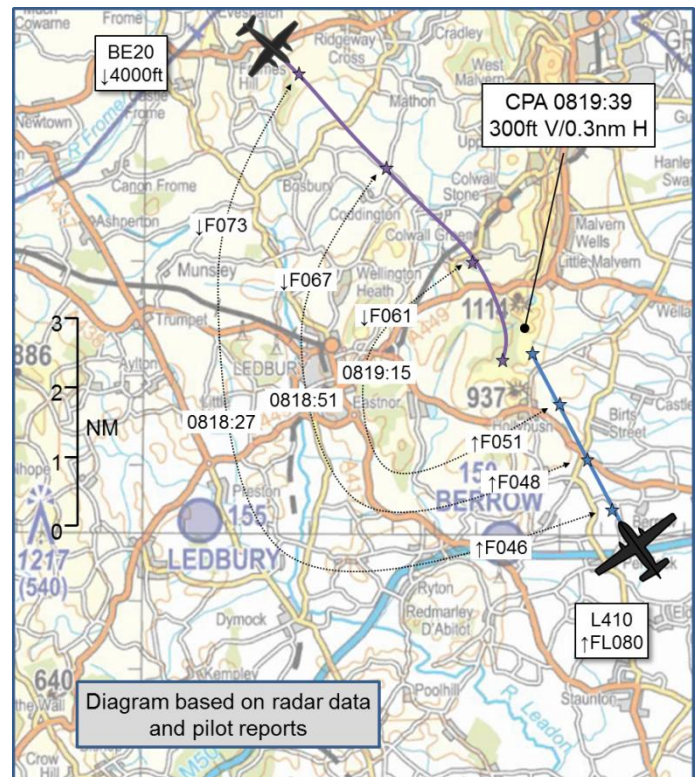


AIRPROX REPORT No 2015066

Date: 11 May 2015 Time: 0819Z Position: 5202N 00022W Location: Nr Ledbury

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	L410	BE20
Operator	CAT	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Procedural	Basic
Provider	Gloster	Gloster
Altitude/FL	FL52	FL55
Transponder	A,C,S	NK
Reported		
Colours	White	NK
Lighting	NK	NK
Conditions	IMC	VMC
Visibility	In cloud	NK
Altitude/FL	FL50	NK
Altimeter	1013hPa	NK
Heading	330°	NK
Speed	130kt	NK
ACAS/TAS	TCAS II	NK
Alert	RA	N/A
Separation		
Reported	200ft V/0m H	NK
Recorded	300ft V/0.4nm H	



THE L410 PILOT reports climbing out from Gloucestershire airport, IMC passing FL50, when the controller passed Traffic Information on opposite direction VFR traffic. He received a TCAS RA to stop climb and initiate descent, which he followed. At the nearest point, the TCAS indicated the other traffic 200ft overhead but, being IMC, the pilot did not see it.

He assessed the risk of collision as 'High'.

THE BE20 PILOT didn't file a full report; however, he reported by e-mail that he was flying VFR in VMC, and the weather at the time was scattered broken layers. Once he had contacted Gloster Approach, they informed him of the outbound traffic and advised that its climb rate would prevent any conflict. He assumed that the other aircraft would have TCAS and would react accordingly. He saw the other aircraft emerge from the scattered cloud on a reciprocal heading about a mile away and so he elected to turn right to mitigate any further conflict. He had to make a fairly steep bank angle to avoid cloud to maintain VFR. He later understood that although Gloster were referring to a radar screen, they were unable to use it for Traffic Information, and that Western Radar declined to offer the IFR traffic a radar service: he opined that it seemed there was a lot of information available that was denied to either crew, moreover the Gloucestershire area is reasonably busy, but there is no provision for controlling IFR traffic below FL70.

THE GLOSTER CONTROLLER reports that he was the combined ADC and APP controller and was using the radar as a 'spatial awareness tool'. The L410 was departing from Gloucestershire airport, routing direct to MONTY in the climb to FL80, and was pre-noted to Western Radar. The controller could see from the DF trace that the L410 was tracking approximately 335°. London Information called to pre-note the BE20, inbound and under a Basic Service, they advised that he was 14nm NW of Shobdon, and the Gloster frequency was passed. Generic Traffic Information was given to the

