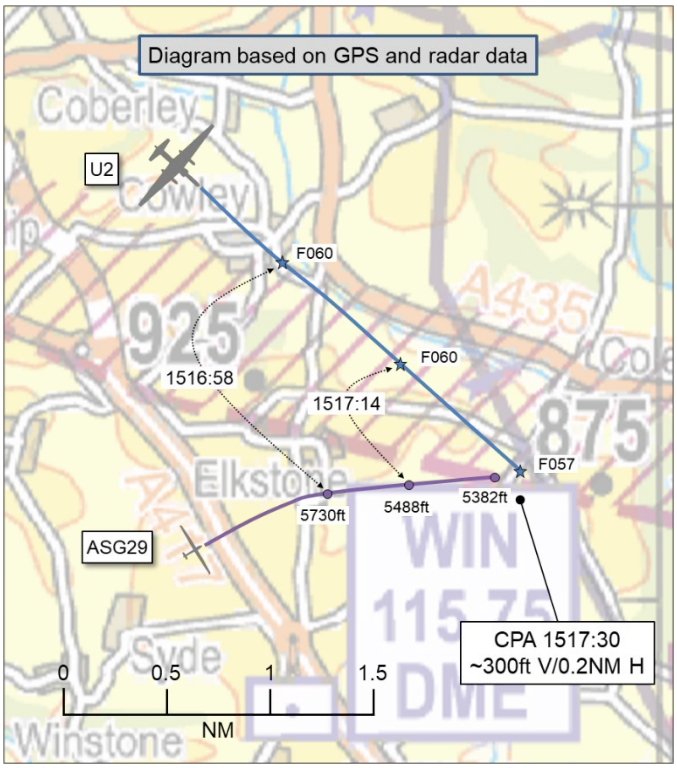
AIRPROX REPORT No 2025158

Date: 11 Jul 2025 Time: 1518Z Position: 5149N 00201W Location: 5NM SSE Cheltenham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	U2	ASG29
Operator	Foreign Mil	Civ Gld
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Traffic	None
Provider	Brize Director	N/A
Altitude/FL	FL057	5382ft
Transponder	A, C	None[1]
Reported		
Colours	Grey	White, day-glo markings
Lighting	NR	None
Conditions	VMC	VMC
Visibility	NR	>10km
Altitude/FL	NR	6300ft
Altimeter	SPS	QNH
Heading	NR	070°
Speed	NR	91kt
ACAS/TAS	Not fitted	FLARM
Alert	N/A	None
Separation at CPA		
Reported	0ft V/200ft H	300ft V/500m H
Recorded	~300ft V/0.2NM H	



THE U2 PILOT reports that, on recovery, they were cleared by the Brize Director to descend from FL080 to FL050, for a visual approach. Shortly afterwards, they were informed of glider traffic at 12 o'clock, at short range and 3000ft below their present altitude. Based on quick mental mathematics, a descent to FL050 seemed ill-advised at that point, so they requested FL060. Arriving at FL060, they gained visual with that traffic (not far below them, at 11 o'clock, validating the decision to stay high) and advised Brize when the traffic was no factor, and received a clearance down to FL030. As they descended through a thin cloud layer around FL050, they looked up in the hope of gaining visual with the airfield and saw a glider in their 2 o'clock position with a vector directly towards them, at close enough range to discern a body in the cockpit. They would estimate 200-300ft. The glider appeared to make an aggressive manoeuvre downward and to the left [they recall], so they manoeuvred upward and away from the traffic until they were certain of separation. They reported this to Brize, and they responded that the traffic was not on their scope. [The U2 pilot opined that the issues had been that] radar cannot detect slow moving aircraft, [glider pilots have] no transponder requirements and no radio requirements.

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

THE ASG29 PILOT reports that they were returning to [their destination] from west Wales. They had just left a thermal at approximately 6580ft AMSL and were tracking approximately 070° at an indicated airspeed of around 91kt. They were looking out as they had known from their [EC device] that there were other gliders in the vicinity. Also, they were looking out for such things as clouds and birds. At around 1516, they spotted what they thought was another glider in their 8 o'clock at a range that they estimated to be half a mile. They adjusted their heading 20° right to avoid getting any closer. However, they then recognised that the aircraft was a U2 and realised it was much larger and further away.

