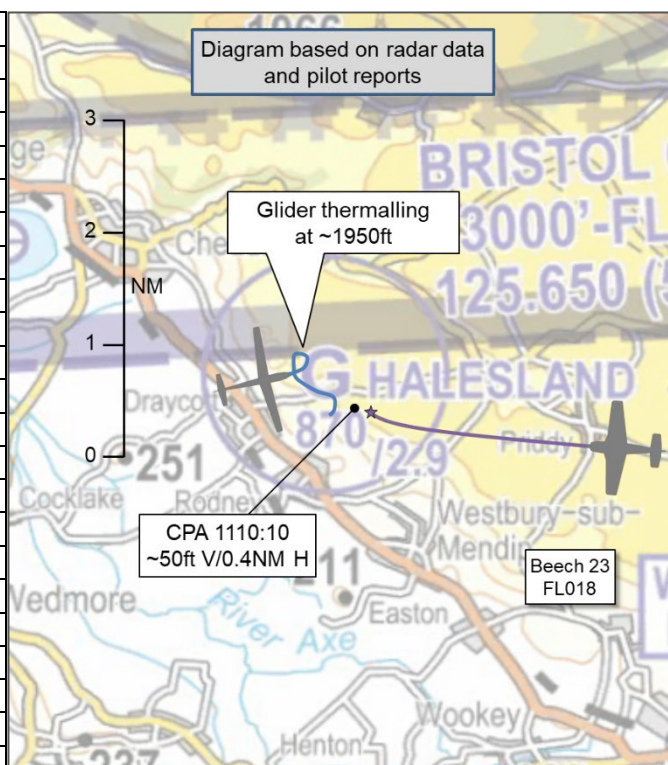


AIRPROX REPORT No 2020090

Date: 29 Jul 2020 Time: 1110Z Position: 5115N 00243W Location: Halesland

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Astir	Beech 23
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider		Cardiff
Altitude/FL		FL018
Transponder	Not Fitted	A, C, S
Reported		
Colours	NR	White, Blue
Lighting	Nil	Wing-tips, Strobes
Conditions	VMC	VMC
Visibility	10KM	'Good'
Altitude/FL	1800ft	2000ft
Altimeter	QNH	QNH
Heading	270°	265°
Speed	60kt	100kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	50ft V/50m H	500ft V/1NM H
Recorded	~50ft V/ 0.4NM H ¹	



THE ASTIR PILOT reports thermalling below the cloud-base close to Halesland airfield on a local flight. Upon straightening back into level flight, the Beech 23 was seen on the left of the glider in straight and level flight very close to the airfield. Both glider and aeroplane then took avoiding action and turned right. Both aircraft then resumed normal flying.

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

THE BEECH 23 PILOT reports that they saw the glider at distance of around 4NM, in a left turn, about 500ft below and so initiated a gentle right turn. The glider pilot must have noticed the Beech 23 coming out of the turn, because they straightened to level flight, the Beech 23 pilot then terminated the turn and continued the flight.

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

THE CARDIFF CONTROLLER reports that they were made aware of the incident some time after the event and so had minimal recollection of the facts. The Beech 23 was inbound to Cardiff, the controller issued a squawk and gave the QNH, then co-ordinated with the Bristol controller to route through their controlled airspace. The Beech 23 pilot was then cleared for a VFR straight-in join for RW30, not above 2000ft, which the pilot read back correctly.

Factual Background

The weather at Bristol was recorded as follows:

METAR EGGD 291050Z AUTO 24008KT 200V270 9999 SCT030 17/10 Q1021=

¹ Separation based on comparing GPS data with radar data.

Analysis and Investigation

CAA ATSI

An Airprox occurred in Class G airspace between an Astir glider and a Beech 23. The Astir pilot was thermalling below the cloud base and operating in the local area around Halesland Airfield. The Beech 23 pilot was tracking toward Cardiff Airport from the east-southeast. The screenshots below display the position of the Beech 23 on the area radar replay and may not be indicative of what was displayed to the Cardiff Radar controller at the time of the event. The Astir was not visible on the area radar replay at any time and was unknown traffic to the Cardiff controller.

