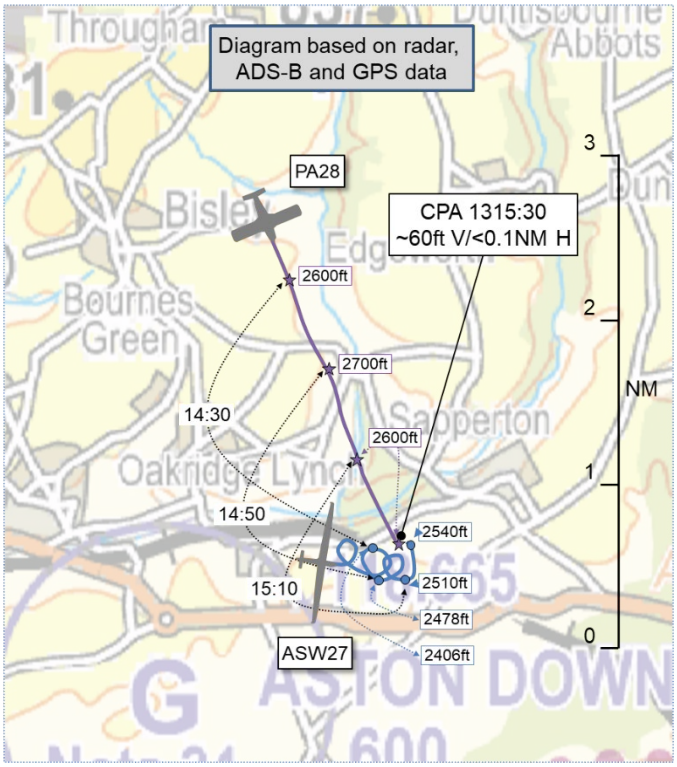
AIRPROX REPORT No 2024185

Date: 03 Aug 2024 Time: 1316Z Position: 5143N 00206W Location: 1.6NM NE of Aston Down

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASW27	PA28
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	AFIS
Provider	N/A	Kemble Information
Altitude/FL	2540ft	2600ft
Transponder	Not fitted	A, C
Reported		
Colours	White	Blue
Lighting	None	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1850ft	2500ft
Altimeter	QFE	QNH
Heading	Circling	163°
Speed	50kt	87kt
ACAS/TAS	FLARM	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	0ft V/150m H	Not Seen
Recorded	~60ft V/<0.1NM H	



THE ASW27 PILOT reports that they were circling to the left in a thermal with a bank of about 40° and had already completed 3 full turns, climbing only rather slowly in weak lift through about 1850ft on Aston Down's QFE. They first saw the PA28 to their left, as they were turning, coming directly towards them about 300-400m away. They came out of their turn and considered turning further to the right but this was not necessary, as they preferred to keep the other aircraft in sight. A few seconds later it passed to their left only a few feet below, [approximately] through the centre of where they had been turning. They were easily able to read its registration and estimated that it was 100-150m away. The [PA28 pilot] took absolutely no avoiding action whatsoever. They presumed that [the PA28 pilot] never saw them. After it had passed they resumed their thermalling turn.

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

THE PA28 PILOT reports that the other aircraft was not seen. A trial flight was being flown to Kemble, straight and level, with an overhead join at Kemble. They had witnessed 3 aircraft in total, a PA28, a motor-glider ([on their return trip]) and a paraglider, none of which were deemed an Airprox.

The pilot also reported making calls to Gloucester 'traffic' at the time on the Gloster frequency which was NOTAM'd as closed due to staff shortages. However, with hindsight, this was later considered as unlikely to be Gloster, because their standard operating procedure would be to call Kemble from 10min out, and they had landed 7min after the Airprox.

THE KEMBLE AFISO reported that they had not been informed of an Airprox by the PA28 pilot, and had no awareness of the ASW27.

They confirmed that the PA28 had landed with them at 1323:20, and although Kemble had not been named as the frequency in use by the pilot at the time it was anticipated to be the most likely frequency in use.

