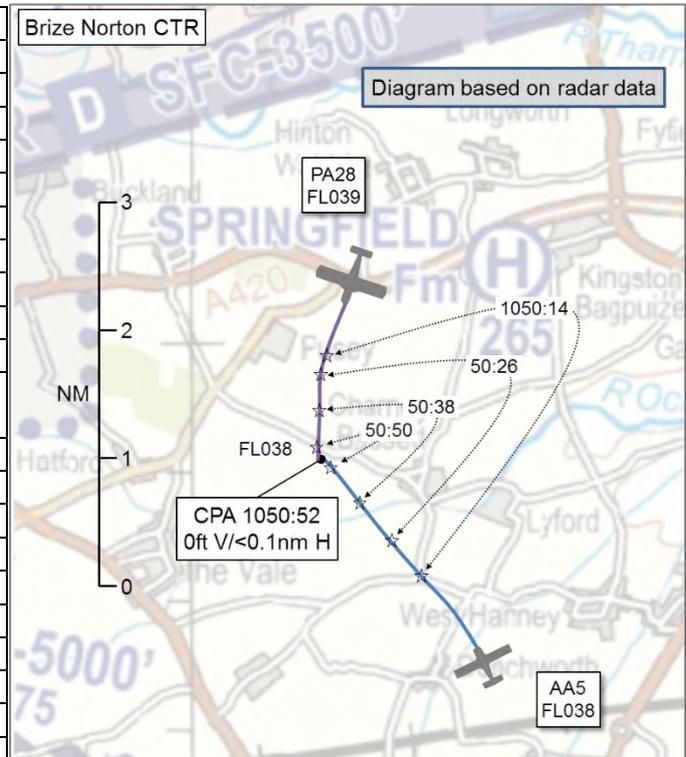


AIRPROX REPORT No 2018057

Date: 21 Apr 2018 Time: 1051Z Position: 5140N 00128W Location: 4nm SSE Bampton VRP

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AA5	PA28
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Traffic	Basic
Provider	Brize LARS	Brize Zone
Altitude/FL	FL38	FL38
Transponder	A,C	A,C,S
Reported		
Colours	Mainly white	Red and white fuselage
Lighting	Wingtip strobes	NK
Conditions	VMC	VMC
Visibility	8km	20km
Altitude/FL	3900ft	4000ft
Altimeter	QNH (1021hPa)	NK
Heading	330°	360° ¹
Speed	105kt	90kt
ACAS/TAS	Not fitted	FLARM
Alert	N/A	None
Separation		
Reported	~100ft V/125m H	Not seen
Recorded	0ft V/<0.1nm H	



THE GULFSTREAM AMERICAN AA5 PILOT reports that he had climbed above the Benson MATZ southern stub towards Compton (CPT) to level at altitude 3900ft. Once west of CPT he turned northwest to route directly to the Brize Norton overhead. Between CPT and Brize Norton he contacted Brize Radar and established a Traffic Service. With approximately 3.5nm to run to the Brize overhead at approx 1055hrs, he saw a low-wing, single-engine aircraft on a reciprocal track in his 12 o'clock, slightly higher and tracking to pass down his left-hand side. Although it was very close, he judged that a collision was not imminent but nevertheless turned right by about 10° to increase the separation while keeping it in sight. The registration of the aircraft was clearly legible as it passed down his left-hand side. It was very hard to estimate distances but, based on the easily legible registration, he estimated the horizontal range on first sighting at about half a mile and, as it passed, perhaps 100-150m with vertical separation perhaps 100ft.

He assessed the risk of collision as 'Low'.

THE PIPER PA28 PILOT reports that at around the reported time of the Airprox he was in the vicinity of RISIN reporting point, carrying out general handling with his student. They were at 4000ft, but carried out a Practice Forced Landing at sometime in the flight (possibly about 1120hrs) before returning to his base. He did not see any aircraft which was close enough to him to warrant an Airprox report.

THE BRIZE LARS CONTROLLER reports that the AA5 pilot was in receipt of a Traffic Service. As the aircraft approached the Brize CTR the pilot asked if he was working the pilot of the PA28 (quoting its registration). He was not but he noticed that the Zone Radar controller, on his right, had the aircraft on his frequency. He passed this information to the pilot and, as far as he could remember, no further

¹ Radar shows it tracking south.

enquiry was made. He was continuously working maximum traffic levels in fine weather conditions, including 3 pilots in receipt of a Traffic Service with up to 3 more pilots on standby for a service. The Zone Radar controller was working at least the Benson Tutors and the PA28. He did not feel that the unit was overburdened but they were working to a medium-high intensity from the time LARS opened.

