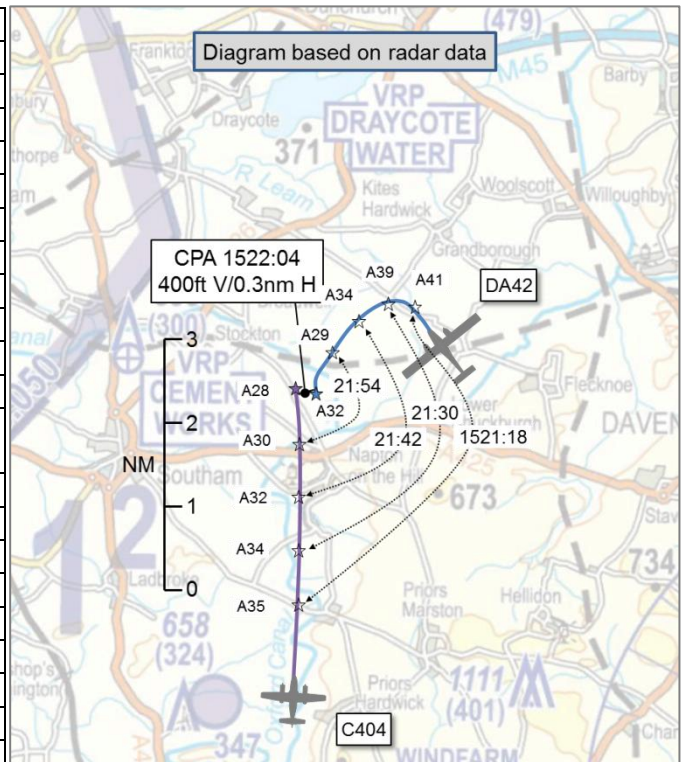


AIRPROX REPORT No 2015044

Date: 14 Apr 2015 Time: 1523Z Position: 5216N 00119W Location: 5nm S Draycote Water VRP

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA42	C404
Operator	Civ Trg	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Traffic
Provider	Coventry Radar	Coventry Radar
Altitude/FL	3200ft	2800ft
Transponder	A/C/S	A/C/S
Reported		
Colours	White	Blue/white
Lighting	Wing-tip strobes, nav	Strobes, nav, red beacon
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	3700ft	4000ft
Altimeter	QNH (1023hPa)	QNH (1022hPa)
Heading	240°	012°
Speed	140kt	180kt
ACAS/TAS	TCAS I	Not fitted
Alert	Nil	N/A
Separation		
Reported	0ft V/800m H	100-200ft V/ 300-500m H
Recorded	400ft V/0.3nm H	



THE DIAMOND DA42 TWIN STAR PILOT reports that he was instructing a general handling exercise on an approved training course. He was in receipt of a Basic Service from Coventry within the company’s designated training area. He had control of the aircraft to set up a descending turn for a student recovery. He was aware of another aircraft receiving a Traffic Service that was being regularly updated about another aircraft manoeuvring which he thought was probably his aircraft. Before entering the manoeuvre on, he recollected, a northerly heading at 4000ft, he carried out a look-out and was satisfied that there was no traffic in the vicinity to affect them. Shortly after entering the turn, he saw the other aircraft in his 10 o’clock position at a similar level, converging within 1000m. He stopped the turn, levelled off and observed the other aircraft to see what actions the pilot was taking as his aircraft was on its right with ‘priority’. Seeing no response after a few seconds, he entered a steep avoiding turn to the left (as it was evident that a standard right turn would reduce separation further). On entering the turn he heard the other aircraft’s pilot report visual with them.

He assessed the risk of collision as ‘Low’.

THE CESSNA 404 PILOT reports that he was transiting to East Midlands at 4000ft in receipt of a Traffic Service from Coventry radar. He was advised of traffic in his right approximately 4nm at 4000ft. He acknowledged the traffic and replied that he would descend to 3000ft because he was not visual with the traffic. While in the descent, he was then advised of the same traffic now at altitude 3700ft in a west-bound turn with a reducing range from him, perhaps 3nm. He acknowledged the traffic report and continued his look-out while in the descent, but he was still not visual. Approximately 10 seconds later he was advised that the traffic was now in his 1 o’clock position at 3100ft at 1nm. He immediately noticed that this was the same as his altitude and he commenced an avoiding-action left turn. It was while making this turn that he and the operator in the rear of the

