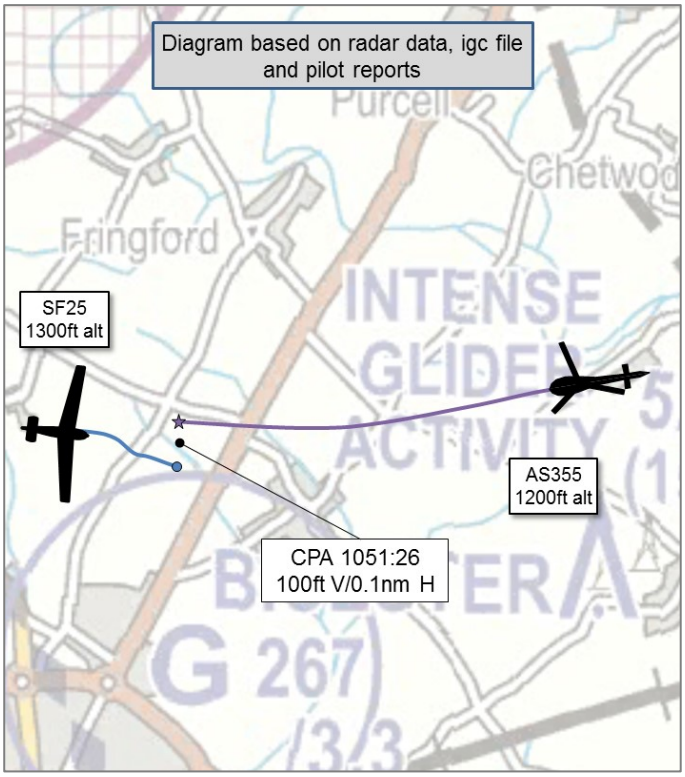
AIRPROX REPORT No 2019271

Date: 15 Sep 2019 Time: 1051Z Position: 5155N 00107W Location: 1.3nm north Bicester airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	SF25 Glider	AS355
Operator	Civ FW	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Basic
Provider	Bicester	Oxford
Altitude/FL	1300ft	1200ft
Transponder	Not fitted	A, C, S
Reported		
Colours	Red, White	White, Green
Lighting	None	Anti Col, Nav
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	800ft	1200ft
Altimeter	QFE[1]	QNH
Heading	130°	270°
Speed	65kt	120kt
ACAS/TAS	FLARM	TCAS I
Alert	None	None
Separation		
Reported	30ft V/30m H	200ft V/0.25nm H
Recorded	100ft V/0.1nm H	



THE SF25 PILOT reports that he had completed a local training flight, during which they spent time considering lookout and how the motor glider's FLARM was a helpful aid. He flew towards the RH circuit to land on RW31 at Bicester airfield (the active in-use runway for winch, aerotow and self-launching on that day) and joined the downwind leg. As he was looking towards his 2 o'clock low towards the available landing area, the student pilot pointed out 'I think there's a helicopter ahead'. He immediately scanned across his 12 o'clock and saw a 'blob' flying towards them, a couple of kilometres away. He adjusted his heading to the right to ensure that he kept adequate clearance and watched the helicopter pass almost parallel down his left-hand side without it changing height or heading he thought.

The pilot assessed the risk of collision as 'None'.

THE AS355 PILOT reports that he was heading west. He was aware that Bicester gliding site was on his planned route and he intended to remain to the north of it before turning left direct to his destination. As he approached the gliding site he kept a good lookout to his left towards the airfield. He saw plenty of activity on the ground which indicated to him that there was a high chance of gliders being airborne around the airfield, this was borne out when he saw a couple of gliders overhead the airfield. While remaining north of the gliding area, he saw a glider in his 10 o'clock and about 200ft below as he passed north abeam. No avoiding action was necessary. Despite being aware of the gliding site, on a clear sunny weekend day, he believes that, in hindsight, he could have taken a slightly wider route, which he did on his return trip.

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

[1] Bicester elevation 267ft.

THE OXFORD CONTROLLER reports that they were made aware on the 19th September 2019 that an Airprox occurred between an aircraft under a Basic Service with them and another aircraft near Bicester aerodrome. The aircraft came on frequency a few miles before Bicester and was passed generic Traffic Information to him about Bicester airfield being active. The pilot reported visual with two contacts. Nothing was reported on frequency.

Factual Background

The weather at Oxford was recorded as follows:

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METAR EGTK 151050Z 36007KT 9999 SCT026 21/13 Q1025
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Analysis and Investigation

UKAB Secretariat

The SF25 and AS355 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[2]. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right[3]. 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[4].

