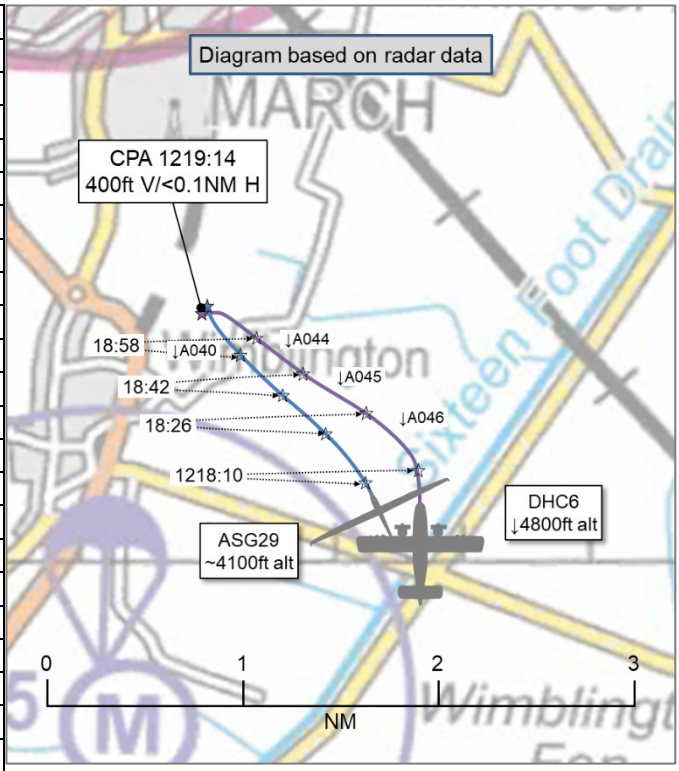
AIRPROX REPORT No 2022048

Date: 09 Apr 2022 Time: 1219Z Position: 5231N 00006E Location: 1.5NM south of March

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASG29	DHC6
Operator	Civ Gld	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Traffic
Provider	Chatteris (old freq)	Lakenheath
Altitude/FL	4000ft	4400ft
Transponder	A, C, S	A, C, S+
Reported		
Colours	White, orange	Purple
Lighting	Nil	Beacon
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	4300ft	3000ft
Altimeter	QNH (NK hPa)	QFE (NR hPa)
Heading	315°	330°
Speed	75kt	90kt
ACAS/TAS	FLARM	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	0ft V/100m H	500ft V/500m H
Recorded	400ft V/<0.1NM H[1]	



THE ASG29 PILOT reports that they were on a cross-country flight from [departure airfield]. The flight was a 300km triangular task via Bury St Edmunds (BSE) and Newark (NWK) starting and finishing at [departure airfield]. On the second leg from BSE to NWK they were aware that their track would take them through the Chatteris parachute zone (PZ). They radioed Chatteris to establish whether the PZ was active, but received no reply on the frequency selected. Thus, they assumed the default status that the PZ was active and altered their track to fly east of the PZ. There was a line of lift (cloud street) that skirted the east side of zone, which they followed. At all times they remained outside the Chatteris PZ. When ENE of Chatteris airfield at a range of 1.75NM at an altitude of ~4300ft QNH, they heard the sound of an aircraft but were unable to see it. The sound level was such that they didn't perceive it as an immediate threat. A short time later, an aircraft appeared off their starboard wing at their level tracking in the same direction, offset by a distance of 100m. This aircraft was a Twin Otter with a corrugated door opening that suggested it was the Chatteris paradropping aircraft. The ASG29 pilot radioed on the Chatteris frequency that they were positioned off the port wing of the Twin Otter – they received no reply. Note: they discovered later that they had selected the wrong (old) frequency for Chatteris that they used for both their radio calls. They monitored the position ready to initiate a turn to the left. However, the Twin Otter gradually increased its height relative to their glider but, at 100ft above and now 100m ahead, the Twin Otter initiated a left turn across their path. The ASG29 pilot is used to flying in close proximity (thermally) with other gliders, so they weren't over concerned, but they were surprised by the manoeuvre. Their glider is equipped with a Mode S transponder with ADS-B out and [other EC equipment] and both were operating on the day. They contacted the Chief Pilot at Chatteris who stated that they flew the Twin Otter with a carry-on Sky Echo II ADS-B out device, but also stated that the Twin Otter is not equipped with any other EC. The Chief Pilot remarked that the field of view

[1] GPS data for the ASG29 recorded an altitude of approximately 3850ft at CPA. However, radar data has been used to determine CPA as this is from the same data source for both aircraft.

from the Twin Otter cockpit isn't very good and kindly invited the ASG29 pilot for a flight to see for themselves.

