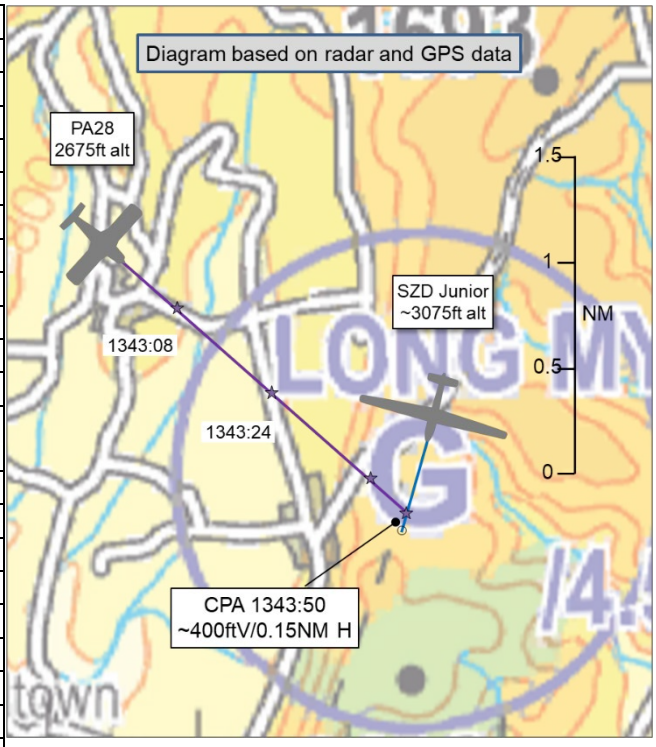
AIRPROX REPORT No 2025011

Date: 05 Feb 2025 Time: 1344Z Position: 5231N 00253W Location: Long Mynd

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	SZD-51-1 Junior	PA28
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Basic
Provider	Long Mynd	Shawbury Zone
Altitude/FL	~3075ft	2675ft
Transponder	Not fitted	A, C, S
Reported		
Colours	White	Orange, white
Lighting	Nil	Ldg, taxi, nav, bcn, anti-colls, strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	~2500ft	2700ft
Altimeter	QFE	QNH (1038hPa)
Heading	200°	135°
Speed	67kt	95kt
ACAS/TAS	FLARM	PilotAware
Alert	None	None
Separation at CPA		
Reported	Not seen	Not seen
Recorded	~400ft V/0.15NM H	



THE SZD JUNIOR PILOT reports that from their point of view the launch [had been normal]. The groundcrew gave the 'all clear above, behind and in front' signal. The pilot checked ahead (left to right +/-45° view approximately) and up towards their launch path (above and to the right of the main winch). They report that they had flown a normal circuit to the west of the airfield, landing to the west, flight time approximately 5min. They did not see the PA28 at any time during the flight. They were alerted to the conflict after landing by the groundcrew and other pilots.

THE PA28 PILOT reports that they had departed […] and climbed to 2700ft. The pilot believed they may have pressed 'direct' to their next waypoint on the GPS which unfortunately routed them over the gliding site. The pilot believed that they should have been more aware of tracking towards the site but had been distracted by a [radio] RX indication and background noise while contacting Shawbury. They note that they had probably not established contact at the time of the incident but had been trying to do so with a lot of [radio] background noise. The pilot believed that they may have had a stuck transmit button and had been checking it out. They report that they did establish contact and the RX noise stopped [at that time]. The pilot notes that they did not report this event on the radio as they had not seen a glider and didn't know that they had come close to it. They had been informed [about the event] later via [destination airfield staff]. The PA28 pilot was asked to contact the Midland GC which they did and talked it over with their safety officer and they accepted the explanation and didn't know if it would go any further so the PA28 pilot had left it at that. The pilot later added that there had been a break in the recorded track of their flight on the SkyDemon equipment which occurred roughly over the Long Mynd gliding site. This was because they had realised the [EC equipment] section of the SkyDemon was not working. They temporarily switched it off to log it into the aircraft. This had cured the issue but unfortunately had been another distraction which led to their poor navigation and probably lookout. The PA28 pilot and their passenger (who was also a pilot) both realised that it had been a mistake to overfly the site. The PA28 pilot stated that they are both glider pilots and realised the risk of flying over a winch

site. The passenger did say that they saw 2 gliders soaring the ridge and hadn't considered that they were a risk at the time; the PA28 pilot notes that they had not seen those gliders. Neither the pilot nor passenger had seen the glider on the winch which the pilot assumes was directly below them.