At 1108:20 the Beech 23 pilot made initial contact with the Cardiff Radar controller and the following exchange took place:

Pilot: "Cardiff radar (callsign)"

ATCO: "(Callsign) Cardiff"

Pilot: "(Callsign) inbound from Boscombe Down, just approaching Cheddar, two thousand feet on one zero two one, information hotel, request basic service."

ATCO: "(Callsign) hotel is current, Cardiff QNH one zero two one, squawk three six one four"

Pilot: "three six one four (callsign)"

ATCO: "(Callsign) confirm QNH one zero two one"

Pilot: "er one zero two one"

At 1109:07 the transponder code was observed to change from 5077 (monitoring Bristol Radar) to 3614 (Cardiff Radar). The level of the aircraft was displayed as Flight Level 018. The QNH set within the Radar Display processor was 1021hPa (216ft difference) resulting in an altitude of 2016ft. (Figure 1).

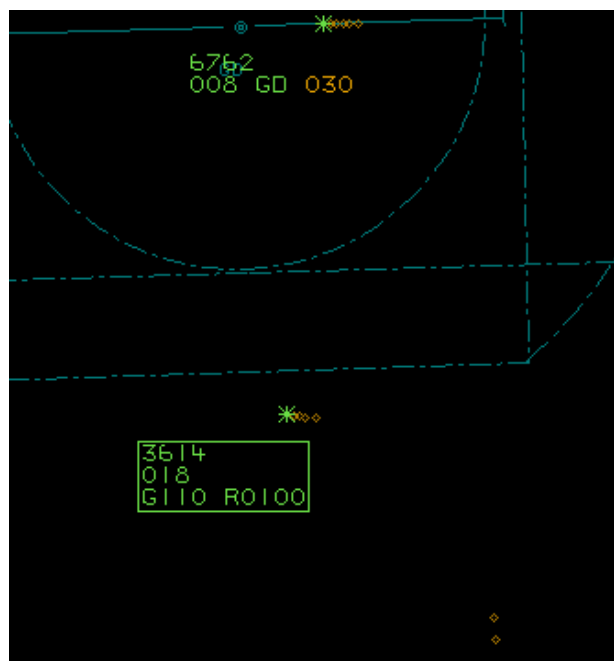


Figure 1 – 1109:07

CPA was believed to have occurred at 1110:10, with the Beech 23 being 0.1NM SSE of the reported position of the Airprox (Figure 2). Although the altitude of the Beech 23 was calculated to be in the region of 2000ft, the altitude of the glider was not known.

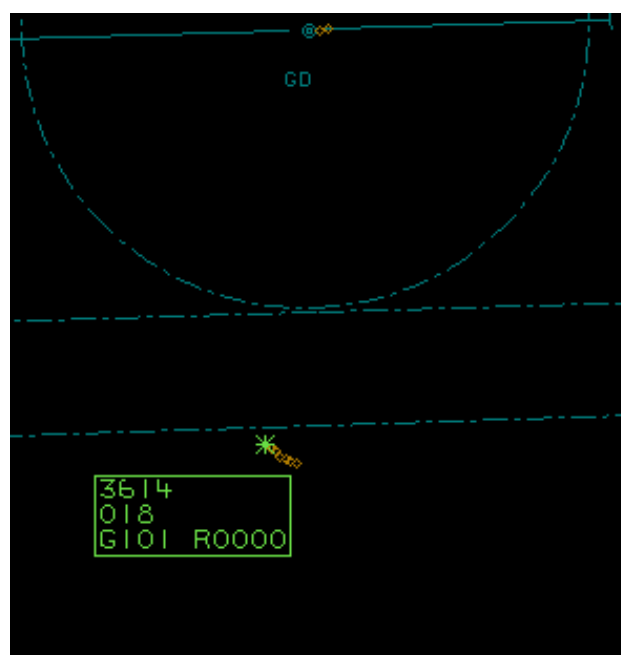


Figure 2 – 1110:10

At 1110:40 the controller gave the joining details for Cardiff, which the Beech 23 pilot acknowledged. No formal agreement was reached between the Cardiff controller and the pilot of the Beech 23 regarding what type of ATC service was being provided. For the purposes of the investigation it has been assumed that the Basic Service requested by the pilot was provided. The controller had no recollection of the event and was unaware of the presence of the glider. As such no warning could be issued to the Beech 23 pilot. The Airprox occurred within Class G airspace where the avoidance of other traffic is ultimately the responsibility of the pilots, regardless of whether or not a warning has been issued.