Factual Background

The weather at Brize Norton was recorded as follows:

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METAR EGVN 031250Z 30008KT 9999 FEW040 BKN046 21/11 Q1011 NOSIG RMK BLU
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An extract from Kemble's entry in the UK AIP regarding a local warning;

4 WARNINGS

a. Be aware of proximity of Aston Down gliding centre 4 NM NW, winch launching to 3000 FT AGL. Avoid South Cerney to the east, it is regularly active up to FL 120 with para dropping.
b. High performance aircraft occasionally carry out non-standard manoeuvres.
c. Windshear or turbulence may be experienced on final approach to Runway 26 in strong southerly or north westerly winds.
d. Grass areas, including grass runway 08/26 and golf taxiway, are subject to restricted use or closure due to waterlogging and subsequent soak away, during and following periods of wet weather.
e. During moderate/heavy rain, standing water forms at the runway edge on the start of Taxiway Delta. This may take up to 48 hours to drain.
f. Model flying operates from the south west corner of the aerodrome, position *513948.10N 0020349.60W, up to 200 FT and occasionally up to 400 FT, during daylight hours up to 2000.

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and neither aircraft could be positively identified using Mode S data. However, the PA28 was visible indicating altitude with Mode C selected and a further primary target was also seen at 1315:11 close to the reported point of the Airprox. The primary return may have been the ASW27 but this could not be confirmed because there were also other gliders in the vicinity (Figure 1).

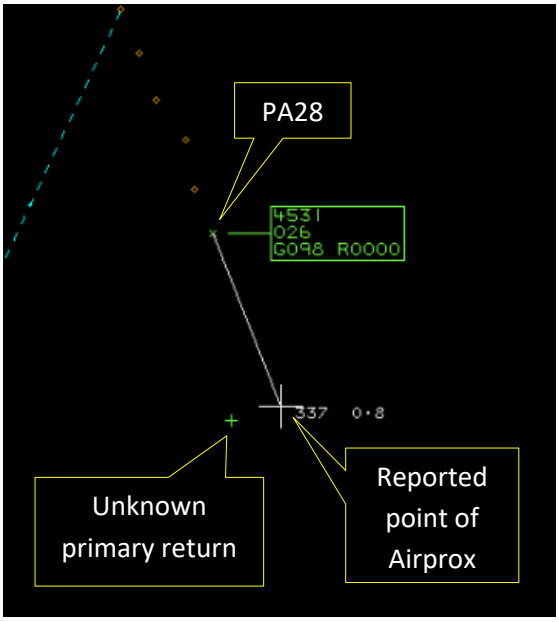


Figure 1 – Time 1315:10 NATS radar depiction of the PA28

Analysis of ADS-B data sources depicted the position of the ASW27 with the PA28 not visible on that data source (Figure 2).

Figure 2 – Time 1315:10 ADS-B depiction of the ASW27.

Both aircraft's navigation files were examined and the closest horizontal separation was seen as approximately 0.05NM from 1315:28 to 1315:30, with the ASW27 altitude having increased slightly at 1315:30 (Figures 3 & 4). This was assessed to be the closest point of approach.

Figure 3 – Time 1315:30 ASW27 position

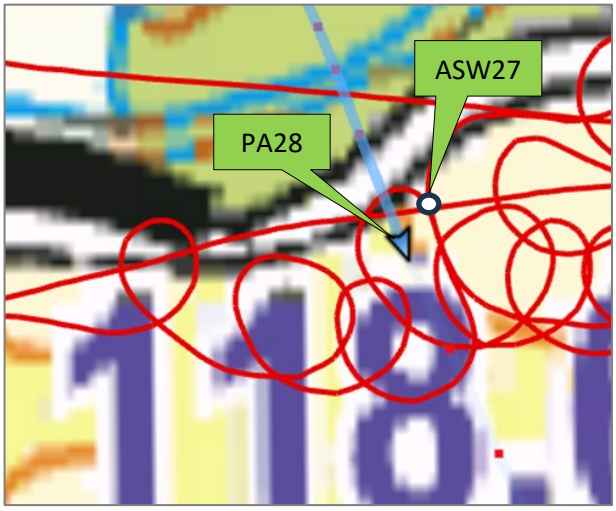


Figure 4 – Time 1315:30 PA28 position

At CPA, the ASW27 navigation data displayed a height of 1880ft above its launch site which was calculated to be an altitude of 2540ft on a setting of 1013hPa, with the local area QNH of 1011hPa.

The PA28 navigation file displayed no accurate altitude information, so the recorded altitude was taken from the radar replay as 2600ft on 1013hPa, which agrees with the PA28 pilot's reported altitude of 2500ft on 1011hPa. However, the PA28 was temporarily recorded at 2700ft at 1314:50, 40sec before CPA and may therefore have been higher than the reported altitude at CPA.