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

THE SHAWBURY CONTROLLER reports that, as the Shawbury Zone controller, they had been providing a Basic Service to the PA28 pilot who had been transiting the airspace around the Long Mynd area. This transit was completed without issue initially, however, an Airprox report was raised by a glider pilot operating also in the Long Mynd area [but] who had not been speaking to Shawbury. To the controller's knowledge, nothing had been reported by the pilot of the PA28. The controller noted that they had very limited memory and knowledge of this event as nothing significant had occurred at the time from their point of view and nothing was reported to them by any pilot they had been providing a service to at the time.

The controller perceived the severity of the incident as 'Medium'.

THE SHAWBURY SUPERVISOR reports that they had been [instructed] to [complete] a DASOR but had no knowledge this [event] had ever occurred hence the input was limited.

Factual Background

The weather at Shawbury was recorded as follows:

```
METAR EGOS 051320Z 24004KT 9999 FEW020 SCT110 BKN250 08/04 Q1038 NOSIG RMK BLACKBLU BLU=
```

Analysis and Investigation

Military ATM

Utilising occurrence reports and information from the local investigations, outlined below are the key events that preceded the Airprox. Where available they are supported by screenshots to indicate the positions of the relevant aircraft at each stage. Screenshots are taken from Unit radar recordings and therefore present the actual radar presentation of the SZD Junior and PA28 available to the controller.

Due to the PA28 pilot being unaware of the Airprox and Shawbury's involvement only being known following Radar Analysis Cell tracing activity, there had been a period of 4 weeks between the Airprox occurring and submission of the controller occurrence report.

Sequence of Events

Figure 1: (1342:57). PA28 pilot contacted Shawbury Zone.

At 1342:57, the PA28 pilot contacted Shawbury Zone. The pilot provided their VFR flight intentions, reported level at 2600ft on 1037hPa and requested a Basic Service. Additionally, they reported hearing what was believed to have been a stuck microphone on the frequency and that they were only just able to receive the Shawbury Zone controller. The Shawbury Zone controller issued a Mode 3A Code, provided the Shawbury QNH of 1038hPa and provided a Basic Service.

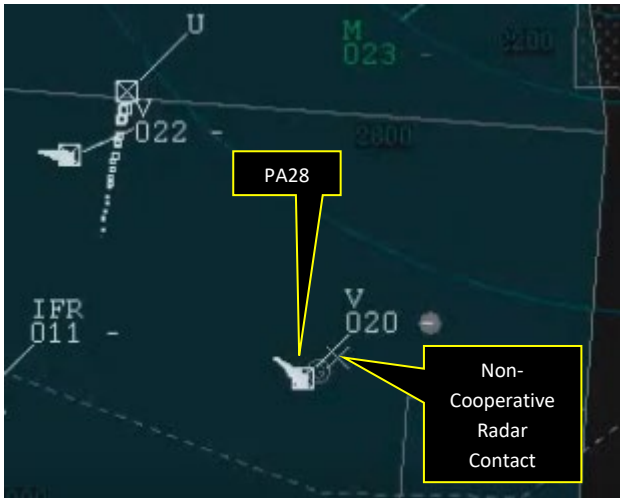


Figure 2: (1343:41). Non-cooperative radar contact displayed.

At 1343:41, a non-cooperative (primary) radar contact was displayed in the vicinity of Long Mynd Gliding Site.

At 1343:58, the PA28's Mode 3A Code changed to the code previously issued and the PA28 pilot reported it as set alongside reading back the Shawbury QNH at 1344:05. During this period, a further non-cooperative (primary) radar contact was displayed to the SW of the PA28 in the vicinity of Long Mynd. Both radar contacts remained within proximity of Long Mynd and only displayed for a brief period of approximately 20sec before fading from radar.

Local BM Investigation

A local investigation was conducted by Shawbury following the event to identify the ATS-related causal/aggravating factors. The investigation found that the Shawbury Zone controller had fulfilled their Basic Service responsibilities correctly with there being no requirement to monitor the PA28 and provide Traffic Information.