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

THE DHC6 PILOT reports that they were conducting a normal descent after paradropping operations. They levelled off briefly to say 'hello' and then continued on their descent. They did not consider the event to have been an Airprox incident at the time. No avoiding action was taken because the [glider] pilot said they had [the DHC6] in sight on Chatteris 129.905MHz;[2] The DHC6 pilot responded that they also had [the glider] in sight. The DHC6 pilot flew alongside the glider, approximately 500m to their starboard side, and then turned back towards Chatteris above the glider, maintaining visual contact throughout. They did not receive any information from Lakenheath about the glider.

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

THE LAKENHEATH CONTROLLER reports that they were informed of this Airprox by their airspace liaison individual on 25th April 2022. The controller radar-identified [the DHC6] and was told that [the DHC6 pilot] would be conducting paradrop operations at FL100 and FL150. When [the DHC6 pilot] advised they were about to commence the drops at FL100, the controller issued an advisory on the Lakenheath MATZ frequency (128.900MHz). This was repeated for the second altitude. There were unverified targets in the vicinity of Chatteris airfield as [the DHC6] was descending for landing; however, traffic calls were not issued. The RAF Lakenheath leadership team has taken appropriate corrective actions in order to prevent these sort of instances in the future.

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

Factual Background

The weather at Marham was recorded as follows:

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METAR EGYM 091150Z AUTO 28015KT 9999 BKN042/// 10/M01 Q1014=
METAR EGYM 091250Z AUTO 32012KT 9999 SCT050/// 10/M02 Q1015=
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Analysis and Investigation

USAFE

Due to the time elapsed between the incident and when Lakenheath was notified, an official investigation was not accomplished. They were able to perform an informal investigation with the following findings:

1203:37 – [The DHC6 pilot] contacted Lakenheath RAPCON.
1204:00 – The controller radar identified [the DHC6] and agreed to a Traffic Service.
1205:52 – [The DHC6 pilot] advised ATC that they were 10min from jumping.
1206:21 – The controller made a blanket broadcast on all frequencies advising of skydiving operations in the vicinity of Chatteris by a Twin Otter.
1210:59 – [The DHC6 pilot] advised ATC that they were 10min from the second jumps.
1211:11 – The controller made a blanket broadcast on all frequencies again.
1214:00 – [The DHC6 pilot] began descent, but did not advise ATC.
1217:39 – The Audio/visual collision alert began between [The DHC6] and [an aircraft with a] 7000 code. The targets were within 2 miles and 1200ft (unverified).
1219:47 – The controller terminated radar services for [the DHC6 pilot].

[2] According to the Eurocontrol website (https://833radio.com/news/show/7), a radio tuned to 129.900MHz operates on the same 'centre frequency' as a radio tuned to 129.905MHz; therefore, communication between the 2 aircraft tuned to the 2 frequencies mentioned should have theoretically been possible.

The targets appeared to get within 1 mile/co-altitude of each other between the collision alert and radar termination. There were no other aircraft on frequency.

Informally, their management team has determined that complacency appears to have been a contributing factor with the caveat that the descent was unannounced by [the DHC6 pilot]. Lakenheath had the controller involved conduct a lessons learned [session] and held a controller briefing to help prevent avoidable incidents like these in the future.

The controller did not issue traffic information to [The DHC6 pilot].

The [Chatteris parachuting] operation is well known to Lakenheath and they have tried, unsuccessfully, to contact the operator to discuss how they report that they are descending or RTB as this did not happen on this occasion in line with the Traffic Service requirements.

UKAB Secretariat

An analysis of the NATS radar replay and GPS data file from the ASG29 pilot was undertaken. Both aircraft were detected by the NATS radars; the ASG29 on Secondary Surveillance Radar (SSR) and the DHC6 on both Primary and SSR. Both aircraft could be seen tracking in a north-westerly direction to the north-east of Chatteris airfield (GPS track data for the ASG29 was consistent with the radar track). Altitude information is displayed on the radar screenshots as Flight Levels – the QNH entered into the radar processor was 1016hPa; therefore, 81ft (~100ft) should be added to the indicated Flight Level to derive aircraft altitude.