[1] The pilot of the ASG29 reported that the transponder fitted to the ASG29 had been switched off at the time of the Airprox.

Because of the sight-line rate, both vertically and horizontally, they maintained their track of approximately 090° and their speed which, in the prevailing conditions, had given them a rate of descent of 5kt or 500ft/min. They assumed that the pilot of the U2 would have been unlikely to have seen them. As the U2 passed ahead of them, they took a photograph.

Probably because of their experience and background, they were very comfortable with the flightpath of the aircraft and that it had posed no risk of collision. When they first recognised that it was a U2 and not a glider, they estimated that they were flying approximately 1 mile line-abreast which they had found familiar. [The pilot of the ASG29 opined that,] had they thought that they were going to get any closer, they would have turned away.

The total flight time on that day for their 533km flight was 5h 50min. For that reason, they had to manage the use of their transponder as it is the greatest electricity-consuming item in the aircraft. They would normally only use it near cloud, in reduced visibility or if they had required a service from ATC. As they were flying in Class G airspace and had almost unlimited visibility, the transponder was turned off but their [additional EC device] was turned on. They had known that they would require the transponder [later in their flight].

Figure 1 – A photograph taken just after CPA by the pilot of the ASG29.

The pilot assessed the risk of collision as ‘Low’.

THE BRIZE NORTON CONTROLLER reports that they had taken a handover of the Approach/Zone/Director positions. The U2 pilot was on the Director frequency recovering to [their destination] descending to FL80 north of Gloucester, and there were two VFR zone transits on the Zone frequency. Due to gliding activity at Aston Down and surveillance equipment limitations with respect to slow moving gliders not displaying on radar, before they issued a further descent, they issued a warning to the U2 pilot that multiple gliders were operating between Gloucester and Fairford and advised the pilot to keep a good lookout. The Supervisor then received an un-prenoted handover of a C17 for a visual recovery into Brize from the north with multiple non-squawking contacts along their intended track adding to the workload. Whilst the U2 was descending, around 7.5NM north-west of Fairford, the pilot informed them that they had come within several hundred feet of a glider. However, there were no radar returns at that position. Shortly afterwards, the U2 pilot [switched to an en-route] frequency. Having watched the radar replay, pop-up traffic appeared 1NM ahead of the U2 shortly before a descent was issued. They had not spotted that at the time due to the C17 [pilot] checking-in simultaneously. It is also unclear whether that was the glider [involved in the] Airprox as it was approximately 3NM north of the

U2 when the Airprox was declared on RT and appeared to be north of the U2 before the descent was issued. In hindsight, had they been aware of the C17 making a recovery, instead of taking over the bandboxed position they would have split-out and taken Director separately to have reduced the workload.

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

THE BRIZE NORTON SUPERVISOR reports that they were monitoring the Approach console. They had two Zone transits and [U2 C/S] on a visual recovery to [their destination] when they took a call from London Control to release an aircraft recovering to Brize at short notice. They took the details and passed them to the Approach controller. There were multiple non-squawking contacts between Gloucester and Fairford that were frequently disappearing and reappearing. This is due to a 'speed-gate' on the radar that does not display any non-squawking aircraft that are travelling less than 40kt (which usually means they do not always see gliders). The extra workload of the C17 coming on frequency and the two Zone transits crossing close to each other (requiring each to be called to the other) meant that, when a return showed in the vicinity of where [the pilot of the U2] had called an Airprox, the controller had been dealing with the other aircraft.

Factual Background

The weather at Gloucestershire Airport was recorded as follows:

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METAR EGBJ 111520Z 32003KT CAVOK 33/13 Q1018
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Analysis and Investigation

Military ATM

The Brize Norton controller (at the time of Airprox) was bandboxed Approach, Director and Zone. The U2 pilot was conducting a visual recovery to [their destination] in receipt of a Traffic Service, at a time of high glider activity.

Sequence of Events

At 1511:50, the U2 pilot made initial contact with the Brize Norton Director following a handover from Swanwick Military.

