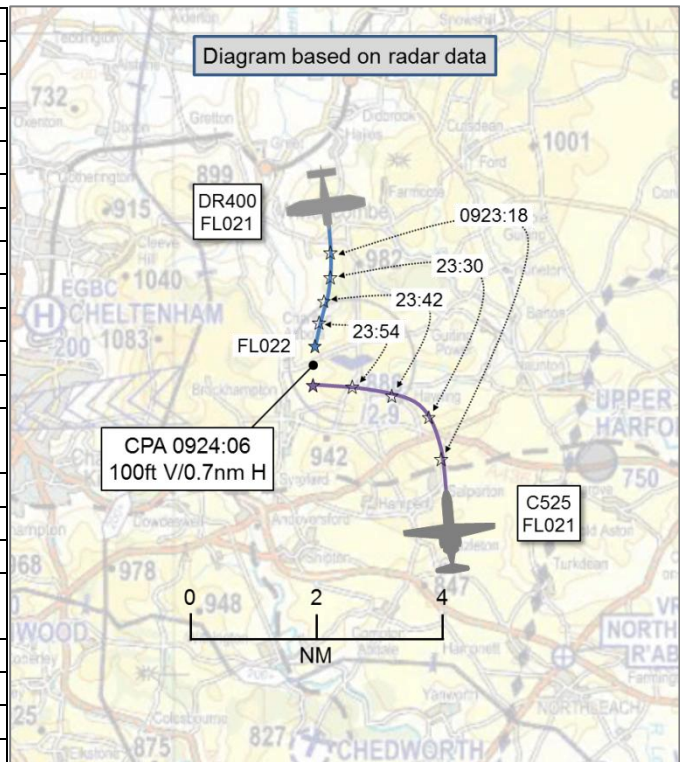


AIRPROX REPORT No 2015071

Date: 21 May 2015 Time: 0925Z Position: 5155N 00157W: Location: 8nm E Gloucestershire airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C525	DR400
Operator	Civ Comm	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Procedural	Basic
Provider	Gloster App	Brize Rad
Altitude/FL	2200ft	2100ft
Transponder	A/C/S	A/C
Reported		
Colours	White/blue	White/blue
Lighting	Strobes, nav, landing, beacon	Wing-tip strobes, HISL
Conditions	IMC	VMC
Visibility	N/A	'Very good'
Altitude/FL	2200ft	2600ft
Altimeter	QNH (1026hPa)	RPS
Heading	265°	185°
Speed	185kt	110kt
ACAS/TAS	TCAS I	Not fitted
Alert	TA	N/A
Separation		
Reported	NK	NK
Recorded	100ft V/0.7nm H	



THE CESSNA 525 PILOT reports that after a left turn at NIRMO, descending from 2500ft to 2000ft and established inbound on the final approach course 266° to the Final Approach Fix (FAF), he overheard the controller clearing the pilot of another aircraft to cross the final approach course. He relayed his concerns to the controller that he was unhappy that an aircraft was being cleared across his inbound course. He had sight of the traffic on TCAS, but no visual sighting of the traffic. The cloud was patchy between 2500-2000ft. He carried out an avoidance manoeuvre climbing initially to 3000ft and then to 3500ft because he had another pop-up traffic on TCAS as he commenced a right-hand turn to establish back on the inbound approach course slightly west of NIRMO. His passenger did comment that he thought that he saw the traffic passing under them as they were in the right turn and climbing. He established back inbound and relayed his concerns again on allowing an aircraft to cross the approach path. The controller informed him that a different agency was handling the traffic and he thought that the controller commented about not being radar rated. The rest of the approach was normal. He kept the controller informed of the avoidance and his intentions, during all phases of the event. His only comment was that in the approach phase of flight the approach course should be sterile; work-load is high, configuring the aircraft and ensuring the approach is being flown in accordance with the published procedure.

He assessed the risk of collision as 'Medium'.