The DHC6 could be seen taking-up a track parallel to, and approximately 0.3NM displaced to the east of, the ASG29 as the DHC6 descended from 4700ft (see Figure 1). The ASG29 maintained a track of approximately 315° and the DHC6 gradually closed to a lateral distance of approximately 0.1NM from the glider ~30sec prior to CPA (see Figure 2). The 2 aircraft then continued to fly slightly converging tracks until CPA, where the radar shows that the DHC crossed above the track of the ASG29 (see Figure 3). Radar separation was measured at <0.1NM horizontally and 400ft vertically; however, GPS data from the ASG29 suggests that the glider may have been slightly lower than indicated by the radar (GPS data showed the ASG29 to be at an altitude of approximately 3850ft at radar CPA).

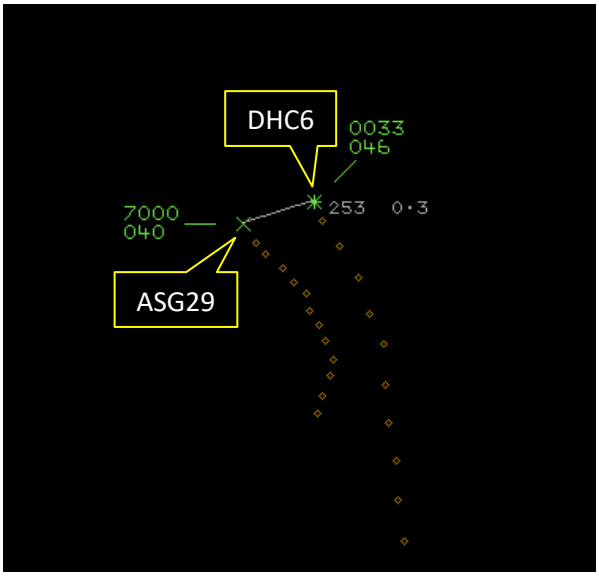


Figure 1 – 1218:14

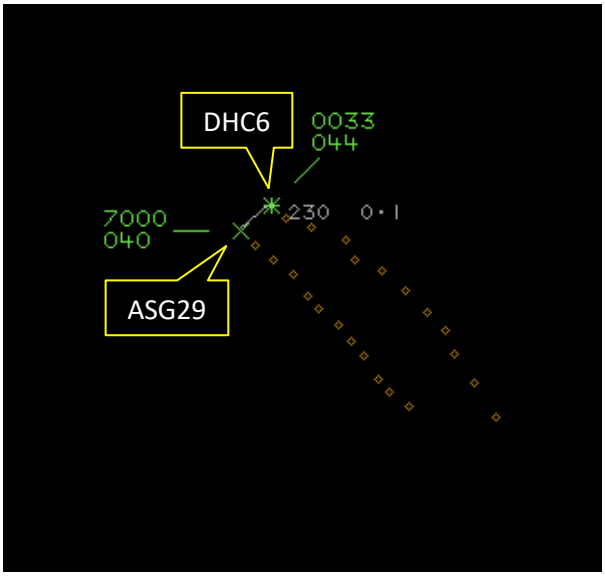


Figure 2 – 1218:46

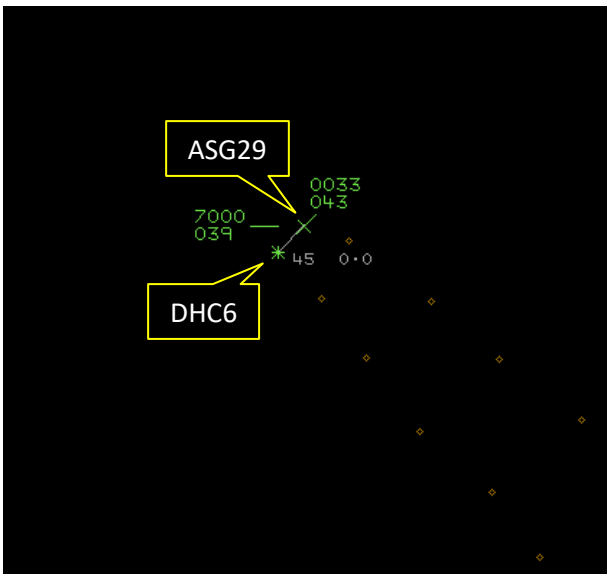


Figure 3 – 1219:14 – CPA

The ASG29 and DHC6 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[3] If the incident geometry is considered as overtaking then the ASG29 pilot had right of way and the DHC6 pilot was required to keep out of the way of the other aircraft by altering course to the right.[4]

