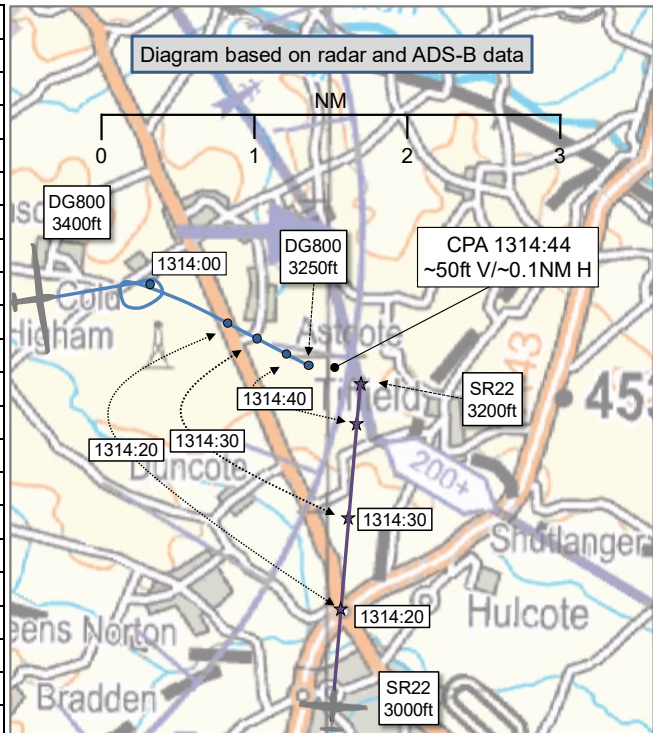


AIRPROX REPORT No 2023095

Date: 26 May 2023 Time: 1315Z Position: 5210N 00059W Location: 2NM North of Towcester

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DG800	SR22
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	NR
Service	None	Basic
Provider	NA	London Info
Altitude/FL	3250ft	3200ft
Transponder	Not fitted	A, C, S
Reported		
Colours	White	NK
Lighting	Strobe	NK
Conditions	VMC	NK
Visibility	>10km	NK
Altitude/FL	3300ft	NK
Altimeter	QFE	NK
Heading	120°	~010°
Speed	75kt	146kt
ACAS/TAS	SkyEcho	NK
Alert	None	NK
Separation at CPA		
Reported	'Similar' V/200m H	NK
Recorded	~50ft V/~0.1NM H	



THE DG800 PILOT reports that an aircraft crossed closely in front of them at a similar altitude. They had [TAS] and ADS-B [TAS] targets set to display on their Nav screen. No targets had been displayed and no audio warnings received. The DG800 pilot noted that their strobe light is forward facing and would not have been visible to the other aircraft approaching from that direction. The DG800 pilot thought that the aircraft must have come from the direction of their right wing which may have contributed to them not seeing it earlier. The DG800 pilot considered that the other aircraft pilot should have had them in their line of sight just left of their 12 o'clock but probably didn't see them as they didn't detect any avoiding actions.

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

THE SR22 PILOT. Despite significant effort by the UKAB Secretariat, it has not been possible to trace the SR22 pilot.

Factual Background

The weather at Cranfield was recorded as follows:

261320Z 06010KT 030V100 9999 SCT037 17/09 Q1032=

Analysis and Investigation

NATS Safety Investigations

The UK Airprox Board alerted NATS of potential involvement in this event on 14 November 2023. Given the time between the event and the notification, no RT or telephone calls were still available for review by the investigation, which has therefore been derived from the pilot narrative from the

DG800 and radar recording data. The SR22 had been displaying Mode-A code 1177 indicating the potential provision of a Basic Service from London FIS. NATS has not been able to confirm this service, however London FIS is only able to provide a Basic Service which is not a radar-derived flight service.

A primary radar return appeared in possible conflict with the SR22 at 1314:34 (Figure 1). There had been no altitude information available relating to the radar return. The closest lateral point of approach between the SR22 and the primary radar return was recorded as 0.1NM at 1314:50. The pilot of the DG800 reported the Airprox in the vicinity of Towcester, which matched with the location of the interaction between the SR22 and the displayed primary radar return.