He perceived the severity of the incident as 'Low'.

THE BRIZE ZONE CONTROLLER reports that he was operating during a medium/high intensity period of traffic, the weather was 'Blue'. He was controlling the PA28 pilot on a Basic Service routing towards Brize. The PA28 pilot elected to carry out 10 mins of general handling south of the airfield before routing via Farringdon. He was also controlling the Tutors out of Benson, who were on a Traffic Service, this is where the majority of his attention was centred. He recalled the LARS controller leaning across to him to confirm whether he was working the PA28. He did not think any more of this until they heard the following day that the AA5 pilot, who was under a Traffic Service with LARS, had reported an Airprox against the PA28. The pilot of the PA28 did not mention anything to him at the time or later. He did not recall seeing anything on the radar screen that warranted a cause for concern.

He perceived the severity of the incident as 'Low'.

Factual Background

The weather at Brize Norton was recorded as follows:

METAR EGVN 211050Z 15004KT 7000 HZ SCT070 19/12 Q1020 WHT BECMG 9999 NSW² BLU=

Analysis and Investigation

Military ATM

The AA5 pilot contacted Brize LARS requesting a Traffic Service, the service was agreed and the aircraft route was confirmed. In the 3 mins prior to the Airprox, the Brize LARS controller accepted a handover from Sector 23 Planner on an aircraft inbound to Gloucester, placed the aircraft under a Traffic Service, ascertained the type of approach at Gloucester and liaised with Gloucester about the inbound. During this 3-min period, no Traffic Information was passed to any pilot including the AA5. At the time of the Airprox, the Brize LARS controller assessed their workload as high to medium and was controlling 4 aircraft (including the AA5), all of whom were receiving a Traffic Service.

The PA28 pilot contacted Brize Zone requesting a Basic Service and 10 mins of general handling prior to a Farringdon recovery. The service was agreed shortly after contact and Brize airfield details were passed. At the time of the incident, the Brize Zone controller was working 4 aircraft (including the PA28); one pilot was receiving a Traffic Service, all others were in receipt of a Basic Service. Two of the pilots on frequency required to cross the Brize Zone and one was a para-dropping aircraft preparing for a drop. Traffic Information was routinely passed to the pilots under the surveillance service. In the 2 mins prior to the Airprox, the Brize Zone controller co-ordinated a Zone transit and the para drop. The Brize Zone controller assessed their workload as medium to low but with a medium level of complexity.

At 10:48:02 (Figure 1), the Brize LARS Controller began to take a handover from the Sector 23 Planner on an aircraft and the Brize Zone Controller began to agree a Zone crossing clearance with another aircraft. The AA5 (squawk 3710) was tracking toward the Brize Zone and the PA28 (squawk 3707) was general handling just to the south of the Brize Zone.

² No significant weather.

