AIRPROX REPORT No 2023230

Date: 30 Sep 2023 Time: 0947Z Position: 5611N 00323W Location: 2.5NM WSW Portmoak

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Eurofox	SR22
Operator	Civ FW	Civ FW
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Basic
Provider	Portmoak Traffic	Edinburgh Radar
Altitude/FL	2680ft	2200ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Black, yellow	Red, silver
Lighting	Nav, strobes, landing	Landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2400ft	2100ft
Altimeter	QNH	QNH
Heading	310°	354°
Speed	65kt	148kt
ACAS/TAS	PowerFLARM	TAS
Alert	None	TA
Separation at CPA		
Reported	250ft V/80m H	0ft V/2NM H
Recorded	~480ft V/0.1NM H	

THE EUROFOX PILOT reports that they were the duty aerotow pilot and this was the second launch of the day. From 0940, they were aerotowing an ASK21. The flight was proceeding normally until 0946:10, when they started a gentle turn to the right to take the glider towards some potentially rising air. Shortly afterwards, at approximately 0946:20, they caught sight of an aircraft in their 10 o'clock position. They took a second or two to assess its trajectory, and took avoiding action by tightening their established turn, and kept the aircraft in sight. The [SR22] passed at its closest point within about 8sec of their initial sighting. The rest of the aerotow continued uneventfully.

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

THE SR22 PILOT reports that, having routed through the overhead at Edinburgh, they were flying north towards Perth. The visibility was excellent and they were alerted by Edinburgh to Portmoak being active and keeping a good lookout. Approaching west-abeam Portmoak, they were alerted by [TAS] to two aircraft in their 2 o'clock in the climb passing the same level as them. Initially, they considered altering course and altitude but, as they watched them, and with the information on [TAS], it became clear they were steering away from them in a southerly, anti-clockwise direction and also climbing above their level. In their opinion, supported by their co-pilot, there was no need for any diversionary action. They estimate that at no point did the aircraft come within 1.5NM of each other, or were at any time at risk of collision. [The SR22 pilot opines that,] other than for political purposes, they cannot see any reason for an Airprox report to have been filed for what is an everyday occurrence in the vicinity of airports outside controlled airspace.

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

THE EDINBURGH CONTROLLER reports that [the pilot of the SR22] called them requesting a VFR zone transit, south-to-north from a private site to [their destination airport]. The pilot was informed it was

a Basic Service outside controlled airspace and was given a routeing taking them through the Edinburgh CTR not above 2000ft on the Edinburgh QNH. It took a number of transmissions to get the pilot to fully readback the full clearance and routeing, but once confident that they would adhere to the routeing, [the Edinburgh controller] allowed them to transit.

After passing through the overhead, they noticed the [SR22] leaving the zone to the north in the vicinity of Kelty. They had seen the 0034 squawk in the vicinity of Portmoak gliding field, which is a known area for gliders to be operating. As the [SR22] continued further to the north, the STCA activated between the [SR22] and the aircraft squawking 0034. They passed Traffic Information on the [aircraft squawking] 0034 and informed the [pilot of the SR22] that it was probably a glider-tug operating from Portmoak, and they replied 'Roger'.

[The Edinburgh controller] assessed that there was no further requirement to update the Traffic Information. A short time afterwards, the [pilot of the SR22] requested to change frequency.

Factual Background

The weather at Edinburgh was recorded as follows:

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METAR EGPH 300950Z VRB01KT 9999 FEW012 12/10 Q1022
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. Both aircraft could be positively identified from Mode S data (Figure 1). Both pilots kindly supplied GPS track data for their respective flights. It was by combining the various data sources that the diagram was constructed and the separation at CPA determined.

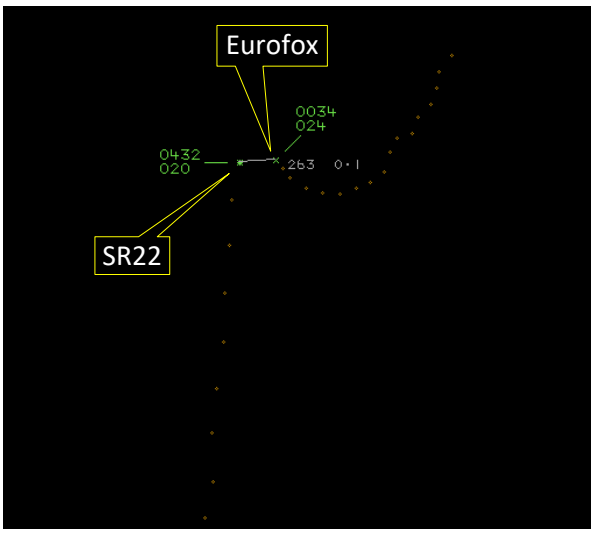


Figure 1 – CPA at 0946:32

The Eurofox 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 Eurofox.[2] If the incident geometry is considered as overtaking then the Eurofox pilot had right of way and the SR22 pilot was required to keep out of the way of the other aircraft by altering course to the right.[3]

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(2) Converging.
[3] (UK) SERA.3210 Right-of-way (c)(3) Overtaking.