Between 1513:59 and 1514:47, the Brize Norton Director provided the U2 pilot with Traffic Information, including "*…be aware there are multiple gliders operating between Fairford and Gloucester, keep a good lookout for them*".

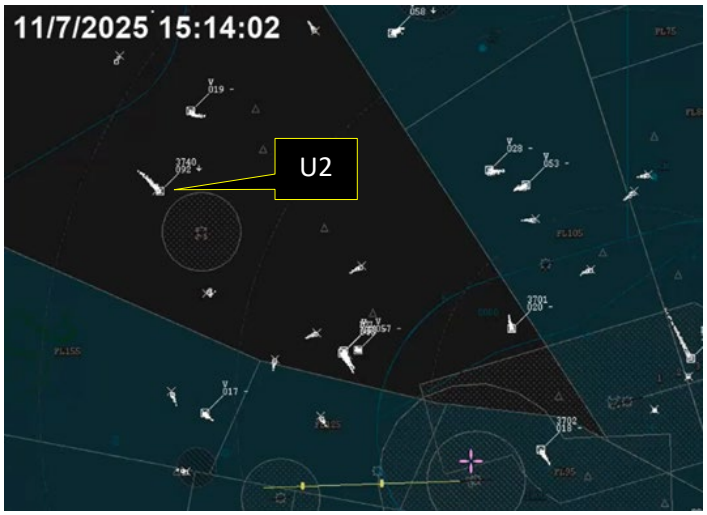

Figure 2 (1514:02) shows the U2 (Mode A 3740) and the high traffic density on its route.

At 1515:00, the Brize Norton Director instructed the U2 pilot: "*…if not sighted stop descent FL060*" against unknown traffic indicating 3000ft below the U2.

At 1515:55, the Brize Norton Director received a zone transit request on the Zone frequency.

At 1517:21, the Brize Norton Director contacted [an en-route ATSU] to 'warn-in' the U2 and request their QNH.

At 1517:35, the U2 pilot transmitted "*Brize…just came within several hundred feet of a glider*" to which the Brize Norton Director responded, "*roger that traffic not painting on my radar*".

At 1517:44, the U2 pilot informed that the traffic was no longer a factor, and the Brize Norton Director issued a further descent.

CPA is undetermined as the glider did not display on radar.

2 Gp BM Analysis

At the time of the Airprox, the Brize Norton Director could not have provided Traffic Information to the U2 pilot as the glider did not appear on radar. However, the Brize Norton Director did provide the U2 pilot with a caution regarding the high level of glider activity.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The U2 could be identified by its squawk and reported track. The U2 was displayed on the radar replay at Flight Levels. Neither aircraft was observed by reference to ADS-B data sources. The pilot of the ASG29 kindly supplied GPS track data for their flight. It was by combining the data sources that the diagram was constructed and the separation at CPA determined.