L410 on the BE20. After a few minutes the controller asked the assistant to call London Information because the BE20 pilot had not yet called on frequency; they were given Traffic Information on the L410 and asked to send the BE20 over to the Gloster frequency. The BE20 pilot duly called inbound at FL95 and requested a Basic Service. DF indicated that he was on a bearing of 330° and he was passed Traffic Information on the departing L410. The L410 pilot was given an update on the inbound traffic and its level, and Traffic Information was updated to both pilots regularly. Because of the limitations of the radar the controller then called Western Radar to ask if they could see the inbound traffic and they advised that it was approximately 10nm north of the L410 and appeared to be descending. The Gloster controller asked the Western controller for a radar heading for the L410, but the Western controller declined as, in accordance with their service provision, they were unable to give a radar service below FL70. The Gloster controller once again gave updated Traffic Information to both pilots. He reported that the effective primary radar range to the NW was only about 15nm, and as the primary contact that was believed to be the L410 approached the edge of the radar cover, a weak contact appeared in close proximity. This was believed to be the inbound aircraft, and Traffic Information was given immediately because the proximity of the two contacts indicated a risk of collision. The contact believed to be the BE20 was seen to make a steep right turn, but neither pilot made any reference to TCAS alerts on the RT. After landing, the pilot of the BE20 was asked whether he was visual with the L410 and he confirmed he was. Recalled that the crew of the L410 subsequently advised by telephone that they had received a TCAS TA.

Factual Background

The weather at Gloster was recorded as:

METAR 0820Z 21010KT 9999 BKN014 15/121016

Analysis and Investigation

CAA ATSI

The Gloucester controller was providing combined Aerodrome and Approach Control without the use of surveillance equipment. The L410 was operating IFR from Gloucester and was in receipt of a Procedural Service from Gloucester. The BE20 was operating VFR to Gloucestershire Airport and was in receipt of a Basic Service from Gloucester. ATSI had access to reports from both aircraft and the Gloucester controller, area radar recordings and transcription of the Gloucester frequencies. During the investigation it was apparent that the R/T recording was not available between 0817:00 and 0821:00 due to a problem with the Gloster recording equipment. Screenshots produced in the report are provided using the area radar recordings, levels indicated are in Flight Levels.

At 0812:03, the L410 received departure clearance to remain outside controlled airspace and route on track to MONTY (a position approximately 70nm north west of Gloucester) climbing to FL75. At 0812:23, the L410 reported ready for departure. At 0813:00, the Gloucester controller phoned Western Radar to ascertain the position of the inbound BE20, which the Gloucester Controller was aware of. The Western Radar controller advised the Gloucester controller that the BE20 was approximately 5 miles north of Shobdon, which itself is approximately 30nm north of Gloucester. During this coordination it was agreed to transfer the BE20 to Gloucester immediately.

At 0813:15 (during the telephone call to Western Radar), the L410 was cleared for take-off by the Gloucester controller. At 0814:30, the BE20 reported on the Gloucester Approach frequency at FL95 and a Basic Service was agreed. The Gloucester controller then passed Traffic Information on the departing L410. At 0815:28, the L410 was provided with a Procedural Service. Traffic Information on the BE20 was then passed to the L410 (Figure 1) as the L410 was passing 1400ft.



Figure 1 (0815:28)

At 0816:25, the BE20 reported leaving FL95 and was instructed to report passing FL40 on track for a right base join for RW22 at Gloucester. No further relevant transmissions were recorded until 0824:31. The controller report refers to an additional telephone call to Western Radar during the period 0817:00 to 0821:00, and a subsequent update to Traffic Information being passed based on weak primary contacts converging approximately 15nm north of Gloucester.

At 0819:19 Figure 2 shows the aircraft were 1nm apart and opposite direction. The L410, which was the southerly of the 2 contacts, showed a climb rate of 600ft per minute and was at FL53. The BE20 appeared to be commencing a right turn at this point and passing FL57 in the descent.