Comments

AOPA

This event shows the importance of updating aeronautical information pre-flight, ensuring correct frequencies are used. Whilst the DHC6 pilot was aware of the glider, the glider pilot wasn't fully aware of the operations at Chatteris. The DHC6 pilot flew near to the ASG29 – without actually flying in formation with the glider – in order to indicate the site was active because the ASG29 pilot wasn't responding to radio calls. This action, once acknowledged by the ASG29 pilot, confirmed to the ASG29 pilot that the site was active.

BGA

We commend the glider pilot for taking the safer course of action by assuming the PZ was active when unable to communicate, and for installing and, importantly, using a variety of EC equipment.

Although the see-and-avoid barrier was effective in this incident, it is concerning that other barriers were not. Although the DHC6 pilot was under a Traffic Service, and the ASG29 carried an operating Mode S transponder, the DHC6 was not passed Traffic Information on the glider. The two aircraft were also apparently unable to establish two-way radio communication.

Summary

An Airprox was reported when an ASG29 and a DHC6 flew into proximity 1.5NM south of March at 1219Z on Saturday 9th April 2022. Both pilots were operating under VFR in VMC, the ASG29 pilot listening-out on an out-of-date frequency for Chatteris and the DHC pilot in receipt of a Traffic Service from Lakenheath.

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

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from the air traffic controller involved 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 considered the actions of the ASG29 pilot and heard from a glider pilot member that glider pilots will normally avoid flying in the vicinity of parachuting drop zones. In this case, the ASG29 pilot had been navigating by means of a moving map to position themselves outside the circle depicted on the CAA/NATS 1:500,000 VFR chart; the Board wished to highlight to all pilots using VFR charts that the circles around parachuting areas serve only to highlight the presence of the parachuting area and do not depict the extent of the parachuting area and neither will parachuting activity be contained within the circle. That said, the Board was encouraged by the actions of the ASG29 pilot in attempting to make contact with Chatteris to ascertain the status of parachuting operations and there then followed a discussion on whether or not the glider pilot's use of the old Chatteris frequency (129.900MHz) may have hindered their ability to gain contact with the pilot of the paradropping aircraft (the DHC6). Whilst it was the understanding of the Board that 2-way communication should theoretically have been possible between the ASG29 pilot operating on frequency 129.900MHz and the DHC6 pilot operating on frequency 129.905MHz, it could not be ascertained if the particular radio equipment fitted to each aircraft may have influenced the ability of the pilots to communicate with each other. Therefore, and given that the DHC6 pilot reported having been able to hear the ASG29 pilot but not *vice versa*, members agreed that the ASG29 pilot's inability to hear the transmissions of the DHC6 pilot had been contributory to the Airprox (**CF7**, **CF8**). The Board also noted that the ASG29 pilot had selected their transponder to 'on' but had not sought an air traffic service. Whilst there is no requirement for pilots to do so when operating in Class G airspace, members noted that this had potentially prevented the ASG29 pilot from receiving information from a controller regarding the presence of the DHC6. The Board also noted that the glider had been equipped with an EC device that could not detect the transponder signals from the DHC6 (**CF10**) and therefore members agreed that the ASG29 pilot had only had generic situational awareness – gained from the information on the VFR chart regarding the presence of the parachuting zone – that there may have been a paradropping aircraft operating in the vicinity (**CF9**). This had left the glider pilot relying on their lookout to detect potential threats to their aircraft and the Board agreed that, on sighting the DHC6, the ASG29 pilot had been concerned by the proximity of the other aircraft (**CF12**).