It was notable that another glider was also operating in the vicinity at the time of CPA, 700ft higher than the ASW27 and in a similar position to the PA28 (Figure 5).

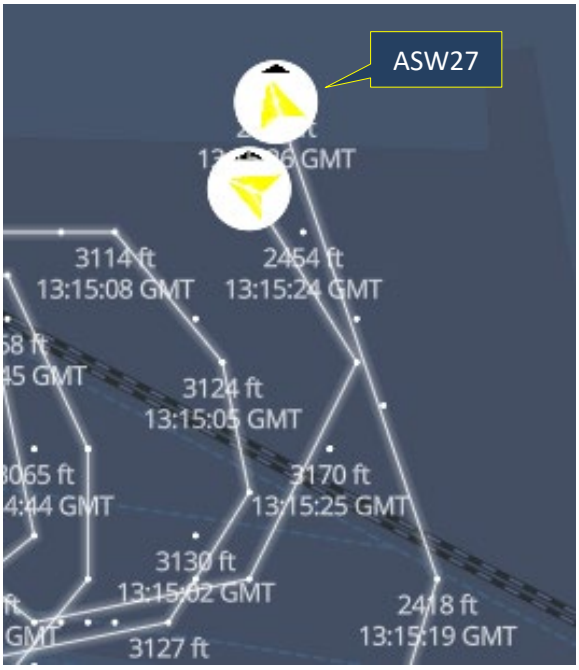


Figure 5 – Time 1315:30

The ASW27 and PA28 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] If the incident geometry is considered as converging then the PA28 pilot was required to give way to the ASW27.[3]

Comments

AOPA

When operating in Class G airspace with no radar-based ATC service available or electronic conspicuity fitted and flying close to a busy gliding site, 'Threat Error Management' should indicate it wise to give the gliding site a call which would improve everyone's situational awareness.

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

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

gliders, and aircraft towing gliders, may be expected in nearby Class G airspace at any time during daylight hours, and at any altitude up to cloudbase.

The Aston Down aerodrome VHF channel is listed in ENR 5.5, shown on CAA VFR charts, and is typically monitored by Aston Down-based gliders flying in this area. If transiting nearby below 3000ft AAL, a brief broadcast call on this channel using "Unattended Aerodrome" phraseology (CAP 413 §4.162 et seq) could help avoid conflicts and increase everyone's situational awareness.

The difficulties of sighting another aircraft approaching head-on with no relative motion are well-known. Many pilots now opt to permanently switch on forward-pointing high-intensity landing lights, even in full daylight, to aid visual conspicuity in this direction.

Summary

An Airprox was reported when an ASW27 and a PA28 flew into proximity 1.6NM northeast of Aston Down gliding site at 1316Z on Saturday 3rd August 2024. Both pilots were operating under VFR in VMC, the ASW27 pilot was not in receipt of an FIS and the PA28 pilot was in receipt of an Aerodrome Flight Information Service from Kemble.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, ADS-B and GPS data, and a report from the AFISO 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 discussed the actions of the ASW27 pilot and noted that they had sighted the PA28 late and, after considering altering course, had decided to continue their thermalling turn (**CF3**). The Board agreed that the pilot would have had generic awareness of traffic in the area approaching Kemble to the southeast of them (**CF1**), but that it would have been conducive to better situational awareness had their electronic conspicuity equipment been compatible with and able to detect that of the PA28 (**CF2**). The Board further discussed the commonality of electronic conspicuity equipment and hoped that a mandate for carriage of equipments operating to the same protocol(s) would be forthcoming from the Department for Transport in the near future.

Turning their attention to the actions of the PA28 pilot, the Board discussed the fact that the instructor had been aware of the proximity of a gliding site close to their destination, and as such could have made use of the GASCo Take2 recommendations[4] (although the Board acknowledged that these recommendations are primarily aimed at avoiding infringements of controlled airspace). Members also suggested that it may have been prudent to have called Aston Down to alert the local glider traffic of their routeing, and that this may have been a useful learning point for the student of the trial lesson. Members also noted, however, that the utility of such a radio call may have been questionable given that the pilot's SOP for contacting Kemble was not later than 10min prior to arrival (meaning that any call to Aston Down would have to have been completed some 12NM north of the glider site. In the event, the Board agreed that the PA28 pilot had had only generic situational awareness of the presence of gliders in the vicinity (**CF1**) and had not sighted the ASW27 (**CF4**).