2 Gp BM Analysis

The actions of the Shawbury Zone controller are assessed to have been suitable and in accordance with Basic Service provision. Whilst the non-cooperative radar contacts were displayed, at the point of initial contact from the PA28 [pilot], none were displayed and equally at the point of contact the confliction had already passed. Therefore, had the Shawbury Zone controller monitored and identified the PA28 during each radio contact, in addition to the Basic Service requirement, no Traffic Information would have been provided as there had been no risk of collision present at either point. Had a Traffic Service been requested, generic Traffic Information may have been provided post initial contact, however, accurate Traffic Information would have most likely not occurred until after CPA given the requirement for radar identification of the PA28 and the time required for this to occur. As the SZD Junior had not been equipped with a transponder, the Shawbury Short Term Conflict Alert equally would not have triggered an alert.

UKAB Secretariat

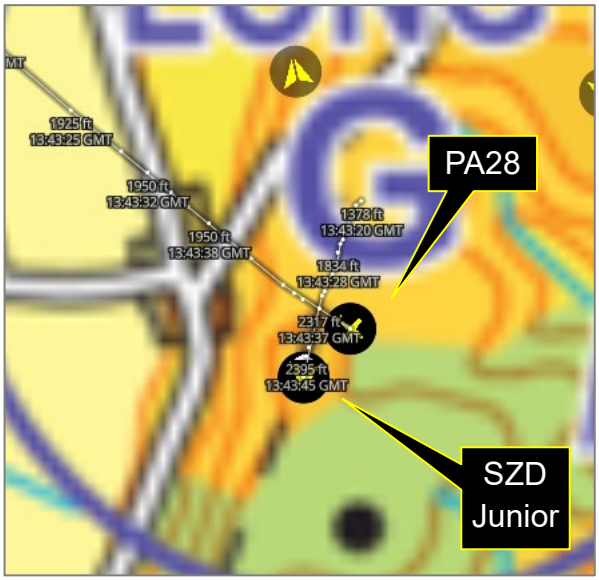


Figure 3: From the CAAs Airspace Analyser Tool at CPA. The SZD Junior is shown at 2400ft (SPS) and the PA28 is at 2000ft (SPS). QNH 1038hPa = +25hPa = +675ft. Therefore: the SZD Junior had been at 3075ft and the PA28 at 2675ft.

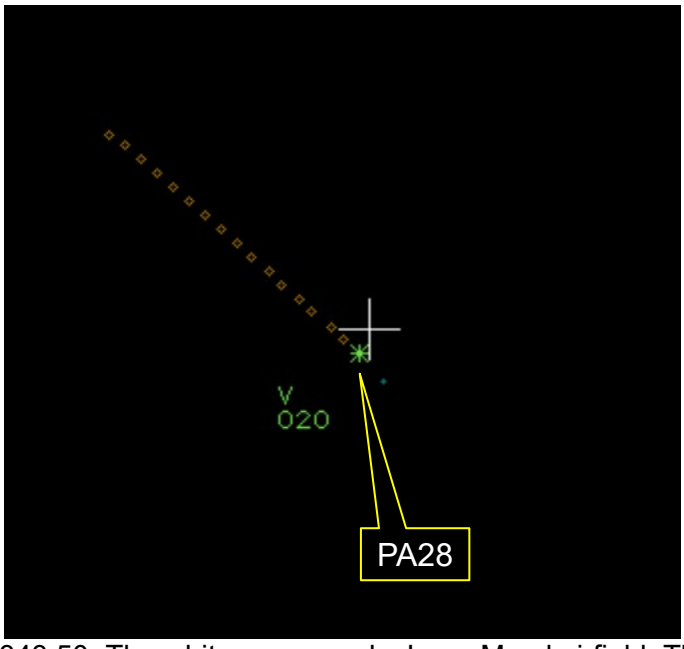


Figure 4: At CPA - 1343:50. The white cross marks Long Mynd airfield. The PA28 is shown at 2000ft (SPS), equating to 2675ft on QNH.

The PA28 did not display the Shawbury conspicuity squawk until approximately 35sec after CPA

The PA28 and SZD Junior 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 PA28 pilot was required to give way to the SZD Junior.[2] 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.[3]

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

Comments

AOPA

There are numerous factors that culminated in this Airprox, some of which can serve as a great teaching example for General Aviation. There were two pilots on board the PA28 which could have allowed a shared workload. The pilot flying flies the aircraft, continues the lookout and avoids airspace restrictions, allowing the pilot not flying to deal with the radio and GPS issues.