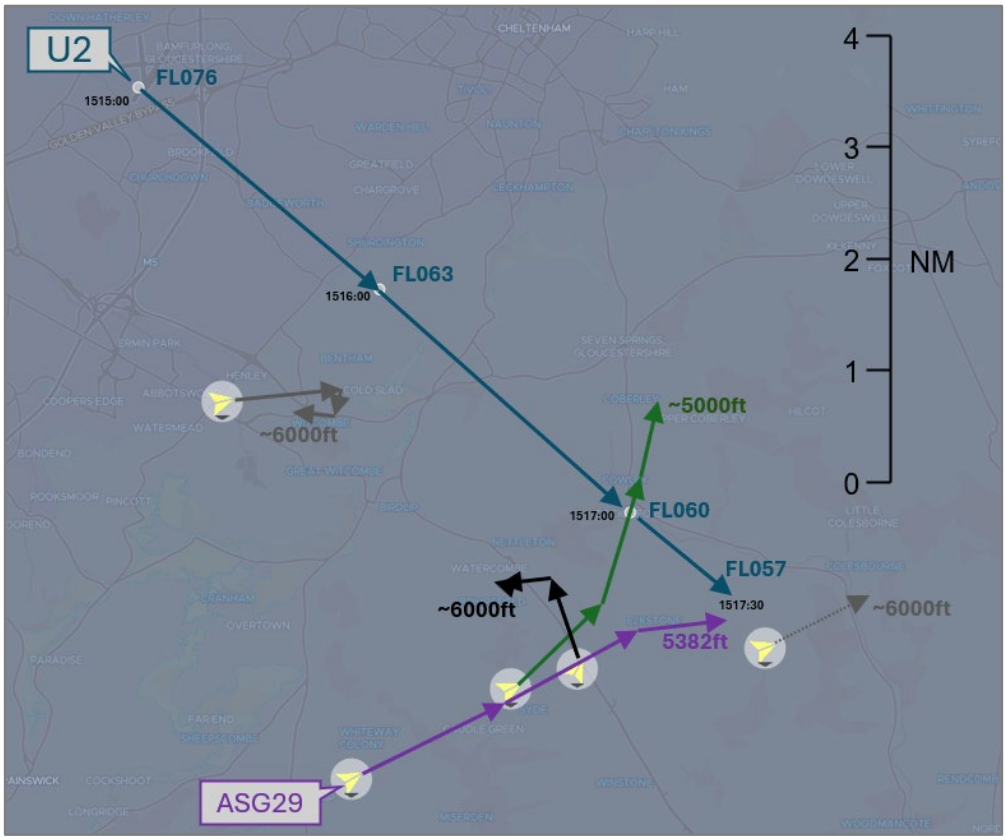

Figure 3 – The traffic situation at 1515 (radar and FLARM data). The arrowheads indicate respective positions at 1516, 1517 and 1517:30

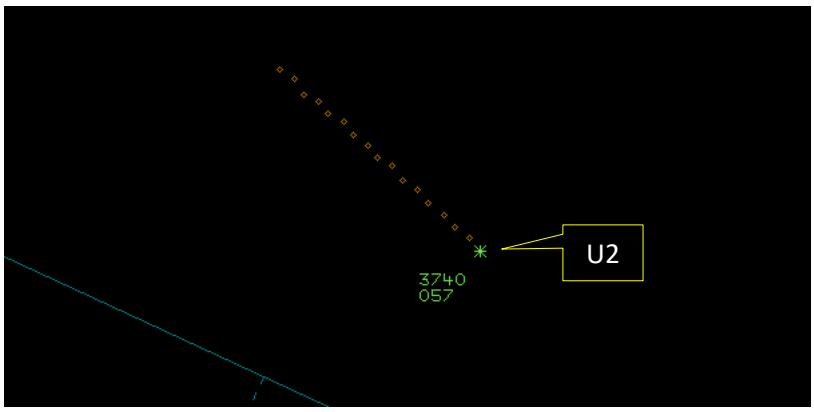

Figure 4 – CPA at 1517:30 (radar data)

The U2 and ASG29 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 converging then the U2 pilot was required to give way to the ASG29.[3]

Comments

USAFE

The USAF operates from RAF Fairford and engages with the RAF and local operators to ensure they are briefed and aware of local airspace activity which may affect their flying.

The U2 is a single-crewed aircraft, and the pilot reports some concern about the level of unknown activity in the area on this day. Visibility from the cockpit is restricted by airframe and equipment and, as such, the operators seek an ATS to support the situational awareness and deconfliction of the aircraft. Outside controlled airspace, the desired service is a Deconfliction Service to mitigate. However, a Deconfliction Service is not always available from Brize Norton due to service limitations and a Traffic Service is provided instead. Per the Brize report, it would appear the Traffic Service provided was 'reduced' due to other traffic and, as they had identified, they may have been able to have split the positions had they known about the additional C17.

Due to airspace considerations and local procedures, the U2 often descends rapidly to establish onto a stable approach into Fairford. Although smaller than commercial aircraft and somewhat similar in appearance to a glider, manoeuvrability at lower levels is more akin to that of a small commercial aircraft. These factors combined do add to concern when other aircraft are close to them without coordination.