UKAB Secretariat

The Astir and Beech 23 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 head-on or nearly so then both pilots were required to turn to the right.³ If the incident geometry is considered as converging then the Beech 23 pilot was required to give way to the Astir.⁴

Cardiff ATC Investigation

Cardiff radar's workload and traffic loading was medium with VFR traffic, IFR traffic, IR training traffic and St Athan active. At 11:08.20 the [Beech 23 C/S] reported on the radar frequency at Cheddar at 2000ft, the controller issued squawk 3614 and QNH 1021. At 11:09.56 a primary only return appeared in almost the same place as [Beech 23 C/S] (figure 3). The primary only contact disappeared from radar display after 4sec. At the time of the Airprox the controller was dealing with numerous other aircraft, both inbound to Cardiff and transiting in the local area.

² SERA.3205 Proximity.

³ SERA.3210 Right-of-way (c)(1)

⁴ SERA.3210 Right-of-way (c)(2) Converging.



Figure 3: Image taken from Cardiff radar replay

The post-incident investigation was able to confirm using a ‘through the wall’ radar replay that the unknown primary return that appeared adjacent to [Beech 23 C/S] was an aircraft and not just radar clutter. However the ‘at the glass’ presentation used operationally by the ATCO only displayed an intermittent primary radar return for 4sec. Therefore, it can be confirmed that there was, at the reported time of the event, a pop-up aircraft contact south of Bristol in proximity to the Beech 23. It was believed to be the glider in question, although it had not been possible for the Cardiff investigator to positively confirm this and neither had an assessment of actual proximity been able to be made due to there being no altitude information.

Under a Basic Service, the ATCO was not obliged to continuously monitor or provide routine Traffic Information to the Beech 23 pilot. They had other workload tasks and did not observe the primary-only contact at the time of the event. The activity of the Halesland gliding site to the south of Bristol was not known to Cardiff ATC as this is an area where the unit has not historically provided a Lower Airspace Radar Service (LARS). Due to its proximity to Bristol Airport and associated controlled airspace the LARS in this area had previously been provided by Bristol Radar, but this service was no longer available.

No generic Traffic Information was given as there was no definite indication of any traffic in the vicinity, the ATCO did not observe the return during the 4sec that it displayed and was unaware of the activity of the Halesland gliding site. There are two gliding sites south of Bristol (Mendip gliding and Halesland gliding site) but under current procedures, Cardiff ATC does not receive notification of their activity status. Due to Bristol relinquishing LARS services, Cardiff radar does now work traffic in different areas where previously Bristol would have worked the traffic. The route flown by the Beech 23 took them close to the Halesland gliding site which increased the likelihood of interaction with glider traffic, although when interviewed, the controller did not recall seeing any strong radar indications of glider traffic on that day.

Comments

BGA

It’s particularly disappointing that the Beech 23 pilot chose to overfly an active and promulgated gliding site well below the maximum winch launch height even though they had seen a glider ahead.

Summary

An Airprox was reported when an Astir glider and a Beech 23 flew into proximity at Halesland glider site at around 1110Z on Wednesday 29th July 2020. Both pilots were operating under VFR in VMC, the Astir pilot was not in receipt of an Air Traffic Service and the Beech 23 pilot in receipt of a Basic Service from Cardiff.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and reports from the air traffic controllers 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board first looked at the actions of the Beech 23 pilot. They wondered why the pilot had not planned to avoid Halesland, or at least climbed to be above the winch launch height which was published on VFR charts (**CF2, CF3**). They noted that the CAA published advice on avoiding glider sites in its Skyway Code⁵ and additionally, the latest GASCO safety seminars went further by recommending that pilots avoid gliding sites by at least 1NM, or 2000ft above the winch launch height⁶. The Beech 23 pilot did not have any prior situational awareness about the glider from ATC, because Cardiff Radar was not aware that the glider site was active and the aircraft was not fitted with a CWS (**CF4**). However, they did become visual with the glider at some distance, reported at 4NM, so members wondered why they continued towards the glider and did not take earlier action to avoid, rather than continue to a point that was close enough to cause concern to the glider pilot (**CF7**). Some members opined that the Beech 23 pilot could have asked for a Traffic Service and therefore may have received more information on the glider activity, however, they were informed by the NATS adviser that Cardiff could not provide a radar service below 3000ft in that area.