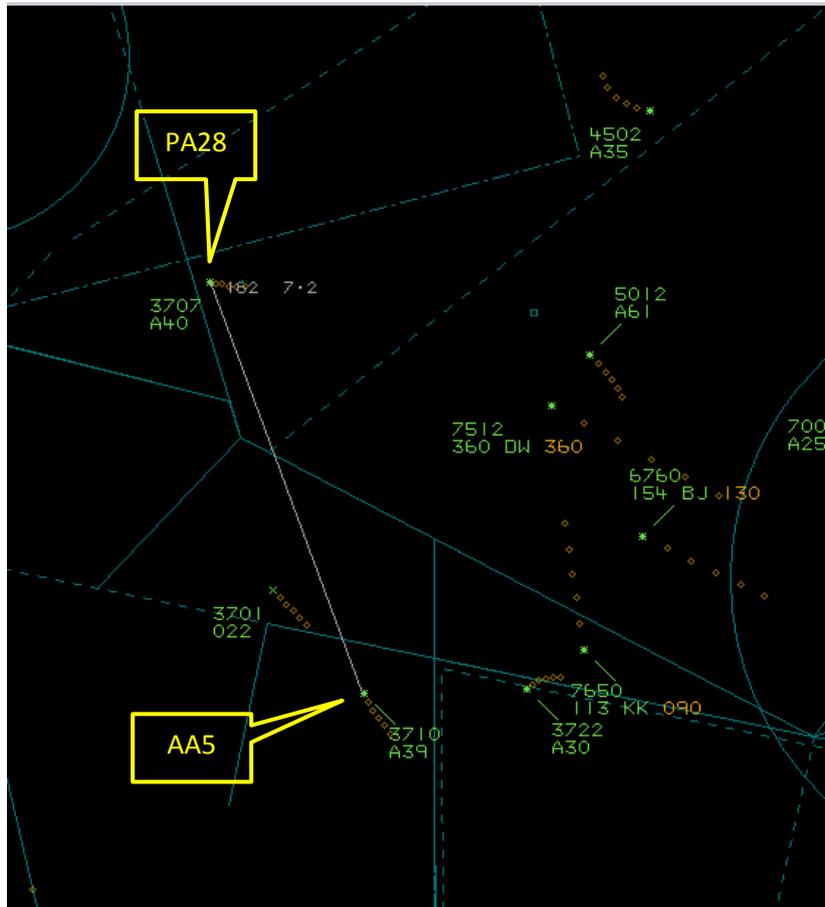


Figure 1: 10:48:02.

At 10:49:05 (Figure 2), the AA5 and PA28 were 5nm apart on conflicting flightpaths; however, no Traffic Information was passed. With respect to a Traffic Service, CAP 774 states '*Controllers shall aim to pass information on relevant traffic before the conflicting aircraft is within 5 NM, in order to give the pilot sufficient time to meet his collision avoidance responsibilities and to allow for an update in traffic information if considered necessary*'.

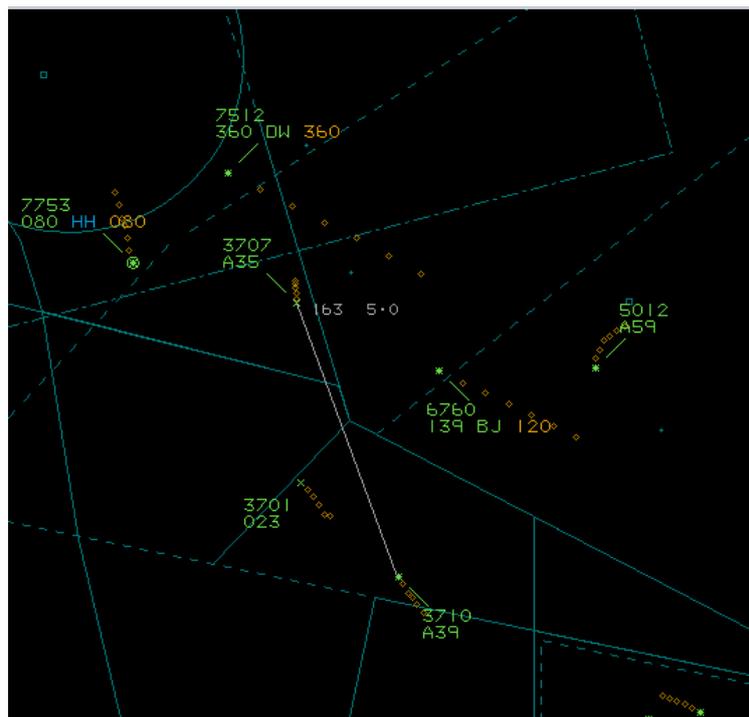


Figure 2: 10:49:05.

At 10:50:34 (Figure 3), the Brize LARS Controller began a prenote to Gloucester about their inbound aircraft. At this point, there was less than 1nm between the AA5 and PA28. Concurrently, the Brize Zone Controller agreed a Zone crossing clearance with another pilot and the pilot of the para-dropping aircraft reported one minute ready to drop.

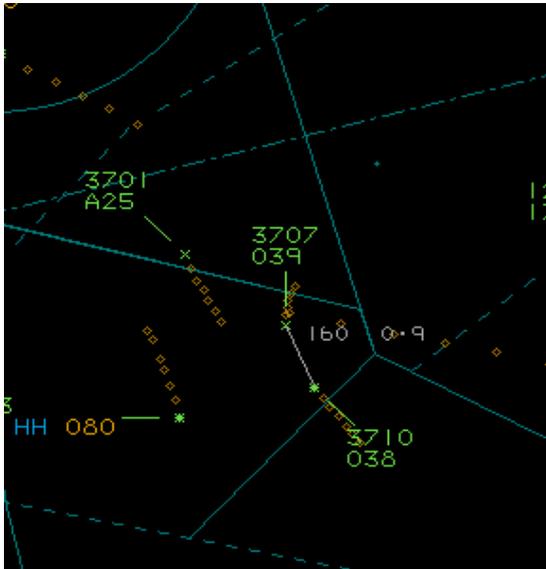


Figure 3: 10:50:34.