A large part of the concern in this situation is that the U2 pilot did not know whether the glider pilot had seen them or not as there was no apparent change in track observed. The U2 pilot had just descended through a cloud layer and found the glider just beneath, which added to the feeling of suddenness. Although the glider pilot on this occasion seemed comfortable with the proximity, pilots should consider what the other crew might be comfortable with and apply that.

Use of electronic conspicuity (EC) equipment which is compatible with other traffic operating in areas in which a private pilot operates should be considered. A serviceable transponder provides significant advantages as it enables ATC to see aircraft position and level as well as enabling TCAS in aircraft so-equipped.

The recurring theme of glider pilots prioritising battery conservation raises serious concerns. Whilst apparently permitted under (UK)SERA.13001(c), this practice significantly compromises safety, particularly given the high density of military traffic in this area. The general arguments for disabling fitted transponders are weakened by the ready availability of affordable, lightweight, and high-

[2] (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.
[3] (UK) SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.

capacity lithium batteries. Prioritising battery life over the safety benefits of an active transponder and/or EC device, especially in such busy airspace, is questionable.

Pilots of aircraft operating in the vicinity of RAF Fairford are encouraged to obtain an ATS from RAF Brize Norton under their LARS.

BGA

Excellent thermal soaring conditions on Friday afternoon 11th July led to large numbers of cross-country glider flights transiting the uncontrolled airspace between Gloucester and Fairford at altitudes up to convective cloudbase (about 7000ft AMSL, FL68). Statistically, about 5% of those gliders would have been transponder-equipped. Under (UK)SERA.13001(c), aircraft fitted with a transponder, but without sufficient electrical power supply, are exempted from the requirement to operate it at all times (unless flying in airspace designated for mandatory transponder use). However, almost all gliders (including this ASG29) are equipped with widely-used EC equipment whose modest power consumption allows it to be operated throughout long-duration flights. ATSUs near busy gliding areas, such as the east/west corridor north of the Brize Norton CTR, may wish to install Flight Information Displays that use this EC system to provide instantaneous SA (including GNSS-derived altitude) on glider traffic.

The ASG29 pilot is to be commended for their effective lookout in sighting the U2 at a range of well over 1NM. They then manoeuvred to maintain what they considered to be adequate separation while simultaneously keeping the U2 in sight. Data from the ASG29's secure GNSS data logger indicates that it flew wings-level at near-constant speed throughout the period from 1516:58 (32s before CPA) to 1519:33 (2m 3s after CPA), thereby complying with (UK) SERA.3210(a) ("The aircraft that has the right-of-way shall maintain its heading and speed"). The recorded vertical separation between the two aircraft was never less than 250ft in the 32sec leading up to CPA.

Summary

An Airprox was reported when a U2 and an ASG29 flew into proximity 5NM south-southeast of Cheltenham at 1518Z on Friday 11th July 2025. The U2 pilot was operating under IFR in VMC in receipt of a Traffic Service from the Brize Norton Director, and the ASG29 pilot was operating under VFR in VMC not in receipt of a FIS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, GPS track data for the flight of the ASG29, a report from the air traffic controller involved, radar photographs/video recordings and a report from the appropriate operating authority. 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 pilot of the U2. Members noted that they had been passed a generic caution concerning multiple gliders along their route. It was also noted that, at 1515, the Brize Norton controller had passed information on 'unknown traffic' that had indicated 3000ft below the U2. Reviewing Figure 3, members suggested that that contact may, perhaps, have been the glider depicted by the green arrows. It was noted that this had also been consistent with the U2 pilot's narrative report that, when they had subsequently gained visual contact with that traffic, it had appeared in their 11 o'clock position once they had arrested their descent at FL060.

Members next pondered the U2 pilot's account of the subsequent sighting of the ASG29 which was described to have 'manoeuvred aggressively'. It was noted that the ASG29 had converged from the U2 pilot's 2 o'clock position (consistent with their narrative report), however, it was clear to members that, from analysis of the GPS track data for the flight of the ASG29, it had remained broadly straight-and-level (save for the gentle turn to the right by 20°). There had been no indication of 'aggressive manoeuvring' that the pilot of the U2 had recalled.