Turning to the Astir pilot, they were thermalling in the vicinity of the gliding site and without a CWS that could detect the transponder of the Beech 23, had no knowledge that it was transiting through the area (**CF4**). They did not see the Beech 23 until it was relatively close (**CF5**), and members thought that the startle factor probably influenced their assessment of range (**CF6**). However, despite the late sighting the pilot was able to take some avoiding action by turning right.

The Board heard from the NATS advisor that now that Bristol ATC no longer provide a LARS in the area, Cardiff ATC were finding that pilots were calling them further away than was previously the case. Cardiff did not have Halesland glider site marked on their radar map, because previously they would not have needed it, however the ATC investigation had made a recommendation to have the glider site marked on the radar map for the future, and the Board were heartened to hear this. Notwithstanding, the controller was providing a Basic Service and so was not required to provide Traffic Information (**CF1**) and so the Board agreed that not having the glider site marked on the radar map did not contribute to this Airprox. The Board were informed that Cardiff ATC did not know that Halesland were active at the time of the Airprox. A gliding member confirmed that the gliding club did have an LOA in place with Bristol ATC of which aspects, such as notifying activity, had fallen out of use, but that the gliding club would reinvigorate it going forward. Again the Board were heartened to hear this and urged them to include Cardiff ATC in such notification.

When determining the risk, members quickly agreed that because the Beech 23 pilot had been visual with the glider, there had been no risk of collision. However, they assessed that the separation of the two aircraft, together with the late sighting by the glider pilot and the positioning of the Beech 23 over the glider site, described a situation where safety had been degraded and accordingly assigned a Risk Category C.

⁵ CAA Skyway Code: https://publicapps.caa.co.uk/docs/33/CAP1535_Skyway_Code_V2_INTER.pdf

⁶ For details on GASCO safety seminars: <https://www.gasco.org.uk/flight-safety-information/safety-evenings>

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2020090			
CF	Factor	Description	Amplification
Ground Elements			
• Situational Awareness and Action			
1	Contextual	• ANS Flight Information Provision	Not required to monitor the aircraft under the agreed service
Flight Elements			
• Tactical Planning and Execution			
2	Human Factors	• Flight Planning and Preparation	
3	Human Factors	• Aircraft Navigation	Flew through promulgated and active airspace
• Situational Awareness of the Conflicting Aircraft and Action			
4	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
• See and Avoid			
5	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots
6	Human Factors	• Perception of Visual Information	Pilot was concerned by the proximity of the other aircraft
7	Human Factors	• Lack of Action	Pilot flew close enough to cause concern

Degree of Risk: C.

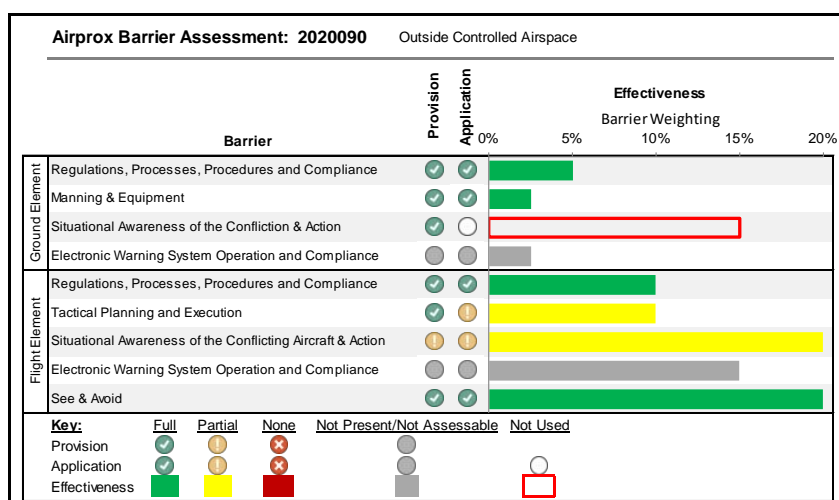
Safety Barrier Assessment⁷

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 the Beech 23 pilot did not plan to avoid the Halesland gliding site.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the Beech 23 pilot only had generic situational awareness that there were gliders in the vicinity.



⁷ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).