The Board briefly looked at the provision of service from Kemble's AFISO, who would have been providing airfield information only at the time and would have had no specific knowledge of the location of the ASW27. The Board agreed that the Kemble AFISO could not have influenced the outcome of this event.

On determining the risk factor, members concluded that neither pilot had had specific situational awareness of the relative proximity of the other aircraft. Furthermore, the PA28 pilot had not sighted the ASW27 and the ASW27 pilot had only sighted the PA28 at a late stage. Although the ASW27 pilot had elected to continue their turn to maintain sight of the PA28, the Board nonetheless considered that

[4] GASCo Take2

safety margins had been much reduced below the norm and that a risk of collision had been present (**CF5**). As such, the Board assigned Risk Category B to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024185			
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	• 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	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
4	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			
5	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[5]

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

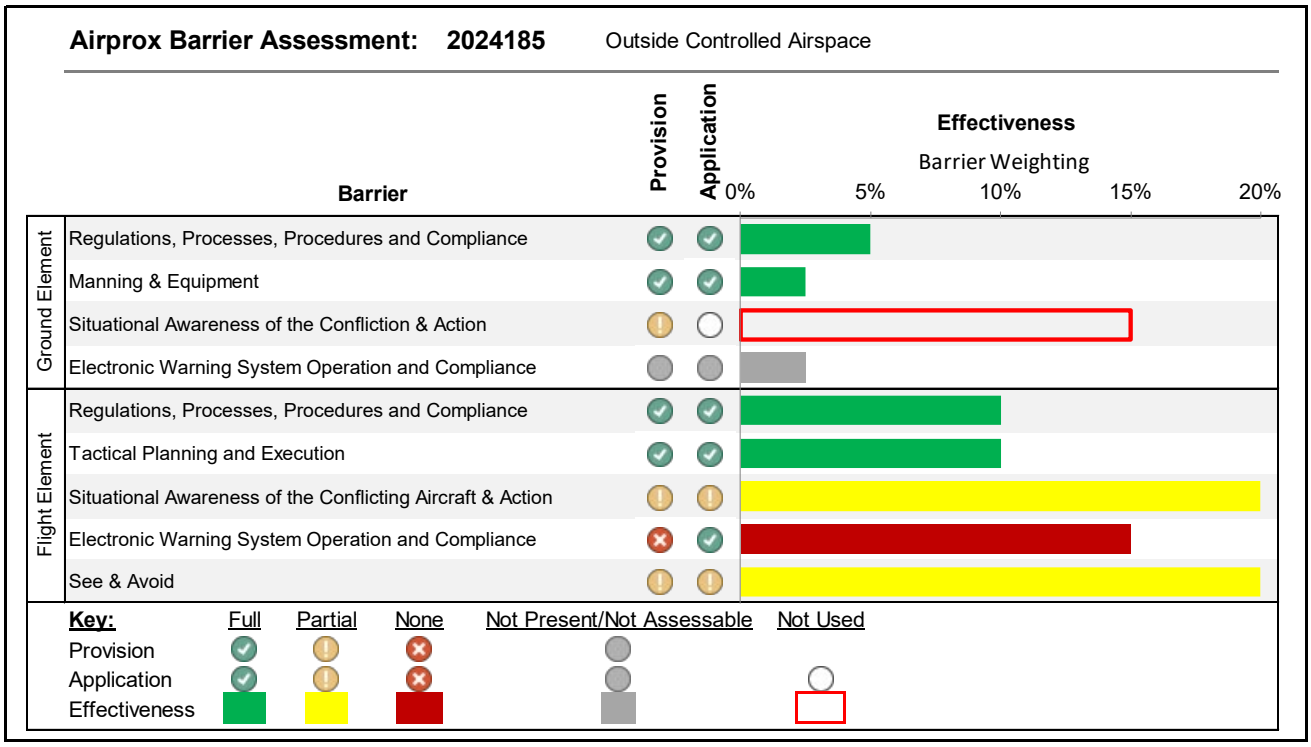
Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because both pilots had only had generic awareness of the likelihood of other aircraft operating in their vicinity.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the ASW27's electronic conspicuity equipment was unable to detect the transmissions from the PA28's transponder.

See and Avoid were assessed as **partially effective** because the ASW27 pilot had sighted the PA28 late, and the PA28 pilot had not sighted the ASW27.

[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: 2024185
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