aircraft became visual with the DA42 which was also in a steep left turn east-bound slightly above by about 100-200ft. He called visual while making the left turn, and asked whether the DA42 pilot was on the frequency but did not receive a reply. Approximately 20 seconds later the pilot of the DA42 reported the Airprox. On discussing the incident with Coventry ATC after landing, the controller said that he was unaware what the DA42 pilot was doing at the time. The controller explained that it was the level changes of the DA42 which had caught his attention as their proximity closed and he passed Traffic Information. Although the traffic passed close by (about 500m) he believed that there was no conflict as he had become visual. However, had he not started to commence the left turn on receipt of the controller's final traffic report (at the same altitude of 3100ft) it may have been much closer.

He assessed the risk of collision as 'High'.

THE COVENTRY APPROACH RADAR CONTROLLER reports that the C404 pilot was in receipt of a Traffic Service, and the DA42 pilot a Basic Service. The C404 pilot contacted him at 4000ft heading north-bound towards Draycote Water. He passed Traffic Information about unknown traffic in his right 1 o'clock, 4nm, at 4200ft [the DA42]. The pilot reported descending to 3000ft. He then updated the Traffic Information twice as the unknown aircraft started to descend. The DA42 pilot then reported an initial Airprox report on the frequency stating that avoiding action had been taken. The weather at the time was CAVOK.

Factual Background

The Coventry weather was recorded as follows:

METAR EGBE 141520Z 24011KT 200V260 CAVOK 19/10 Q1022=

Analysis and Investigation

CAA ATSI

At 1453:00, the DA42 pilot departed for a general handling training exercise to the south-east of Coventry airport. The DA42 displayed the Coventry conspicuity code 4360 and the pilot was in receipt of a Basic Service from Coventry Radar. The DA42 was not identified and was not being monitored by radar. At 1519:22 (Figure 1), the DA42 pilot was manoeuvring 10.6nm south-east of Coventry airport. Two aircraft were shown in the vicinity, both displaying the Coventry 4360 conspicuity code. The C404 was 15.6nm south of Coventry displaying a Brize Norton squawk (3710) at an altitude of 3900ft.

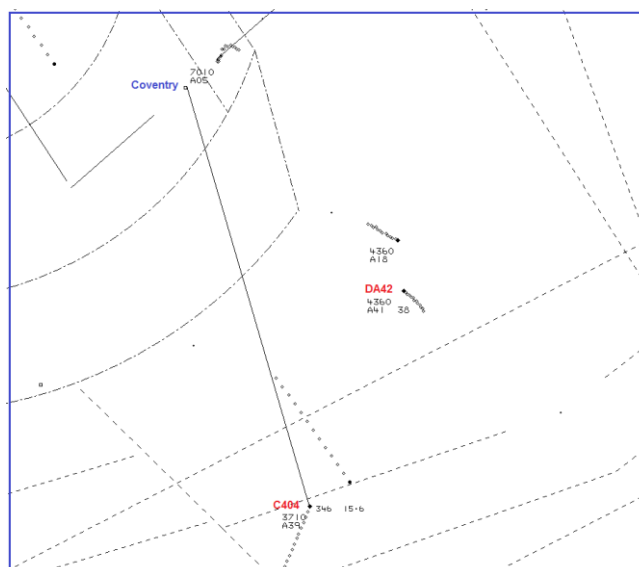


Figure 1: Swanwick MRT at 1519:22

At 1519:42, the C404 pilot contacted Coventry Radar reporting 5nm north of Banbury at 4000ft on QNH 1023hPa, routing north towards East Midlands and requesting a Traffic Service. The C404 was 14.3nm south-south-east of Coventry at 3900ft squawking 7000. The Coventry controller instructed the C404 pilot to squawk 4362 and passed the Coventry QNH 1022hPa.

At 1520:22, the controller advised “[C404 C/S] *you are identified Traffic Service, traffic in your right one o'clock, range four miles, manoeuvring, indicating altitude four thousand two hundred feet*”. The C404 pilot replied, “*Er roger copy the traffic Traffic Service er [C404 C/S] descending to er altitude three thousand feet*” which was acknowledged by the controller.

The DA42 pilot tracked north-north-west and, at 1521:26 (Figure 2), started to turn left; the controller updated the Traffic Information, “[C404 C/S] *that traffic now right one o'clock er two and a half miles, westbound, in the turn and er descending, indicating altitude three thousand nine hundred feet*” which was acknowledged by the C404 pilot.