BGA

UK glider launch sites are listed in UK AIP ENR 5.5 and labelled on the CAA 1:500,000 and 1:250,000 charts with a "G" symbol, as shown in the chart segment in Part A. A greater density of gliders may be expected nearby at any time during daylight hours, and at any altitude up to cloud-base. In this incident the SZD Junior was being winch-launched from the gliding site on top of the Long Mynd ridge. Figure 5 shows this site's usual airfield configuration for the wind conditions at that time, with the take-off and landing direction along the top of the ridge. In preparation for a winch launch, high-tensile-strength steel cable is pulled out from the main (launching) winch to the launch point, approximately 1100m to the north, and attached to the glider. A second, retrieve cable is attached to the launching cable close to the glider; when the glider releases the launch cable at altitude, a retrieve winch, positioned at the launch point, is used to reel in this retrieve cable and thus bring the free end of the launch cable back to the launch point ready for the next launch.

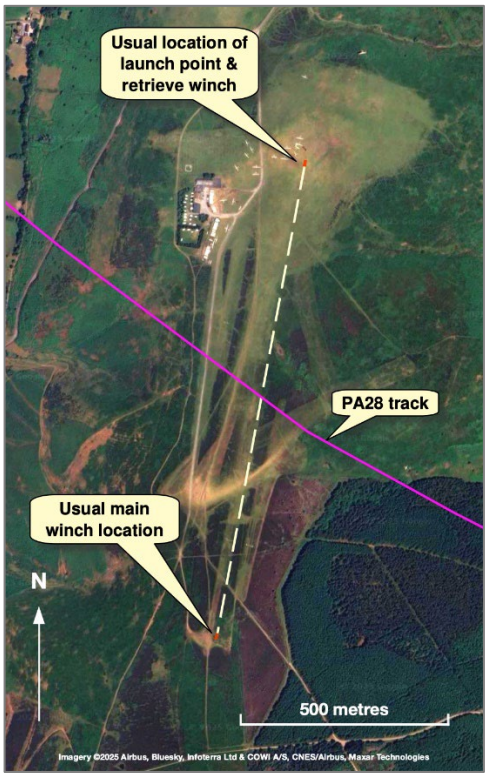


Figure 5: Showing this site's usual airfield configuration for the wind conditions at that time, with the take-off and landing direction along the top of the ridge.

A glider being winch-launched achieves a climb angle of 45° and an initial climb rate in excess of 4000fpm within 10sec of starting its ground roll. The maximum winch launch altitude permitted at Long Mynd is 3000ft AAL (4411ft AMSL), as listed in the AIP and marked on VFR charts, but it's likely that this launch achieved an altitude of about 1500ft AAL (2900ft AGL), after which the glider flew a continuously-descending profile for the reported 5min duration flight, before landing back on the airfield close to the launch point. Although neither pilot saw the other aircraft, CPA seems to have occurred at about the time that the glider released the launch cable, when nearly directly overhead the main winch.

In addition to the winch locations and cable run, Figure 5 also shows the ground track of the PA28 around the time of CPA, based on multilateration (MLAT) of its Mode S transponder returns. The provider of these data reports that "MLAT position calculations have a general accuracy of 10-100 metres". Based on this ground track and usual winch positions, Figure 6 shows the probable relative positions of the two aircraft as the PA28 crossed the line of the winch cables, a couple of seconds after CPA. The droop shown for both the main winch cable and retrieve winch cable is illustrative, not exact.

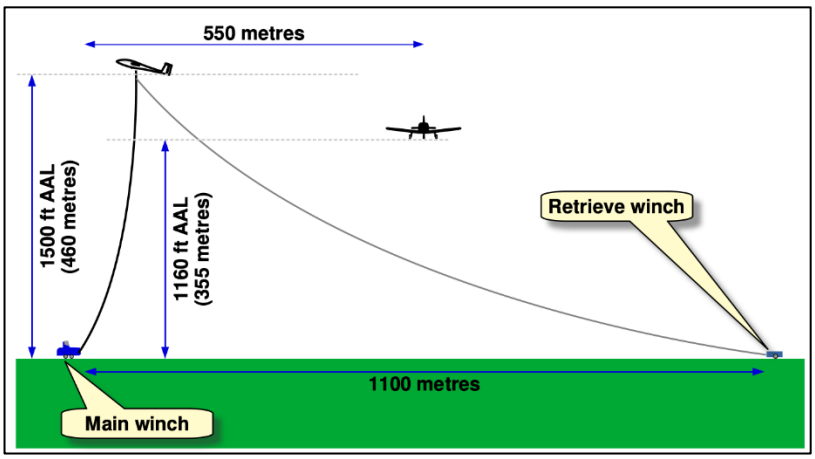


Figure 6: Probable relative positions of the two aircraft as the PA28 crossed the line of the winch cables.