Comments

AOPA

Before any turns are made, an effective lookout should be undertaken. Until there is commonality of electronic conspicuity, operating under an appropriate service is a prudent way to mitigate the risk of a mid-air collision. The air traffic controller should be commended for their duty of care under a Basic Service.

BGA

There are about 20,000 aircraft movements each year at Portmoak airfield, which operates every day during daylight hours (weather permitting). If transiting nearby below 3000ft AAL, a brief broadcast-call on the Portmoak aerodrome VHF channel (shown on CAA charts and listed in AIP ENR 5.5) using "Unattended Aerodrome" phraseology (CAP 413 Ed 23 §4.162 et seq) could help avoid conflicts and increase everyone's situational awareness.

Summary

An Airprox was reported when a Eurofox and an SR22 flew into proximity 2.5NM west-southwest of Portmoak at 0947Z on Saturday 30th September 2023. Both pilots were operating under VFR in VMC, the Eurofox pilot listening-out on the Portmoak Traffic frequency and the SR22 pilot in receipt of a Basic Service from Edinburgh Radar.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS track data and a report 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.

The Board first assessed the actions of the pilot of the Eurofox and considered the EC equipment fitted to their aircraft. Members noted that it would have been expected to have alerted to the presence of the SR22 but that an alert was not reported (**CF6**). Consequently, members were in agreement that the pilot of the Eurofox had not had situational awareness of the SR22 until it had been visually acquired (**CF4**).

Noting that the Eurofox had been towing a glider and its pilot had just commenced a turn to their right, members pondered the geometry of the encounter with the SR22 and wondered whether it may have been prudent to have reversed their turn and to have banked left instead. A member with particular knowledge of gliding operations explained that an aircraft with a glider in tow would have had reduced manoeuvrability. Members noted the narrative report provided by the pilot of the Eurofox and, acknowledging that they had described having taken a moment to have assessed the safest course of action, concluded that tightening their turn to the right had been appropriate, and had allowed them to have maintained visual contact. However, members appreciated that the proximity of the SR22 had caused the Eurofox pilot some concern (**CF8**).

Turning their attention to the actions of the pilot of the SR22, members noted that they had left Edinburgh controlled airspace and had intended to continue to track northwards. Whilst some members pointed out that the pilot of the SR22 should not have expected to have been passed any Traffic Information along their route whilst in receipt of a Basic Service, one member remarked that the provision of service in this case required further examination. Drawing the Board's attention to the narrative report provided by the Edinburgh controller, the member recalled the procedures provided in CAA CAP774 'UK Flight Information Services':

Appropriate type of ATS

1.9 A pilot shall determine the appropriate ATS for the various phases and conditions of flight and request that ATS from the controller/FISO. If a pilot fails to request an ATS, the controller/FISO should normally ask the pilot to specify the ATS required, apart from the following circumstances:

- FISOs will only provide a Basic Service;
- Controllers at approved ATC Units that do not have surveillance equipment available will routinely apply a Procedural Service to aircraft carrying out IFR holding, approach and/or departure procedures;
- Where ATC are unable to provide the full range of UK Flight Information Services to aircraft about to leave controlled airspace, a controller should specify the ATS that are available.

The member suggested that it appeared that the Edinburgh controller had provided a Basic Service by default rather than the pilot of the SR22 having requested the service that they had required. Notwithstanding, members were in agreement that a Basic Service had not been the most suitable to have negotiated the busy airspace ahead of them and that to have requested a Traffic Service may have been more prudent. Further, given that their track had been, in essence, a straight line through an area marked on VFR navigational charts as being an area of 'Intense Glider Activity', members were in full agreement that it would have been most prudent indeed to have tuned their radio to the Portmoak Traffic frequency and relayed their intentions of transiting through the area (**CF2**).

Members noted that the pilot of the SR22 had been passed Traffic Information by the Edinburgh controller on a contact ahead of them. It was also noted that the EC equipment fitted to the SR22 had detected the presence of the Eurofox and had alerted the SR22 pilot accordingly (**CF5**). It was agreed that such information had presented a good indicative model of the traffic situation and members next examined the description of the subsequent visual acquisition of the traffic. Members noted that the pilot of the SR22 had sighted an aircraft that they had described in their narrative report as having been turning in a "*southerly, anti-clockwise direction*" and that in their opinion there had not been a need to have altered course. Additionally, the pilot of the SR22 reported that there had been "*no need for any action*" and that "*they estimate that at no point did the aircraft come within 1.5NM of each other*". Members could not reconcile those statements with the evidence that the Eurofox had actually turned to the north in a clockwise direction and the aircraft had passed closer than 500m horizontally. As such, members determined that the pilot of the SR22 had, effectively, not sighted the Eurofox (**CF7**) and had flown close enough to it to have caused its pilot concern despite the available situational awareness of its proximity (**CF3**).