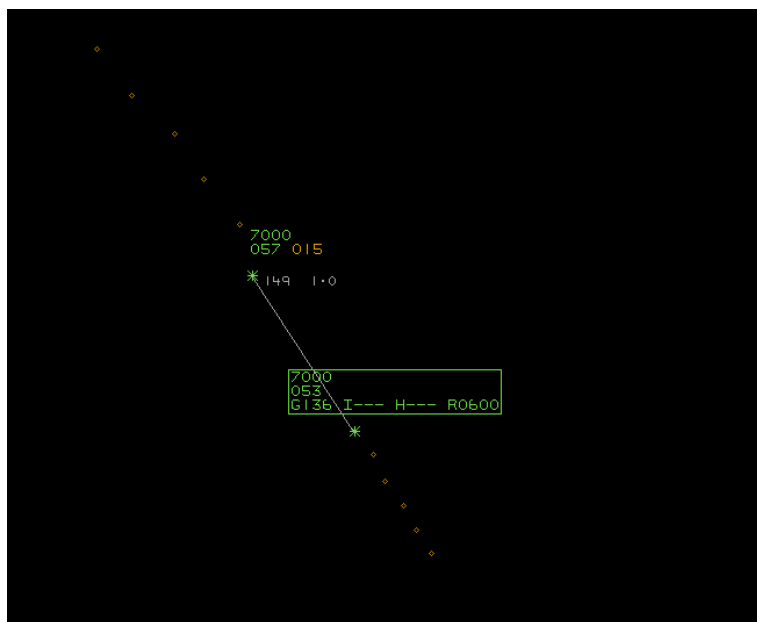


Figure 2 (0819:19)

At 0819:39, CPA occurred (0.3nm and 300ft) as the BE20 had turned to the right (Figure 3). The L410 had stopped the climb and descended to 5200ft – the climb rate indicated the L410 had levelled off.

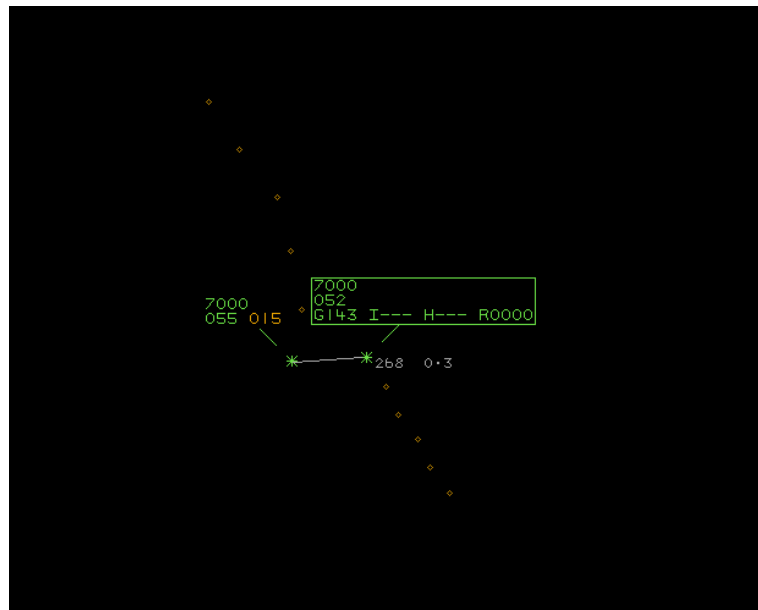


Figure 3 (0819:39)

There is no R/T evidence to record what the L410 pilot reported to Gloucester when radar indicated that the climb was arrested. In his written report, the pilot of the L410 reported responding to a TCAS RA. At 0824:31 (after the BE20 had landed at Gloucester), the controller explained to the BE20 pilot that he had not had radar available at the time the L410 passed the BE20, but asked the pilot if he saw the L410 to which the pilot confirmed “Visual with the Let”.

When providing a Procedural Service a controller shall provide Traffic Information if it is considered that a conflict may exist on other known traffic; however, there is no requirement for deconfliction advice to be passed, and the pilot remains responsible for collision avoidance.¹ The BE20 was being provided with a Basic Service and therefore was not participating in the Procedural Service. Accordingly, deconfliction advice (in this case to the L410) shall not be provided against non-participating aircraft.² Subject to workload, controllers may initiate agreements with aircraft on a Basic Service to restrict their flight profile in order to coordinate them with aircraft in receipt of a Procedural Service. This type of agreement shall be limited to those occasions that a clear conflict exists but is only to be undertaken when the workload permits.³ The pilot of the L410 received a TCAS RA which alerted him to the proximity of BE20, and he complied with the instruction to stop the climb and descend.

The Gloucester controller provided early Traffic Information and reported updating that information when the degree of conflict was checked with Western Radar. The Gloucester controller was also providing an Aerodrome Control Service so their workload would have been greater and the opportunity to restrict the levels of the BE20 may have been limited. Both aircraft were operating in Class G airspace; therefore, the pilots of both aircraft were ultimately responsible for their own collision avoidance having been provided with mutual Traffic Information.

UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard⁴. If the incident geometry is considered as head-on, or nearly so, then both pilots were required to turn to the right⁵.

¹ CAP 493 Section 1 Ch.12 page 12

² CAP 493 para 5F.5 Section 1 Ch.12 page 12.

³ CAP 493 para 5F.8 Section 1 Ch 12 page 12.

⁴ SERA.3205 Proximity.