Summary

An Airprox was reported when an SZD Junior and a PA28 flew into proximity at Long Mynd at 1344Z on Wednesday 5th February 2025. The SZD Junior pilot was operating under VFR in VMC and Listening Out on the Long Mynd frequency and the PA28 pilot was operating under VFR in VMC in receipt of a Basic Service from Shawbury Zone.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, ADS-B-derived track data for both aircraft, reports from the air traffic controllers involved and reports from the appropriate operating authorities. 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.

Members firstly considered the actions of the SZD Junior pilot; they noted the nature of the flight and that they had been unaware of the event until after landing. They recognised that, on this occasion, the aircraft had been winch-launched into a local circuit sortie and had therefore maintained a listening watch on the Long Mynd frequency and had carried an electronic conspicuity device to aid their situational awareness, although it had been incompatible with the equipment carried by the PA28 (**CF7**). As the PA28 pilot had not been operating on the Long Mynd frequency, that, alongside the lack of EC warning, had meant that the SZD Junior pilot had not had any situational awareness of the presence of the PA28 (**CF6**).

In reviewing the actions of the PA28 pilot, members recognised the position the pilot(s) had found themselves in and firstly wished to remind ALL pilots that the phrase 'Aviate/Navigate/Communicate' is particularly relevant in this case. Unfortunately, the PA28 pilot had suffered a number of equipment failures and had become distracted with those issues (**CF9**) to the point where they had not recognised their position with respect to others around them, or the flightpath they had inadvertently chosen. The Board agreed that the consequence of their distraction had led to their flight through promulgated and active airspace (**CF3**), a lack of plan adaption to recognise their new flightpath (**CF4**) and them not avoiding the pattern of traffic (**CF5**) at Long Mynd as established by the SZD Junior. Although the PA28 pilot had established themselves under a Basic Service with Shawbury, the limitations of that service

and the reduced awareness Shawbury had of activity in that area had meant that the PA28 pilot could have chosen to offer an information call to Long Mynd as they had transited that area (**CF2**) to raise awareness amongst the community there. The Board noted that the PA28 had carried electronic conspicuity equipment which had been capable of receiving signals from the SZD Junior, but unfortunately it had registered nothing in this event (**CF8**) and that, together with a lack of common RT frequency, had led to the PA28 pilot being limited to having only generic situational awareness of gliding activity in the area (**CF6**).

Turning to the contribution by the Shawbury Zone controller, members thanked the military authority for their report and acknowledged the nature and limitations of the service established for the PA28 pilot, accepting that the controller is not required to monitor the flight under a Basic Service (**CF1**) and that, in this case the SZD Junior had appeared at a late stage as a primary-only contact, further limiting the option for greater information available to the PA28 pilot even if the pilot had requested a higher level of support, such as a Traffic Service.

Concluding their discussion, members turned their attention to the determination of the risk of collision. Members noted that neither pilot had seen the other at the time of the event (**CF10**), and that the SZD Junior pilot had been alerted to the event by colleagues on the ground. The SZD Junior pilot had no situational awareness of the presence of the PA28 and the PA28 pilot had only generic situational awareness of potential gliding activity in the area gained through marked glider sites. Members therefore felt that safety margins had been reduced much below the norm. Members were in agreement that there had been a risk of collision (**CF11**) and, accordingly, assigned a Risk Category B to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025011			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
	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
3	Human Factors	• Aircraft Navigation	An event involving navigation of the aircraft.	Flew through promulgated and active airspace, e.g. Glider Site
4	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
5	Human Factors	• Monitoring of Environment	Events involving flight crew not to appropriately monitoring the environment	Did not avoid/conform with the pattern of traffic already formed
	• Situational Awareness of the Conflicting Aircraft and Action			
6	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			
7	Technical	• 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
8	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			

9	Human Factors	• Distraction - Job Related	Events where flight crew are distracted for job related reasons	
10	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
	• Outcome Events			
11	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: B.