The Board then considered the actions of the DHC6 pilot and heard from a GA pilot member that it is often the practice of pilots of paradropping aircraft to highlight their presence, and by extension the related activity of the parachuting site, to pilots of nearby aircraft by positioning themselves in such a manner that they can be seen by the pilot of the transiting aircraft. The Board noted that the DHC6 pilot had not received any Traffic Information on the ASG29 from the Lakenheath controller and so members agreed that they had not had any situational awareness regarding the presence of the glider (**CF9**). That said, the Board agreed that the DHC6 pilot had sighted the glider early enough to be able to position themselves in such a manner that the glider pilot would have been able to see their aircraft but, nonetheless, had caused concern to the glider pilot by their proximity (**CF11**) when they had turned over the top of the glider. The Board recommends to pilots to avoid overflying other aircraft if possible – even with adequate vertical separation – because it often cannot be ascertained if the pilot of the other aircraft is visual and their intentions are not necessarily known.

Turning to the actions of the Lakenheath controller, the Board heard from an advisor that the controller's recollection of the event had been poor due to the repetitive nature of the paradropping operation and the time elapsed between the Airprox occurring and their notification of it [UKAB note: the Airprox was reported to the UKAB Secretariat on 12th April by the ASG29 pilot; Lakenheath was informed that their controllers may have been involved on 19th April]. The advisor informed the Board that there had been 2 controllers on duty that day, primarily to provide air traffic services to large aircraft operating to/from Mildenhall, and that one controller was on console at the time of the Airprox. The Board noted that the DHC6 pilot had flown multiple similar profiles that day and that they had not informed the Lakenheath controller of their change of level as they commenced their descent on this particular occasion.

Controller members felt that, had this information been forthcoming from the DHC6 pilot, then it may have highlighted the potential confliction with the ASG29 to the Lakenheath controller and may have prompted Traffic Information to have been passed. However, in the event, the Board agreed that the Lakenheath controller had not detected the potential conflict between the DHC6 and the ASG29 (**CF4**) and had therefore not passed Traffic Information on the ASG29 to the DHC6 pilot (**CF1**, **CF3**). Additionally, members noted that the Short Term Conflict Alert at Lakenheath had activated (**CF6**) but could not understand why this had not also prompted the controller to pass Traffic Information to the DHC6 pilot or why the Supervisor (or equivalent) had not intervened at this point. (**CF2**, **CF5**). A GA pilot member added that, in their experience, Lakenheath controllers have been very accommodating when GA pilots have requested an ATS from Lakenheath [UKAB note: Lakenheath is not a designated LARS provider].

Finally, the Board considered the risk involved in this event. Members noted that the DHC6 pilot had sighted the ASG29 at a relatively early stage, had transmitted that they had been visual with the glider (although this had not been heard by the ASG29 pilot) and had positioned themselves in such a manner as to be easily seen by the ASG29 pilot. Therefore, the Board agreed that there had been no risk of collision. However, in turning over the top of the glider, the Board felt that the safety had been reduced because the DHC6 pilot had not fully established 2-way communications with the ASG29 pilot and therefore could not have known their intentions. Accordingly, the Board assigned a Risk Category C to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022048			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Regulations, Processes, Procedures and Compliance			
1	Human Factors	• ATM Regulatory Deviation	An event involving a deviation from an Air Traffic Management Regulation.	Regulations and/or procedures not fully complied with
	• Manning and Equipment			
2	Human Factors	• ATM Leadership and Supervision	An event related to the leadership and supervision of ATM activities.	
	• Situational Awareness and Action			
3	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late
4	Human Factors	• Conflict Detection - Not Detected	An event involving Air Navigation Services conflict not being detected.	
	• Electronic Warning System Operation and Compliance			
5	Human Factors	• ATM personnel operation/interpretation of equipment	An event involving the operation or interpretation of ATM equipment by ATM personnel	Controller did not adequately act on the EWS indications
6	Technical	• STCA Warning	An event involving the triggering of a Short Term Conflict Alert (STCA) Warning	
	Flight Elements			
	• Tactical Planning and Execution			
7	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
8	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
	• Situational Awareness of the Conflicting Aircraft and Action			
9	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			
10	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine	Incompatible CWS equipment

			aircraft position and is primarily independent of ground installations	
	• See and Avoid			
11	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern
12	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[5]

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

Ground Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the Lakenheath controller did not pass Traffic Information on the ASG29 to the DHC6 pilot.

