accepted that, other than perhaps fortuitous assimilation of other aircraft transmissions, all of these options were unlikely to offer much assistance due to the nature of his flight. Although the Duo Discuss was fitted with FLARM, this was could not detect the TB20's transponder (**CF4**) and so the glider pilot was denied any prior situational awareness from that also. In the end, although later than desirable, the Board noted that the glider pilot saw the TB20 and was able to take avoiding action (**CF5**).

The TB20 pilot reported being on a Basic Service with Oxford, but the time elapsed since the incident and the TB20 being traced meant that the Board were unable to corroborate that with Oxford. In providing a Basic Service, Oxford were not required to monitor the TB20, or provide Traffic Information (**CF1**), and members wondered whether the TB20 pilot may have been better placed asking for a Traffic Service (**CF2**). Similar to the Discus pilot, the TB20 pilot therefore did not have any situational awareness from ATC (**CF3**), nor was the aircraft fitted with a CWS. The latter was unfortunate because, unusually, the glider was squawking so if the TB20 had been fitted with a CWS of some description, it may well have picked up the glider's transponder and alerted the pilot to its presence. Acknowledging that gliders are notoriously difficult to see head-on, the Board noted that the TB20 pilot did not see the glider at all and therefore was not able to take any avoiding action (**CF6**).

In assessing the risk, the Board's discussion centred mainly on whether the avoiding action taken by the glider pilot had been taken in sufficient time to materially affect the separation. Given the estimated range of 1000ft at first sighting, in the end they decided that, notwithstanding the likely lack of manoeuvrability by the glider if it was at slow speed between thermals, the glider pilot's report indicated that he had had time to actively assess the situation and react which indicated that his manoeuvre probably had improved the separation. Nevertheless, the Board agreed that this had been emergency avoiding action where safety had been much reduced below the norm and, accordingly, they assessed the risk as Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Contributory Factors:

	2019122		
CF	**Factor**	**Description**	**Amplification**
	Ground Elements		
	• Situational Awareness and Action		
1	Contextual	• Situational Awareness and Sensory Events	Not required to monitor the aircraft under the agreed service
	Flight Elements		
	• Tactical Planning and Execution		
2	Human Factors	• Communications by Flight Crew with ANS	Appropriate ATS not requested by pilot
	• Situational Awareness of the Conflicting Aircraft and Action		
3	Contextual	• Situational Awareness and Sensory Events	Pilot had no, only generic, or late Situational Awareness
	• Electronic Warning System Operation and Compliance		
4	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
	• See and Avoid		
5	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots
6	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: B.

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 Elements:

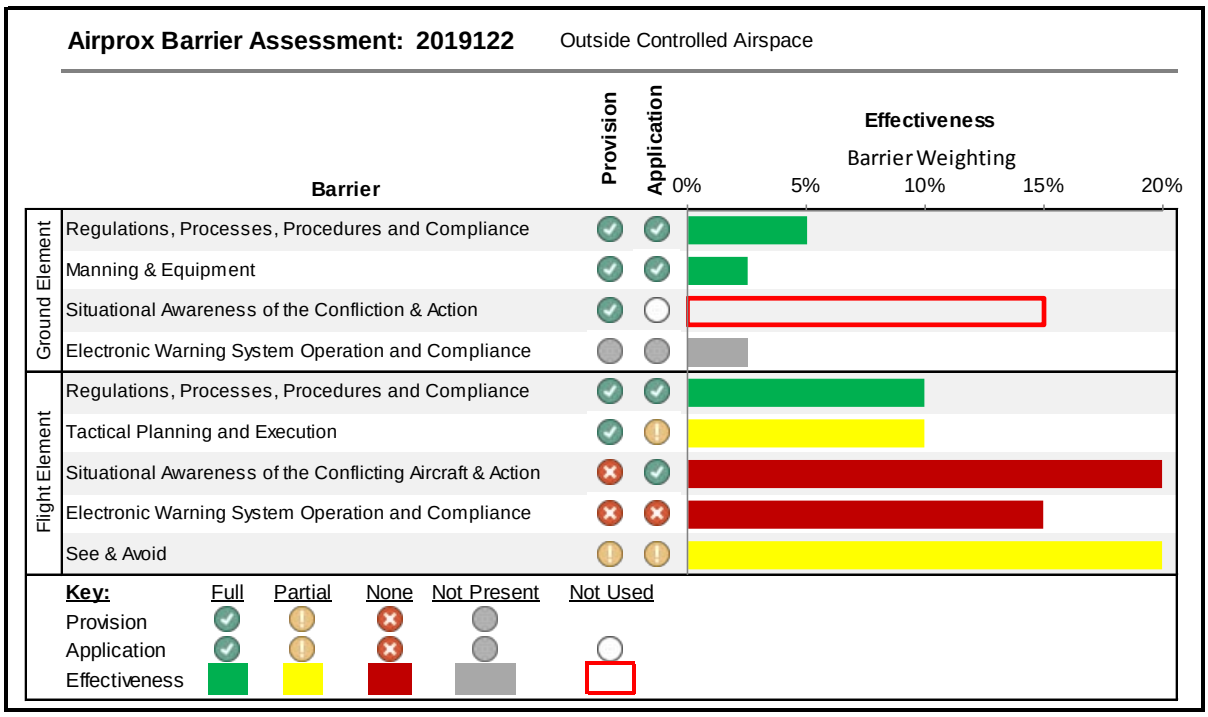
Tactical Planning and Execution was assessed as **partially effective** because the TB20 pilot could have upgraded to a Traffic Service.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any prior knowledge about the other.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the Duo Discuss was fitted with FLARM which could not detect the TB20's incompatible transponder.

See and Avoid were assessed as **partially effective** because the Duo Discuss pilot managed to take avoiding action, albeit late.

[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: 2019122
Outside Controlled Airspace
Barrier
Provision
Application
Effectiveness
Barrier Weighting
0%
5%
10%
15%
20%
Ground Element
Regulations, Processes, Procedures and Compliance
Manning & Equipment
Situational Awareness of the Confliction & Action
Electronic Warning System Operation and Compliance
Flight Element
Regulations, Processes, Procedures and Compliance
Tactical Planning and Execution
Situational Awareness of the Conflicting Aircraft & Action
Electronic Warning System Operation and Compliance
See & Avoid
Key:
Full
Partial
None
Not Present
Not Used
Provision
Application
Effectiveness