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

Summary

An Airprox was reported on 11 May 2015 at 0819 between an L410 and a BE20. The L410 was departing Gloucestershire under a Procedural Service and the BE20 was inbound, on a Basic Service. The controller passed Traffic Information to both pilots. The L410, whose pilot was IMC, subsequently received a TCAS RA to stop climb and then descend.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the L410 pilot, transcripts of the relevant RT frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board first looked at the actions of the Gloucester controller. He was constrained by the equipment that he had, in that the radar range at Gloucester did not go far enough out for him to see the BE20 inbound. Although he was aware of the BE20's approximate location, controlling members on the Board agreed that, without having a positive return on his radar, he couldn't have turned either aircraft in case he made matters worse. The Board noted that he had tried to ask Western Radar for assistance, but that they were unable to offer a radar heading. The Board asked for clarification on why this was so, given that Western Radar had both aircraft on their display. They were informed by the NATS representative that it was due to technical issues with the radar which meant that controllers are unable to provide a radar service below FL70; because of this, they have no terrain clearance charts covering that area, and so cannot provide any control to aircraft below FL70. As a result, although the Weston Controller was able to give Traffic Information because he could see the two aircraft concerned, he wouldn't have been able to issue a radar heading, because of terrain and the limited radar performance in the area which meant that there may have been other traffic in the vicinity that he couldn't see.

The Board then wondered whether the Gloucester controller could have used height to separate the aircraft. Acknowledging that he wasn't required to separate aircraft under a Basic Service from those under a Procedural Service, CAP 493 nevertheless states that if the controller's workload permits, he can initiate an agreement with aircraft under a Basic Service to provide separation from those under a Procedural Service - in this instance height separation would have seemed appropriate. The Board were aware that the controller was combining ADC and APP controlling positions, but were unable to assess his workload because, disappointingly, the RT recordings were not available for the few minutes surrounding the Airprox.

Turning to the pilots, the Board first looked at the actions of the L410 pilot. The Board wondered whether he was fully aware that, under a Procedural Service, the controller was not obliged to provide separation from anything other than other aircraft under the same service. There was a great deal of discussion about the rules which applied in this situation, and some members of the Board felt that even if he was completely familiar with the rules pertaining to a Procedural Service, the Gloucester controller's numerous calls of Traffic Information about the BE20 may have led the pilot to believe that some separation was being applied. That said the Board did not wish this to imply that they thought that the Gloucester controller should not have given such comprehensive Traffic Information. It was simply that there was a need to be clear to pilots that there is no such separation being applied under a Procedural Service and, on the assumption that his TCAS would have given him an indication of the conflicting traffic for some time before the RA, the Board thought that it would have been wiser for him to act before he did.

The Board then turned their attention to the actions of the BE20 pilot; in this respect they were disappointed that he had decided not to file a report because more detail about his circumstances may have helped them to understand his situation better. There was a general feeling amongst members that he could also have done more than he did. He was VFR outside controlled airspace, had equal responsibility for averting a collision, and knew that traffic was departing Gloucester on an IFR departure and heading in his direction, yet he seemed to be under the impression that it would avoid him by using its TCAS. Because the RT recordings weren't available, the Board weren't able to

determine what the controller had said to him to give him the idea that the L410's rate of climb would keep the two aircraft apart. Such a call would have been highly unusual from a controller that didn't have access to secondary radar to assess rates of climb but, without the RT recordings, the Board couldn't decide whether the controller had said something misleading, or the pilot had just misunderstood. The Board also discussed at some length the wisdom of the BE20 pilot being on a Basic Service when, under his own admission, there was obviously a fair amount of cloud around. That being said, other than maintain above FL70 with Western radar, his only alternative in that area was to request a Procedural Service from Gloucester, which might have required him to fly IMC under their control; it was not known whether the pilot had an IMC rating to allow him to accept flight in cloud. As it had been for the L410 pilot, members wondered whether, in receiving comprehensive Traffic Information from the controller, the pilot was led to believe that the controller was separating the two aircraft when, in fact, it was the pilots' responsibility.

When deciding on the cause of the Airprox, the Board quickly agreed that, irrespective of the fact that the Gloucester controller had provided Traffic Information, both pilots were in Class G airspace and were therefore responsible for their own separation. Moreover, both had received sufficient information to break the confliction well before it became an Airprox and it had been their mutual inaction that had led to the situation developing. Therefore, the Board determined that the cause was that the L410 and the BE20 pilots flew into conflict. Given the head-on nature of the incident, the risk was assessed as B; safety margins had been much reduced.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The L410 and the BE20 pilots flew into conflict.

Degree of Risk: B.