THE ROBIN DR400 PILOT reports that he was flying south in good or very good visibility. There was a Parachute Jump Exercise (PJE) at Little Rissington, with a 10nm radius around the airfield, which was on his direct route. This influenced his planning of his route. The 10nm radius cone of risk reduced nearer the ground, and his plan to mitigate risk and avoid conflicting traffic was to remain low and well clear of Little Rissington to remain outside the Oxford AAIA. He therefore routed west

overhead Moreton-in-the-Marsh, turning south at Winchcombe, direct to Kemble. This track would put him clear of the NOTAM area, clear of the AAIA and would also avoid overflying the para/hangliding site south-east of Winchcombe. It would also put him just clear of the 'feather' of Gloucestershire's instrument approach, with the reassurance that any procedural IFR traffic would avail themselves of Gloster Radar. Once airborne he contacted Brize Radar with details of his route and obtained a Basic Service. He was allocated a squawk, set Mode C and set the Cotswold RPS. The closest position to Little Rissington was where the Airprox was reported to have occurred. As far as he was concerned the flight was uneventful, he did not sight the C525. He commented that he had visited Brize ATC before the date of the Airprox to see their ATC services in action. He had heard from the controllers that even though a Basic Service is agreed, Brize, as part of their duty of care, will inform pilots when a collision risk is heightened. He therefore thought that he would be afforded the 'protection required'. Reviewing the available north/south transit routes across the 5154N Latitude with a 10nm PJE at Little Rissington meant that there were not many options. East of Gloucester there are a number of airfields and then a small corridor before Benson. Given the PJE at Little Rissington, he opined that it was predictable that the traffic would be funnelled between the airfield and Gloucestershire airport. In his opinion, pilots and Gloster and Brize controllers should use knowledge and radar equipment to maximise effect on these occasions.

THE GLOUCESTERSHIRE APPROACH CONTROLLER reports that the C525 pilot was on the RNAV Approach, routeing via REKLO and had been cleared for the approach. The controller was operating as an Approach Procedural controller but was using the radar as a spatial awareness tool when he observed traffic believed to be approximately 3nm north of the final approach, southbound. It was estimated that the observed track would pass through the final approach track at approximately 8nm. At the time the C525 pilot had reported at NIRMO (from the south) and Traffic Information was passed on this contact based on the information available. Shortly afterwards the C525 pilot reported a TCAS RA, climbing to 3000ft and abandoning the approach.

Factual Background

The Gloucestershire weather was:

EGBJ 210920Z 29007KT 9999 FEW024 15/07 Q1026=

The Little Rissington NOTAM:

H1746/15 NOTAMN

Q) EGTT/QWPLW/IV/M /W /000/130/5152N00142W010

A) EGTT B) 1505210700 C) 1505210900

E)

PJE WI 10NM RADIUS 515200N 0014136W (LITTLE RISSINGTON AD) WI THE FLW CONE (ALL HEIGHTS AGL): SFC-3000FT 3NM RADIUS, 3000FT-6000FT 6NM RADIUS, 6000FT-12000FT 10NM RADIUS. DROP HGT SUBJ ATC CLR. OPS CTC 07881 837365. 15-05-0432/OPS 2.

F) SFC G) 13000FT AMSL)

Analysis and Investigation

CAA ATSI

The C525 pilot was carrying out the RNAV approach to RW27 from the south (Figure 1) and had routed from the south-west to REKLO and then made a left turn to NIRMO before joining the final approach.