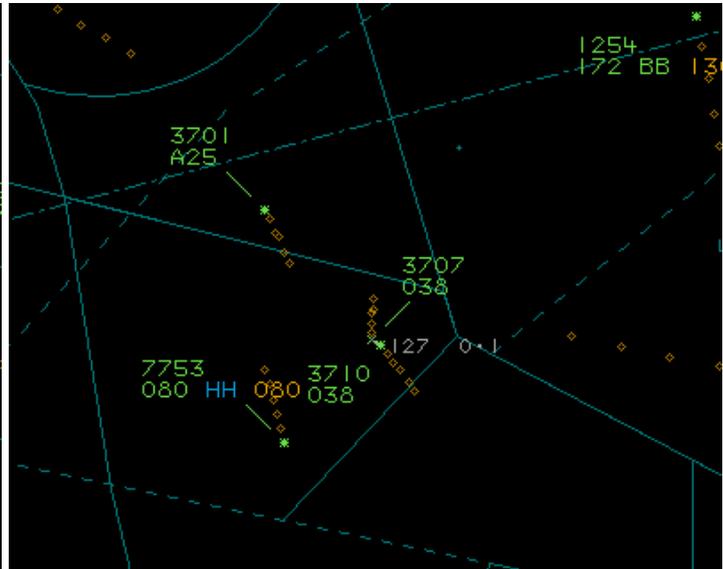


Figure 4: CPA at 10:50:51.

CPA occurred at 10:50:51 (Figure 4). Due to radar replay 'jump' this is the closest measurable CPA (0.1nm horizontal, 0ft vertical). Allowing the radar replay to continue shows that the radar returns merge. At this time, the Brize LARS Controller was still on the landline prenoting the aircraft inbound to Gloucester and the Brize Zone Controller had just agreed a Zone transit with another pilot.

The Brize LARS controller (controlling the AA5 under a Traffic Service) noted their workload as high to medium with 4 aircraft on frequency, all in receipt of a Traffic Service, although this is not an unusual occurrence in the Brize area. All controllers are taught, during basic controller training, to scan for conflicting traffic prior to opening any landline. It is reasonable to expect that, in this situation, had the controller done so they may well have noticed the developing conflict between the AA5 and the PA28 and passed timely Traffic Information. As the handover from Sector 23 was completed, the distance between the aircraft decreased to 5nm, the latest point at which Traffic Information should have been passed. However, no radio transmissions were made for 30 secs and then the call that was made was a terrain warning to another pilot. Having identified the Gloucester inbound, the Brize LARS Controller then began a prenote to Gloucester during which the separation between the AA5 and the PA28 decreased to 0.9nm. The Airprox occurred during this landline conversation.

The Brize Zone Controller (controlling the PA28 under a Basic Service) noted their workload as medium to low but with a medium level of complexity. CAP774 states that *'the provider of a BS is not required to monitor the flight, pilots should not expect any form of TI'* but *'if a controller considers that a definite risk of collision exists, a warning shall be issued'*. Given the complexity of the workload at the time, the Zone Controller correctly allocated his priorities in passing Traffic Information to the other pilot receiving a Traffic Service, organised a Brize Zone crossing and co-ordinated the para-dropping aircraft. As a result, it is unsurprising that the conflict between the AA5 and PA28 was not noticed by the Zone Controller and no Traffic Information was passed, even though a definite risk of collision existed. Given these circumstances, the Brize Zone Controller discharged his responsibilities correctly.

UKAB Secretariat

The AA5 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 hazard³. If the incident geometry is considered as converging then the AA5 pilot was required to give way to the PA28⁴. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right⁵, which the AA5 pilot did.

Summary

An Airprox was reported when an AA5 and a PA28 flew into proximity at 1051hrs on Saturday 21st April 2018. Both pilots were operating under VFR in VMC, the AA5 pilot in receipt of a Traffic Service from Brize LARS and the PA28 pilot in receipt of a Basic Service from Brize Zone.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, the controllers concerned, area radar recordings and reports from the appropriate ATC and operating authorities.