UKAB Secretariat

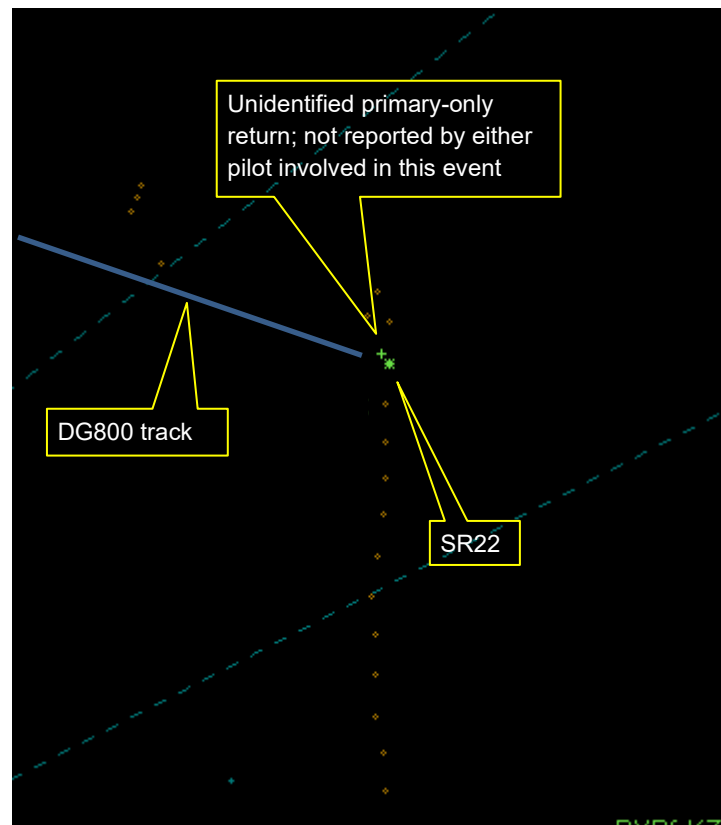


Figure 1: CPA with DG800/SR22/Unidentified ~1314:44
SR22 passed ahead of DG800 by approximately 50ft V/0.1NM H

Initial investigation led to the identification of the second aircraft as a DA40 – that pilot kindly submitted a report, declaring their lack of awareness of an Airprox in this case; this submission was supported by a comprehensive report from the ATS unit serving the DA40 pilot at that time. Subsequent investigation has recognised that aircraft not to be involved. Our thanks to their commitment to the process.

Latterly, the UKAB Secretariat identified the second aircraft in this event to have been an SR22 – it has not been possible to make contact with that pilot.

The DG800 and SR22 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 SR22 pilot was required to give way to the DG800 pilot.²

¹ (UK) SERA.3205 Proximity..

² (UK) SERA.3210 Right-of-way (c)(2) Converging.

Comments

AOPA

To obtain the best analysis of an Airprox, both pilots' recollections of the events are paramount to derive safety relevant points. In this case it is disappointing that one of the pilots could not be traced.

BGA

The glider owner-pilot is to be commended for carrying both an ADSB-In/Out device and the EC device fitted to almost all UK gliders, with data about nearby aircraft derived from both devices available via a single in-cockpit display. It is unfortunate that this system did not warn of the SR22's presence.

Summary

An Airprox was reported when a DG800 and an SR22 flew into proximity 2NM north of Towcester at 1315Z on Friday the 26th of May 2023. The DG800 pilot was operating under VFR in VMC and not in receipt of an Air Traffic Service. The SR22 pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the DG800 pilot, radar photographs/video recordings, GPS data and a report from the air traffic control agency 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.

Board members discussed the actions of the DG800 pilot; they noted positively the carriage and use of 2 popular sources of electronic conspicuity equipment and having equipped their aircraft with strong lighting to enable easier visual acquisition. Despite these precautions, the DG800 pilot had recorded no emissions from the SR22 (**CF2**) and had therefore not had any situational awareness of its proximity (**CF1**). They noted that the SR22 had passed approximately 0.1NM ahead of the DG800 and its proximity had caused concern for the DG800 pilot (**CF3**) but recognised that the DG800 pilot had reported no risk of collision.

Board members expressed disappointment that it had not been possible to trace the pilot of the SR22 and that, combined with a late identification of that aircraft as the 2nd party involved in the Airprox leading to a limited input from the Air Traffic Service provider due to the passage of time, meant that full examination of the events leading to the Airprox was not possible.