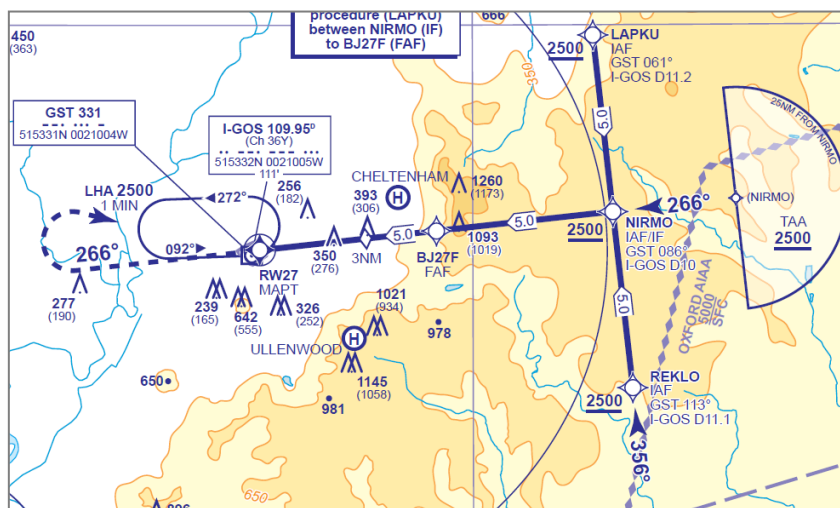


Figure 1 – Extract from UK AIP (RNAV approach RW27).

As the C525 pilot commenced the final approach, the controller provided Traffic Information based on radar derived information. (Figure 2).

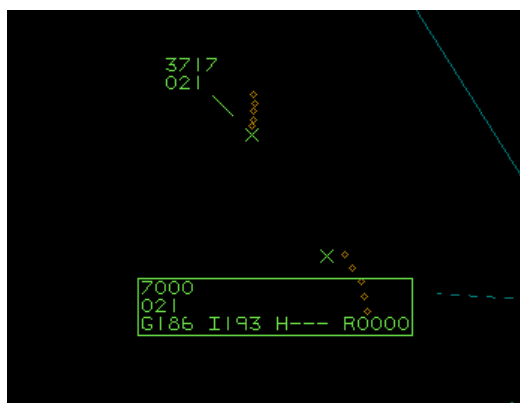


Figure 2 (Swanwick MRT at 0923:44).

Although the controller stated “radar service” while giving this Traffic Information the controller was providing a Procedural Service but reported using the radar for ‘spatial awareness’. The Traffic Information given related to an unknown aircraft tracking southbound with no height information. (Although the Swanwick MRT did indicate a height, the Gloucestershire controller would not necessarily have had this information). Deconfliction advice can only be given against other aircraft participating in the Procedural Service. The pilot queried the position of the Traffic Information which was repeated. The C525 pilot, once established on the final approach, reported receiving a TCAS RA which he responded to. The radar recording showed the CPA just as the pilot commenced a climb (Figure 3). The CPA was 100ft vertical and 0.6nm horizontal.

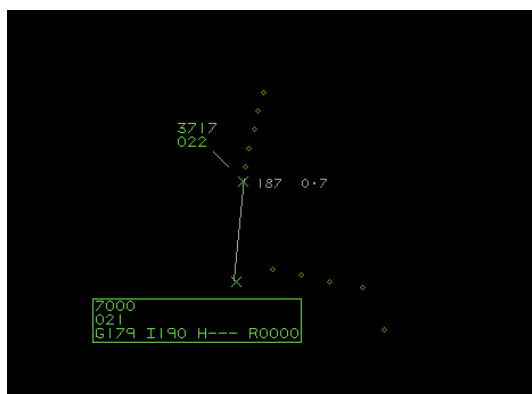


Figure 3 - CPA (Swanwick MRT at 0924:07).

The C525 pilot then completed a 360° right-turn and re-established on final approach and subsequently landed. The Gloucestershire controller subsequently ascertained that the unknown aircraft was working Brize Radar under a Basic Service. When under a Procedural Service, collision avoidance remains the responsibility of the pilot.

Military ATM

The incident occurred between a C525 and a DR400 under a Basic Service with RAF Brize Norton radar.

The Radar Analysis Cell captured the incident based on the London QNH 1026hPa.