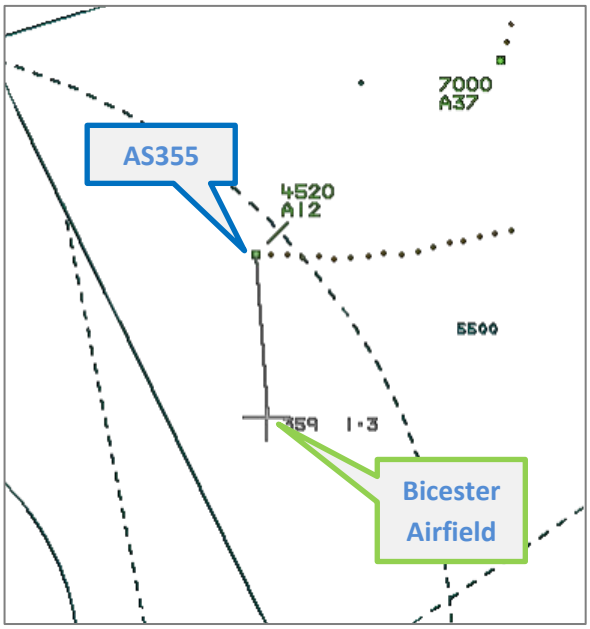


Figure 1: AS355 distance from Bicester Airfield at CPA

Comments

BGA

The area around Bicester is particularly busy with transiting traffic, we commend the SF25 crew for their lookout and the Squirrel pilot for their open and honest response.

Summary

An Airprox was reported when an SF25 and an AS355 flew into proximity near Bicester airfield at 1051hrs on Sunday 15th September 2019. Both pilots were operating under VFR in VMC, the SF25 listening out on the Bicester frequency and the AS355 pilot in receipt of a Basic Service from Oxford.

[2] SERA.3205 Proximity.
[3] SERA.3210 Right-of-way (c)(1) Approaching head-on.
[4] SERA.3225 Operation on and in the Vicinity of an Aerodrome.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, igc data and reports from the air traffic controller involved. 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments. Although not all Board members were present for the entirety of the meeting and, as a result, the usual wide-ranging discussions involving all Board members were more limited, sufficient engagement was achieved to enable a formal assessment to be agreed along with the following associated comments.

The Board began by looking at the actions of the SF25 glider pilot. He had seen the AS355 at 2km and had turned slightly to increase separation. Noting his estimate of separation at CPA (30ft vertically and 30m horizontally), some members wondered why he had allowed himself to fly so close to the other aircraft and had not made a greater turn to provide more of a margin. Although the AS355 pilot was required to avoid the pattern of traffic at Bicester, if another aircraft is approaching and not deviating, then defensive flying would have suggested a greater turn away to achieve more than 30m separation. Members opined that the SF25 pilot may have placed too much reliance on expecting the AS355 pilot to see him and turn away in the belief that the AS355 pilot was too close to the glider site circuit (**CF6**). Commenting on the difference between the SF25 pilot's reported separation and the recorded separation (0.1nm equals 185m), members noted that there was a degree of inaccuracy in radar measurements, which meant that the separation could have been less. Nevertheless, they wondered whether the SF25 pilot had underestimated the separation somewhat given that he also did not think that there had been a risk of collision.

Turning to the actions of the AS355 pilot, the helicopter members commented that, as he himself acknowledged, he could have planned to route further from the glider site, although he did avoid Bicester by a wider margin on his return flight. Noting that Bicester glider site does not have an ATZ, some members believed that, at 1.3nm distance from the site, he had at least attempted to avoid it laterally by an adequate margin and that the issue was more about his chosen transit height. The Board often sees incidents where helicopters are transiting at or near to 1000ft height, which is exactly the height of many minor airfield circuits. One member commented that, by simply flying at 1500-2000ft when possible, many conflicts with minor airfield circuits could easily be avoided. As it happened, the AS355 pilot saw the SF25 later than desirable, probably due to the head-on aspect, and determined that no avoiding action was required at that point (**CF5**), probably because the SF25 pilot had already turned to avoid. Neither pilot had any specific information on the other aircraft (**CF3**), and their electronic warning systems were not compatible with each other (**CF4**); the AS355 was not FLARM equipped, and the SF25 was not transponder equipped.

For his part, because the SF25 was not transponder-equipped it did not display on the Oxford controller's radar which meant that the he could not see the confliction. As a result, the controller had no information to assist him in being able to pass any Traffic Information to the AS355 pilot. Furthermore, under a Basic Service the controller was not required to monitor the AS355 anyway, and so the AS355 pilot could not expect to receive Traffic Information (**CF1 & 2**).