The Board first noted that both pilots were in receipt of an Air Traffic Service (ATS) from Brize, albeit not from the same controller. The AA5 pilot was in receipt of a Traffic Service from the Brize LARS controller and the PA28 pilot was in receipt of a Basic Service from the Brize Zone controller. Discussing the actions of the controllers, the HQ Air Command BM advisor commented that the Zone controller was working 'quite hard'. He had prioritised his workload by dealing with traffic that was receiving a Traffic Service and another pilot who wished to transit the Brize Zone. Additionally, he had coordinated a parachute drop with Swanwick Civil for an aircraft that wished to enter Controlled Airspace (CAS). He could understand why the Zone controller had not been able to monitor the progress of the PA28, whose pilot was receiving only a Basic Service. The BM advisor then discussed the LARS controller and commented that he also was working 'reasonably hard'. He had 4 pilots receiving a Traffic Service, including the AA5 pilot, and 3 others on standby. In the period leading up to the Airprox, the LARS controller had carried out various administrative tasks, including accepting a handover from the Swanwick Sector 23 Planner on traffic inbound to Gloucestershire airport and coordinating its arrival with the airport. During this period, 3 mins prior to the Airprox, he did not issue Traffic Information to any pilot. The BM advisor stressed that it is recognised within ATS that control tasks should be carried out before any administrative duties, and he opined that the LARS controller should therefore have scanned the radar display to ascertain if there were any potential conflicts before commencing any telephone calls. Controller members agreed that this course of action would have been appropriate. Some controller members wondered whether it would have been appropriate to have reduced the service being provided due to the controller's workload, but GA pilot members were not entirely convinced that this would have prevented the Airprox. In the end, members concluded that, under pressure of workload, the LARS controller had probably either forgotten about the presence of the AA5 or had erroneously thought that he had had sufficient time to conduct the handover tasks in an effort to reduce his own workload.

The Board noted that the AA5 pilot had sighted the PA28 late, and members commented that it would have been a hard target to see in a head-on situation. Notwithstanding, some were concerned that he had not taken further action rather than just turning right 10° to avoid the PA28; they felt that a more aggressive turn was warranted, and that this might in itself have assisted the PA28 pilot to detect his aircraft. Nevertheless, members also noted that the AA5 pilot seemed content with the proximity of the two aircraft in assessing the risk of a collision as 'low', having first sighted the PA28 at about 0.5nm.

The Board noted that the 2 pilots were receiving an ATS Service from Brize on different frequencies, which prevented the pilots overhearing each other's transmissions. However, a Mil Terminal controller

³ SERA.3205 Proximity.

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

⁵ SERA.3210 Right-of-way (c)(1) Approaching head-on.

member explained that it was not operationally practical to work the aircraft on the same frequency because of the nature of the coordination required within the unit. The Board queried whether it would be practical to employ Short Term Conflict Alert (STCA) to assist the Brize controllers. The HQ Air Command BM advisor reported that there were plans to introduce STCA to military controllers within the forthcoming Project Marshall military ATM update but that this project had been significantly delayed in recent years. The Board were heartened to hear that it was hoped to soon install Project Marshall equipment for a trial at Shawbury, possibly next year.

The Board quickly decided that the cause of the Airprox was a late-sighting by the AA5 pilot and a non-sighting by the PA28 pilot. It was considered that the LARS controller not passing Traffic Information to the AA5 pilot was a contributory factor. Turning to the risk, the Board noted that, at the CPA, the AA5 pilot had the PA28 in sight and had taken what he thought was appropriate action to ensure that a risk of a collision did not exist. Some members thought that the propinquity of the aircraft in a head-on situation was such that the incident represented circumstances where a definite risk of collision had existed and safety had been much reduced below the norm (risk Category B). Others thought that, although safety had been degraded, the AA5 pilot had taken action, was visual with the PA28, and could have taken more action if he had considered it necessary. After some discussion, the latter view prevailed and the Board assessed that the collision risk was Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late-sighting by the AA5 pilot and a non-sighting by the PA28 pilot.

Contributory Factor: The Brize LARS controller did not provide Traffic Information to the AA5 pilot.

Degree of Risk: C.

Safety Barrier Assessment⁶

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

ANSP:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the LARS controller did not scan his radar display effectively before carrying out other operational administrative tasks and did not realise the proximity of the 2 aircraft. Consequently, he did not issue Traffic Information to the AA5 pilot.

Situational Awareness and Action were assessed as **ineffective** because ATC was not aware of the close proximity of the two aircraft until the AA5 pilot commented about the position of the PA28. Consequently, timely Traffic Information was not issued.

Flight Crew:

Situational Awareness and Action were assessed as **not effective** because neither pilot was given Traffic Information about the other aircraft.

Warning System Operation and Compliance were assessed as **not effective** because although the PA28 was equipped with FLARM, the AA5 was not fitted with compatible equipment.

⁶ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

See and Avoid were assessed as **partially effective** because the PA28 pilot did not see the AA5 and the AA5 pilot only saw the PA28 late.