At 0906:38, the pilot of the DR400 called Brize Radar, "(DR400 C/S) is a DR400 out of [...] for Kemble via Winchcombe and Morton in the Marsh to avoid the parachute drop, request Basic Service, 2500 feet." Brize applied a Basic Service at 0906:56 with a 3717 squawk.

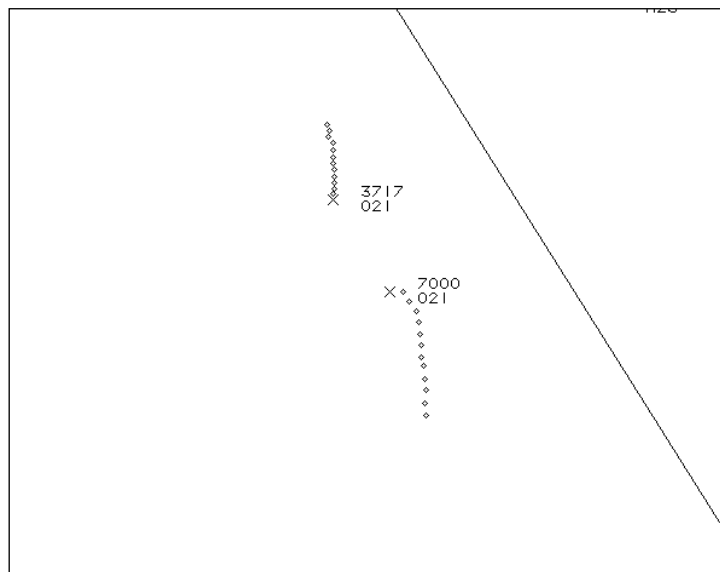


Figure 1: Geometry at 0923:39 (DR400 3717; C525 7000).

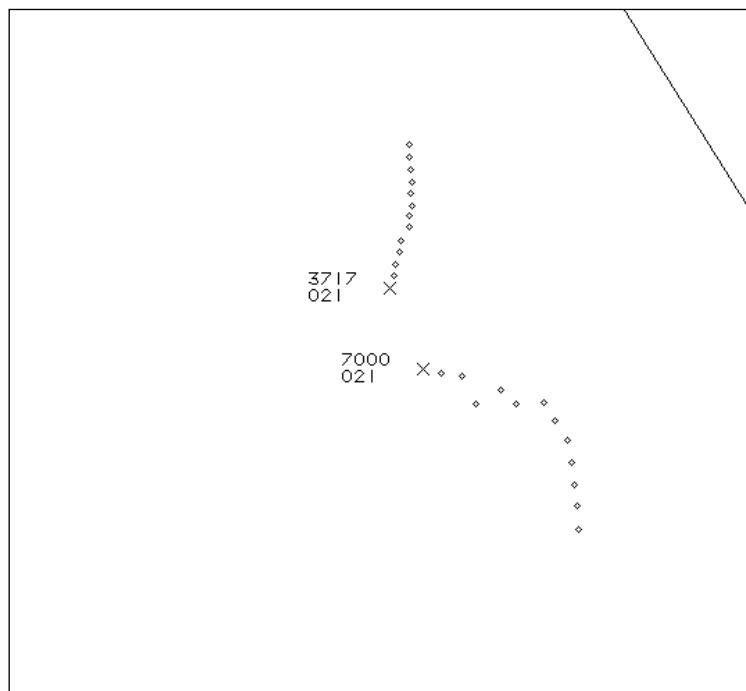


Figure 2: Geometry at 0923:59.

The CPA was estimated at 0924:10 with 100ft and 0.6nm horizontal separation.