Whilst Figure 3 indicated the position and progress of several gliders in the area at that time, it was accepted that this may not have represented all aircraft that had been in the vicinity. Nevertheless, there had appeared to have been at least one other glider that had been present that had been in a thermalling turn to the left (represented by the black arrows in Figure 3) as the U2 pilot had transited the area. Members surmised that the sighting of that glider to their right 'manoeuvring aggressively', and then a subsequent sighting of the ASG29 in their 2 o'clock position may have been inadvertently conflated. Notwithstanding, members appreciated that the pilot of the U2 had been concerned by the proximity of the ASG29. Members agreed that the U2 pilot had not had specific situational awareness of the ASG29 until it had been visually acquired, but that they had had generic situational awareness of the presence of multiple gliders in the area.

Members next discussed the actions of the pilot of the ASG29, and the matter of the use of their transponder was considered. A member with particular knowledge of gliding operations explained that the use of a transponder consumes a significant amount of battery power which, when depleted, would also render a radio and flight instruments inoperable. Judicious use of a transponder was, therefore, an important consideration, particularly on a flight which might last several hours (as had been the case for the pilot of the ASG29).

Members agreed that the EC device fitted to the ASG29 would not have been expected to have detected the presence of the U2. Furthermore, without there having been a common frequency in use between the pilots, it was agreed that the pilot of the ASG29 had not had situational awareness of the U2 until it had been sighted. Members suggested that it may have been prudent for the ASG29 pilot, who had been in possession of a FRTOL, to have contacted the Brize Norton controller whilst they passed through their area of responsibility.

Members noted that the ASG29 pilot's recall of the event suggested that they had had ample time to have assessed the situation and to have considered that urgent action had not been necessary. Indeed, taking a moment to capture a photograph of the U2 as it had passed suggested that, from their perspective, the encounter had been entirely benign. One member suggested that the gentle turn of 20° to the right may not have increased their separation from the U2 as the ASG29 pilot had opined, but may have prolonged the time that the U2 had been in a favourable position to have taken a photograph.

Turning to the actions of the Brize Norton controller, members agreed that the ASG29 had not been observed on their radar display and that they had not had specific situational awareness of it. Nevertheless, members noted that they had passed a generic caution regarding multiple gliders along the U2 pilot's route and had passed specific Traffic Information regarding an 'unknown contact' that they had observed on the radar display. Members agreed that there had been little else that they could have done to have assisted matters.

Concluding their discussion, members were in full agreement that there had not been a risk of collision. Nevertheless, some members pointed out that several safety barriers had either not been present or had not been fully effective during this encounter. Other members proffered that the scenario had been typical of an encounter in Class G airspace and that it had unfolded in a manner that had allowed both pilots to have monitored the situation and to have taken early action if required. A vote was conducted and the latter view prevailed. The Board assigned Risk Category E to this event and members agreed on the following contributory factors:

CF1. The Brize Norton controller had not had specific situational awareness of the ASG29.

CF2. It may have been prudent for the pilot of the ASG29 to have contacted the Brize Norton controller.

CF3. The transponder fitted to the ASG29 had not been operated.

CF4. The pilot of the ASG29 had not had situational awareness of the presence of the U2. The pilot of the U2 had generic situational awareness of the presence of gliders along their route.

CF5. The U2 was not equipped to emit any signals which the EC device fitted to the ASG29 would have been expected to have detected.

CF6. The pilot of the U2 had been concerned by the proximity of the ASG29.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025158			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
	Flight Elements			
	• Tactical Planning and Execution			
2	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
3	Human Factors	• Transponder Selection and Usage	An event involving the selection and usage of transponders	
	• Situational Awareness of the Conflicting Aircraft and Action			
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	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			
6	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: E.

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 **ineffective** because the Brize Norton controller had not had specific situational awareness of the presence of the ASG29.

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because it may have been prudent for the pilot of the ASG29 to have contacted the Brize Norton controller to relay their intentions.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the ASG29 had not had situational awareness of the presence of the U2 until it

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

had been visually acquired. The pilot of the U2 had generic situational awareness of the presence of gliders along their route.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because neither aircraft was carrying EC equipment which would have been expected to have detected by the other aircraft.