Manning and Equipment were assessed as **partially effective** because the STCA in use at Lakenheath alerted for an extended period without the intervention of the Supervisor.

Situational Awareness of the Confliction and Action were assessed as **ineffective** because although the ASG29 was displayed to the Lakenheath controller, they did not detect the conflict and did not pass Traffic Information on the glider to the pilot of the DHC6.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the controller did not issue Traffic Information to the pilot of the DHC6 when the alert activated.

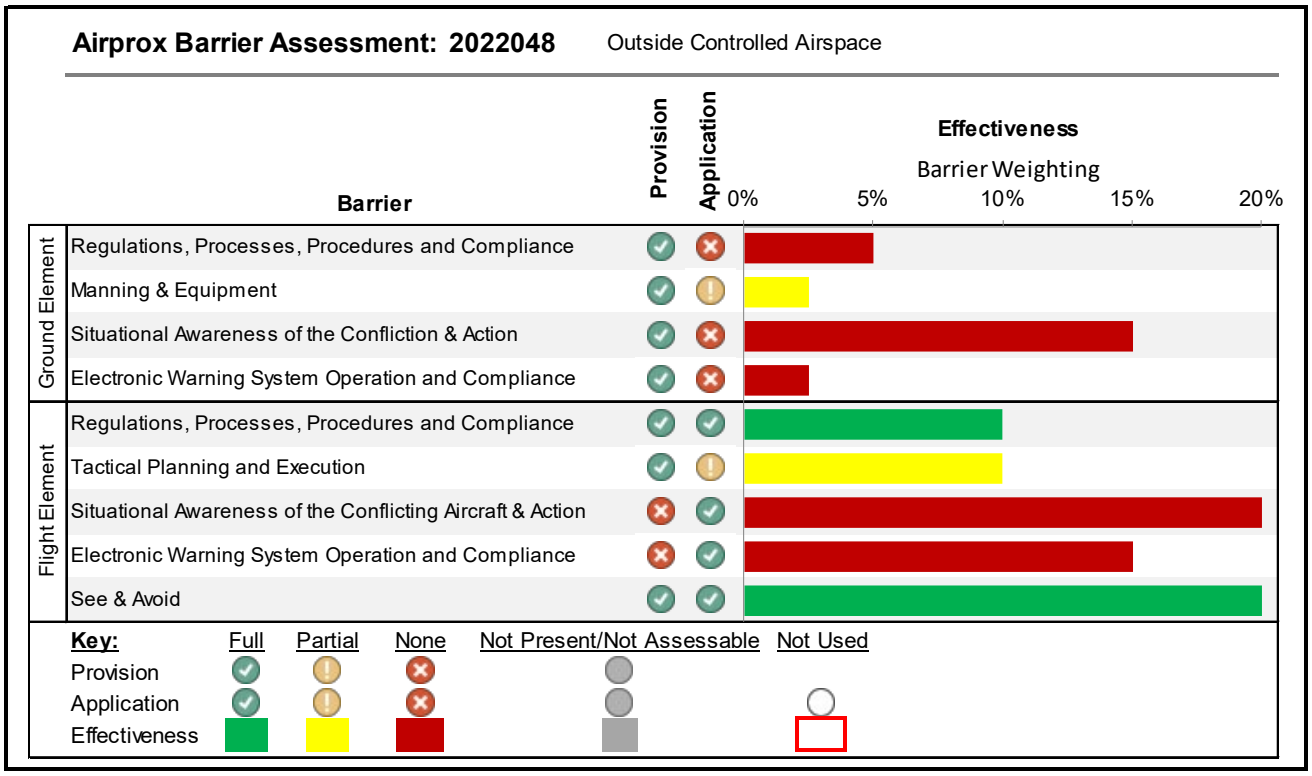
Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the ASG29 pilot did not have the correct frequency for Chatteris and therefore could not hear/be heard fully on the current Chatteris frequency.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the ASG29 pilot had only generic situational awareness that parachuting at Chatteris might be in progress (and therefore there may be a paradropping aircraft in the vicinity), and the DHC6 pilot did not have any situational awareness of the presence of the ASG29.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC equipment carried by the ASG29 could not detect the emissions from the transponder fitted to the DHC6.

[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: 2022048
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