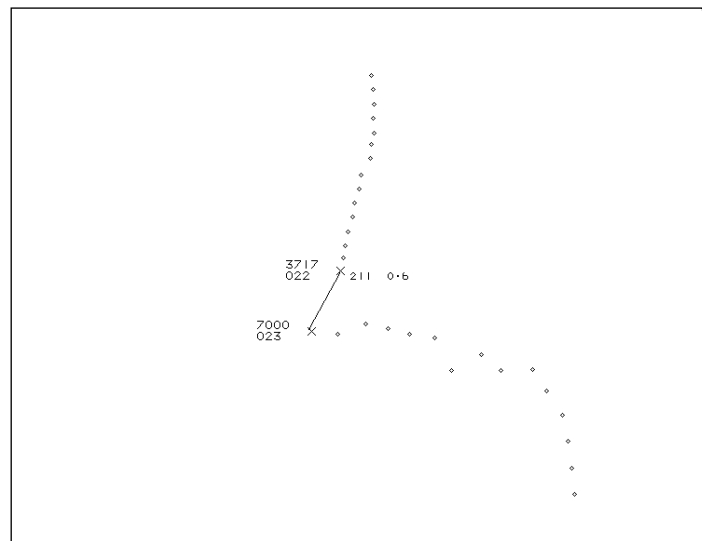


Figure 3: Geometry at CPA at 0924:10.

At 0928:00, Brize informed the pilot to squawk 7000 and freecall Kemble. At 0929:30, the pilot transmitted, “(DR400 C/S) has 5 miles to run to Kemble, we’d like to change to 118.9, thank you.”

At 0929:35, Brize approved the request.

The DR400 was under a Basic Service with Brize Radar at the time of the Airprox. No Traffic Information was passed and the pilots were responsible for collision avoidance. The DR400 was not fitted with TCAS and the key barrier to prevent loss of safe separation would have been ‘see-and-avoid’. However, it appears that the pilot of the DR400 was not visual with the other aircraft.

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 hazard¹. Because the geometry was converging, the C525 pilot was required to give way to the DR400².

CAP 774, Flight Information Services, states;

‘Pilots must remain alert to the fact that whilst in receipt of a Procedural Service, they may encounter conflicting aircraft for which neither traffic information nor deconfliction advice has been provided. Pilots must still comply with the Rules of the Air with regard to the avoidance of aerial collisions and advise ATC of any deviation from their clearance in order to do so.’³

‘Pilots should not expect any form of traffic information from a controller/FISO, as there is no such obligation placed on the controller/FISO under a *Basic Service*, and the pilot remains responsible for collision avoidance at all times. However, on initial contact the controller/FISO may provide traffic information in general terms to assist with the pilot’s situational awareness. This will not normally be updated by the controller/FISO unless the situation has changed markedly, or the pilot requests an update. A controller with access to surveillance-derived information shall avoid the routine provision of traffic information on specific aircraft, and a pilot who considers that he requires such a regular flow of specific traffic information shall request a Traffic Service. However, if a controller/ FISO considers that a definite risk of collision exists, a warning may be issued to the pilot.’⁴

¹ SERA.3205 Proximity.

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

³ Chapter 5.

⁴ Chapter 2.

Summary

The Airprox occurred in Class G airspace 8nm east of Gloucestershire airport. The C525 pilot was inbound to the airport IFR in patchy cloud on an RNAV approach to RW27 in receipt of a Procedural Service from Gloster Approach. The Approach controller was able to view a radar display but only for situational awareness and saw traffic approaching the RW27 approach path from the north but with no ability to determine its altitude. Using this information, Traffic Information was issued to the C525 pilot, who subsequently reported reacting to a TCAS RA to climb. The DR400 pilot was in receipt of a Basic Service from Brize Radar and was not aware of the presence of the C525. The minimum separation between the aircraft was 100ft vertically and 0.6nm horizontally.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, the Gloucestershire controller, area radar and RTF recordings and reports from the appropriate ATC and operating authorities.

The Board wondered why no ATC report had been obtained from the Brize Radar controller. A Military ATC member explained that the Unit had not been aware until some time after the event that an Airprox had been filed and so the controller involved could not remember the situation. The Board were disappointed, but noted that it had still been possible to obtain a recording of the Radar frequency.