Turning to the Risk, the Board agreed that because the SF25 pilot had seen the AS355 at 2km and was monitoring it throughout, there was no risk of collision. However, because the SF25 pilot could have done more to increase separation; the AS355 pilot could have avoided the pattern of traffic by a greater margin; and the AS355 pilot saw the SF25 later than desirable, the Board felt that safety had been reduced below the norm; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTOR(S) AND RISK

Contributory Factor(s):

	2019271		
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
2	Contextual	• Situational Awareness and Sensory Events	Generic, late, no or incorrect Situational Awareness
	Flight Elements		
	• Situational Awareness of the Conflicting Aircraft and Action		
3	Contextual	• Situational Awareness and Sensory Events	Generic, late, no or incorrect 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	Late-sighting by one or both pilots
6	Human Factors	• Perception of Visual Information	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: C.

Safety Barrier Assessment[5]

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

Ground Elements:

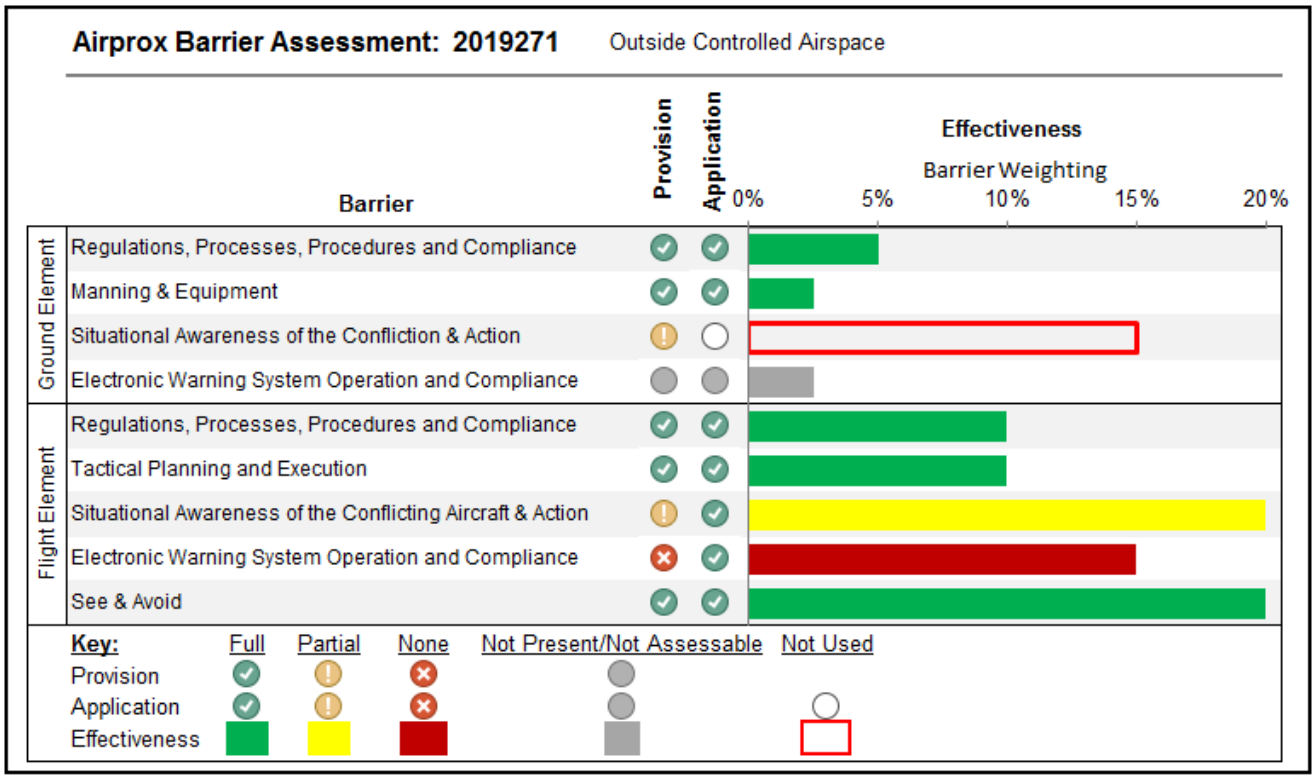
Situational Awareness of the Confliction and Action were assessed as **not used** because the Oxford controller was not aware of the presence of the SF25 glider because it was not visible on his radar screen.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the AS355 pilot only had generic information regarding gliders in the area of Bicester gliding site.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the aircraft were flitted with electronic warning systems that were incompatible.

[5] 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: 2019271
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 Assessable
Not Used
Provision
Application
Effectiveness