Members next considered the actions of the Edinburgh controller and noted that they had provided a Basic Service to the pilot of the SR22 once they had left Edinburgh controlled airspace. It was noted that the STCA had alerted the Edinburgh controller to a possible confliction between the aircraft (**CF1**) and had subsequently passed Traffic Information to the pilot of the SR22. Members were in agreement that there had been little else that the Edinburgh controller could have done to have helped the situation.

Concluding their discussion, members were in agreement that, having elected to transit through an area of intense glider activity, it would have been most prudent for the pilot of the SR22 to have relayed their intentions on the Portmoak Traffic frequency. Additionally, members felt that it may also have been prudent to have taken decisive action following the situational awareness available to them on the traffic situation. Members agreed that normal safety margins had been eroded during this encounter but the separation between the aircraft had been such that no specific risk of collision had existed. As such, the Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2023230			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Electronic Warning System Operation and Compliance			
1	Technical	• STCA Warning	An event involving the triggering of a Short Term Conflict Alert (STCA) Warning	

	Flight Elements			
	• Tactical Planning and Execution			
2	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
	• Situational Awareness of the Conflicting Aircraft and Action			
3	Human Factors	• Lack of Action	Events involving flight crew not taking any action at all when they should have done so	Pilot flew close enough to cause concern despite Situational Awareness
4	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			
5	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
6	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
	• See and Avoid			
7	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
8	Human Factors	• 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 Assessment[4]

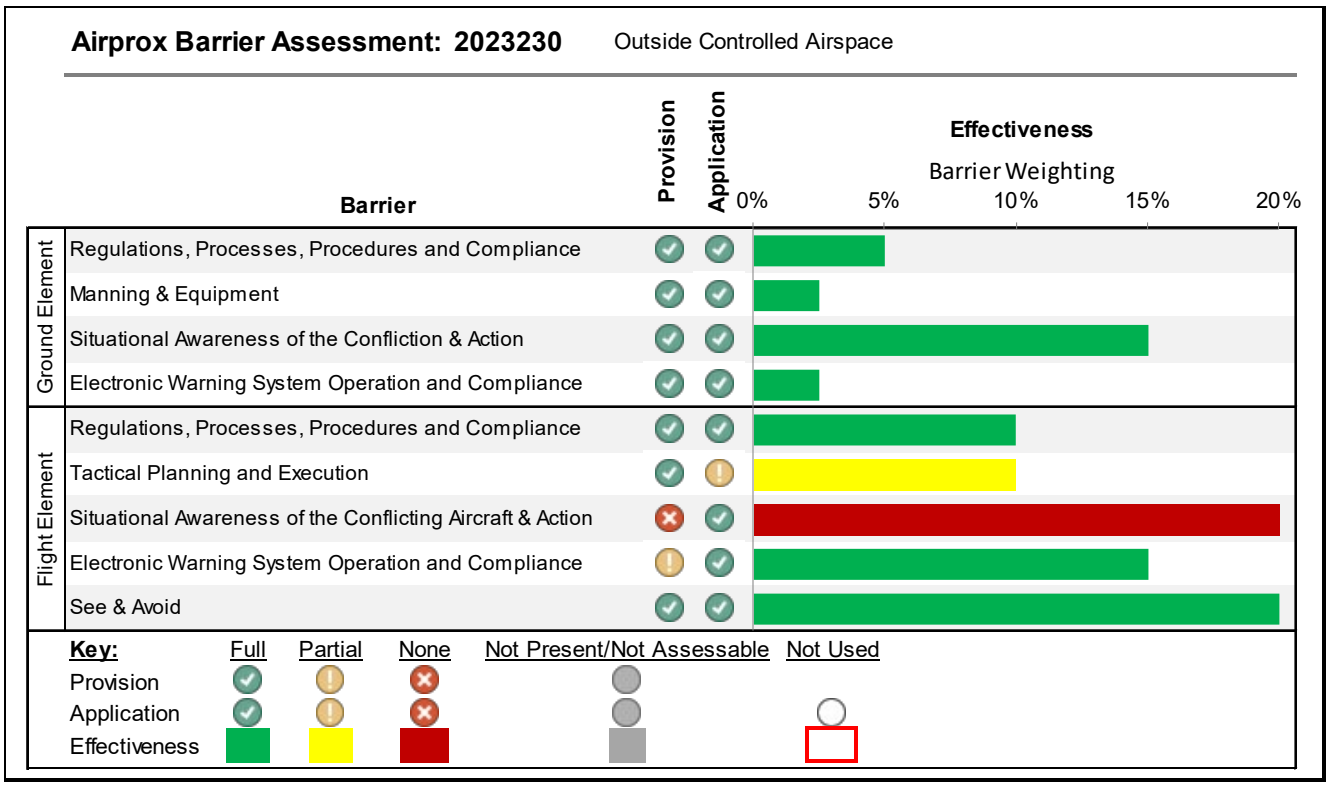
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because it may have been prudent for the pilot of the SR22 to have transmitted their intentions on the Portmoak Traffic frequency.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because, despite having situational awareness of the presence of the Eurofox, the pilot of the SR22 flew close enough to the Eurofox to cause its pilot concern.

[4] 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: 2023230
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