The Board discussed the fact that, common to the reports of both pilots was the impression that they appeared to assume that a level of priority or protection was being provided by ATC under their respective services in Class G airspace. The C525 pilot, in receipt of a Procedural Service, commented that he considered that his approach course should have been 'sterile'. The Board noted that under a Procedural Service separation is only provided from other aircraft receiving the same service. On this occasion the DR400 pilot had not been in contact with Gloster Approach, therefore its details had been unknown to the controller. Although the controller had been able to see the DR400 spatially on his radar display, and had passed associated appropriate Traffic Information to the C525 pilot, the Unit is not equipped with SSR and it had not therefore been possible to issue any altitude information about the unknown traffic. Board members noted that the C525 pilot had reported that he had overheard another pilot being cleared to cross his final approach course but, in fact, the DR400 pilot had been on the Brize frequency at the time. It was surmised that the C525 pilot had misinterpreted the Traffic Information from the Gloucester controller as a clearance to the other pilot. The Board noted that the C525 pilot had continued with his approach when not visual with the conflicting traffic, but had observed it on his TCAS display. Some members doubted that continuing the approach had been a prudent action knowing that there was unknown conflicting traffic operating close to his route; they opined that this perhaps gave insight into the mindset of the C525 pilot who clearly expected to have priority because he was conducting a procedural approach. That this was not the case in Class G airspace was germane to the incident. The Board also noted that the C525 pilot had reported climbing in reaction to a TCAS RA. Although he was no doubt operating in the best interests of himself and his passenger, the Board noted that the TCAS equipment fitted to his aircraft was not capable of generating a TCAS RA; the radar recording indicated that he commenced climbing after CPA.

As for the DR400 pilot, the Board commended him for having visited Brize ATC to witness ATC services in action. Unfortunately, it appeared that he had come away from the visit with a false expectation that, even under a Basic Service, the controllers, as part of their duty of care, would inform pilots when a collision risk was present. Consequently, he had thought that on this occasion he was being afforded the 'protection required'. A Military ATC advisor explained that, under a Basic Service, controllers do not have to monitor an aircraft's flight or routinely issue Traffic Information. Given that the area was routinely busy, there was no specific reason for the Brize controller to focus on the DR400's flight unless he had been asked to provide a Traffic Service. Notwithstanding, if the Brize controller had been aware of the potential conflict between the DR400 and the C525 then he would of course have passed Traffic Information to the DR400 pilot. However, a military controller member noted that the C525 was squawking 7000 at the time and so would have been just another

general track in the area. The Board wondered whether, if the C525 had been showing a Gloucester-specific squawk, the Brize controller might have assimilated this information and could possibly have telephoned them to exchange details of their respective traffic. Although Gloucester had no capability to display SSR themselves, there might be value in their being allocated squawks for aircraft operating with them so that other units could readily identify their traffic for potential coordination purposes.

The Board commended the actions of the Gloster Approach controller. He had used the limited information available to him to pro-actively issue Traffic Information to the C525 pilot, it had been unfortunate that this information had not been acted on to maximum effect.

The Board then discussed the cause of the Airprox. The discussion ebbed and flowed between it being considered a conflict in Class G airspace or the C525 pilot simply being concerned by the proximity of the DR400. In the end, and noting that the closest distance was 0.7nm at CPA, it was considered that there had not been a conflict, especially since no action had been taken until after the CPA and the DR400 had passed behind the C525. Therefore, the Board eventually agreed that the cause had been that the C525 pilot was concerned by the proximity of the DR400 because he could not see the DR400, did not know the pilot's intentions, and erroneously considered that he had a degree of priority because he was conducting an approach to an airfield.

The Board then turned its attention to the risk. They considered that, although there had been no risk of a collision, the recorded minimum separation still indicated that this had been too close to be described as normal operations. It was agreed, therefore, that the Airprox should be categorised as risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The C525 pilot was concerned by the proximity of the DR400.

Degree of Risk: C.