When assessing the risk, members considered the reports from the DG800 pilot, air traffic control agency, the radar replays available and the GPS data provided. They noted that the separation between the two aircraft had been reduced and that safety had been degraded but that the circumstances, actions and information available had been sufficient to prevent the aircraft from coming into close proximity and that, therefore, no risk of collision had remained. Accordingly, the Board assigned a Risk Category C to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2023095			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	Flight Elements			
	• Situational Awareness of the Conflicting Aircraft and Action			
1	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance			

2	Technical	<ul style="list-style-type: none"> ACAS/TCAS System Failure 	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
• See and Avoid				
3	Human Factors	<ul style="list-style-type: none"> Perception of Visual Information 	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: C.

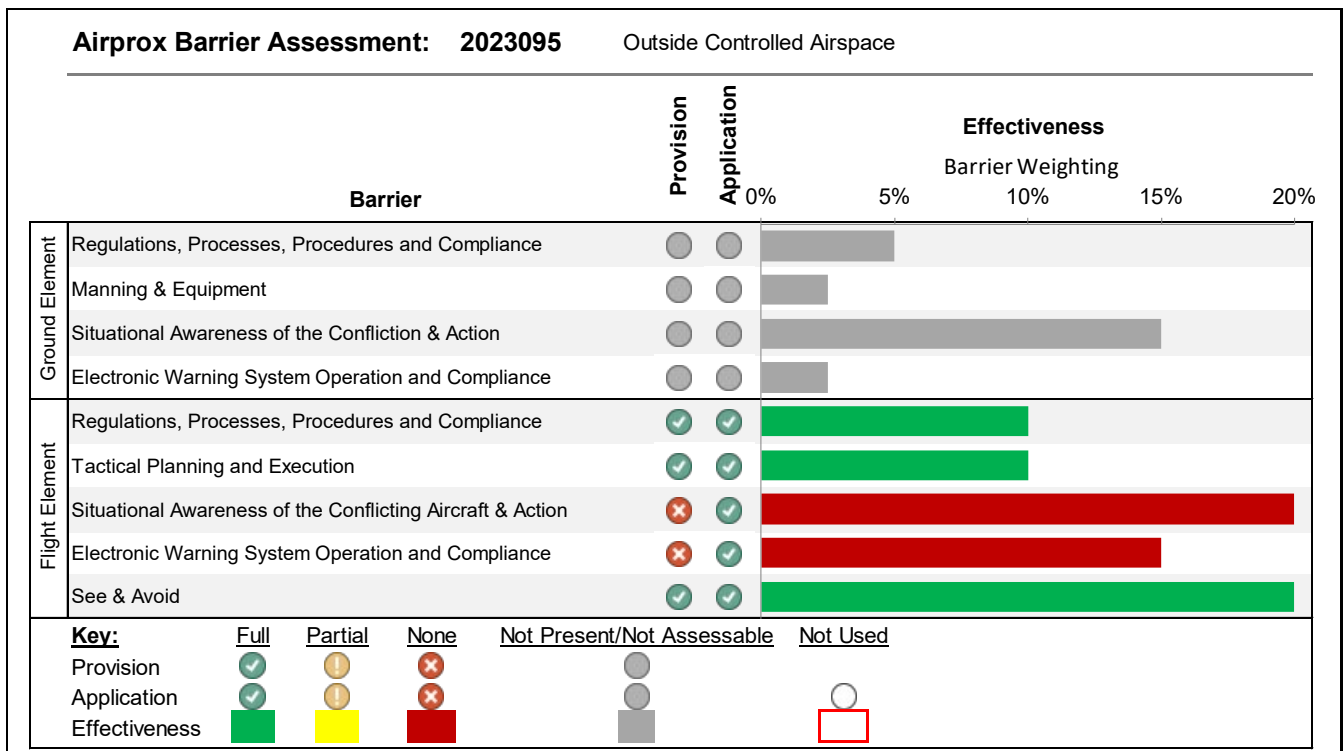
Safety Barrier Assessment³

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

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the DG800 pilot had no situational awareness of the SR22’s proximity.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because although the DG800 pilot carried two commonly utilised electronic conspicuity devices, and the SR22 had an active transponder, no interaction between the two aircraft was recorded in this event.



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