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:

Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **not used** because the Shawbury controller was not required to monitor the flight under a Basic Service.

Flight Elements:

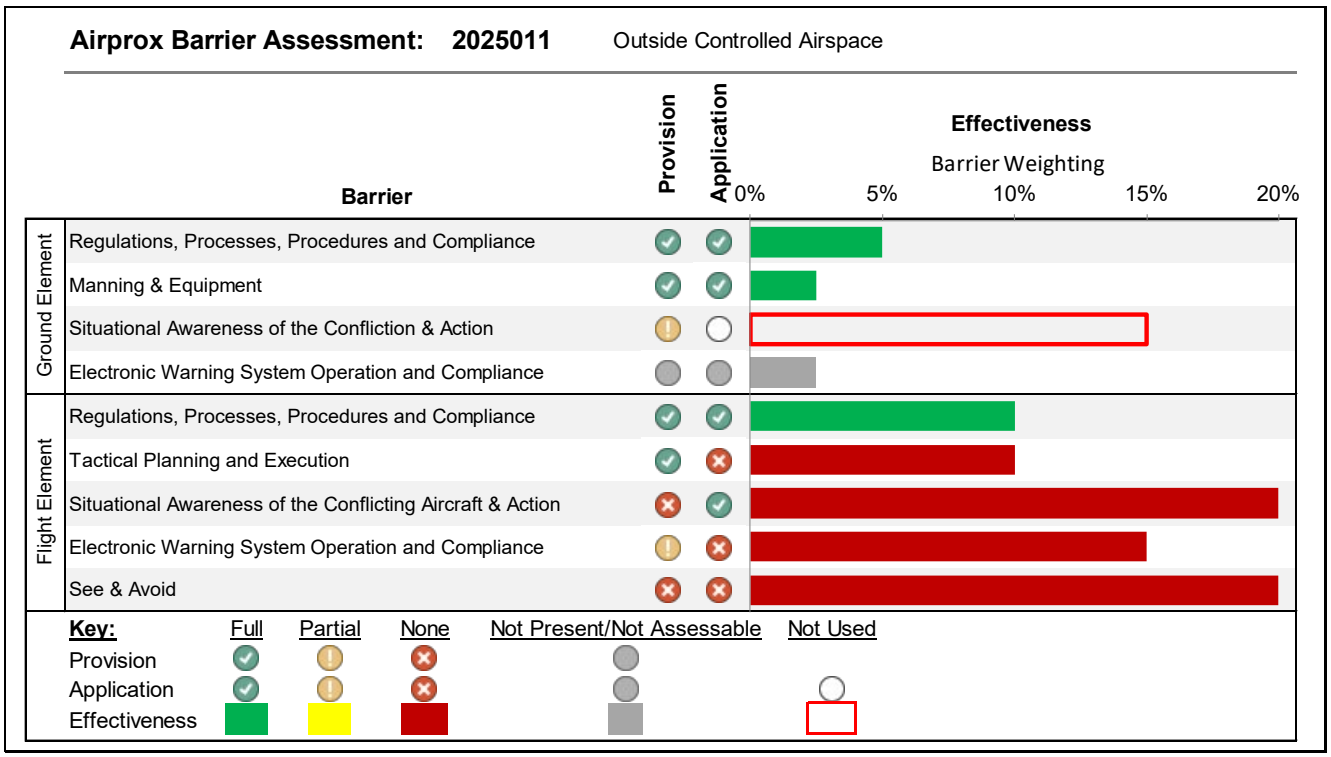
Tactical Planning and Execution was assessed as **ineffective** because the PA28 pilot had not adapted their plan, had flown through the active glider site without communicating and did not avoid the traffic pattern as formed by the SZD Junior.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the SZD Junior pilot had no situational awareness of the presence of the PA28, and the PA28 pilot had only generic situational awareness of the presence of gliding activity in that area.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the equipment carried by the SZD Junior had been unable to receive electronic emissions from the PA28, and the PA28 pilot reported receiving no alert from their equipment.

See and Avoid were assessed as **ineffective** because neither pilot had gained visual contact with the other aircraft.

[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: 2025011
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