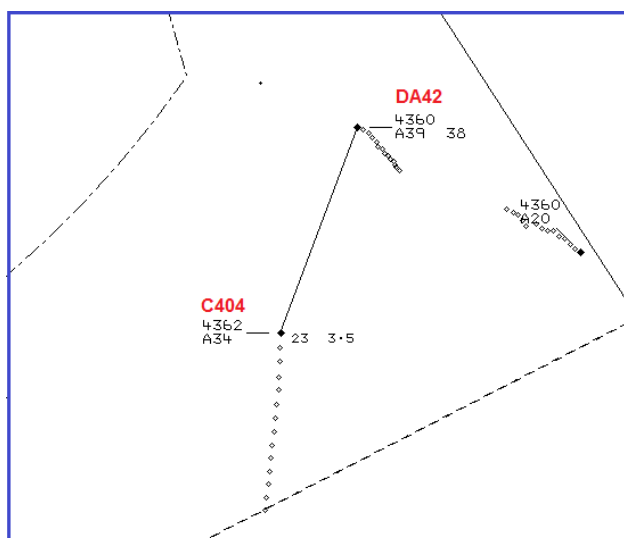


Figure 2: Swanwick MRT at 1521:26

At 1521:42 (Figure 3), the controller advised “*Now in your right er one o'clock er two miles, southwestbound, indicating altitude three thousand one hundred feet descending*”. This was acknowledged by the C404 pilot.

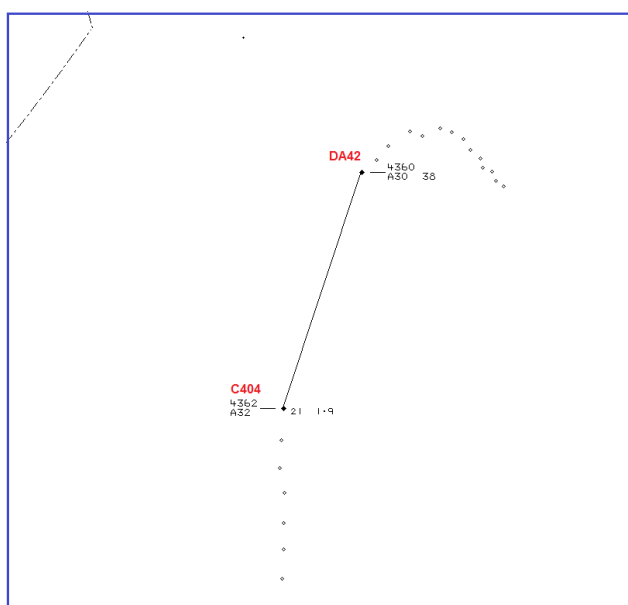


Figure 3: Swanwick MRT at 1521:42

At 1522:02 (Figure 4), the C404 pilot reported visual with the traffic and shortly afterwards asked if the other traffic was on frequency. The controller responded, *“I believe it’s not positively identified but I believe it’s er either a D A forty two or a Grob one one five”*. The C404 pilot advised, *“Yeah it was definitely a D A forty two [C404 C/S]”*.

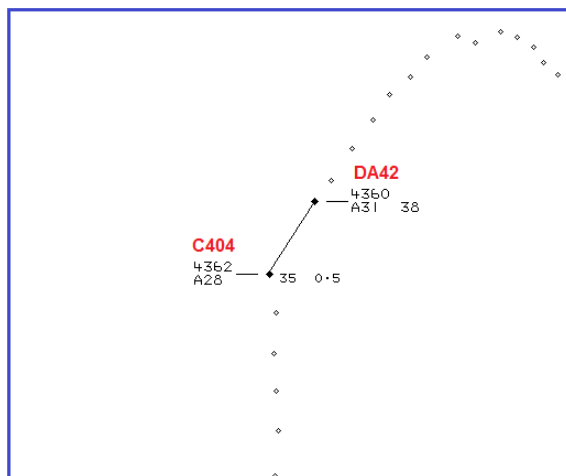


Figure 4: Swanwick MRT at 1522:02

CPA occurred between radar updates at an interpolated separation of 0.3nm horizontally and 250ft vertically. At 1522:06 (Figure 5), the two aircraft had passed abeam.

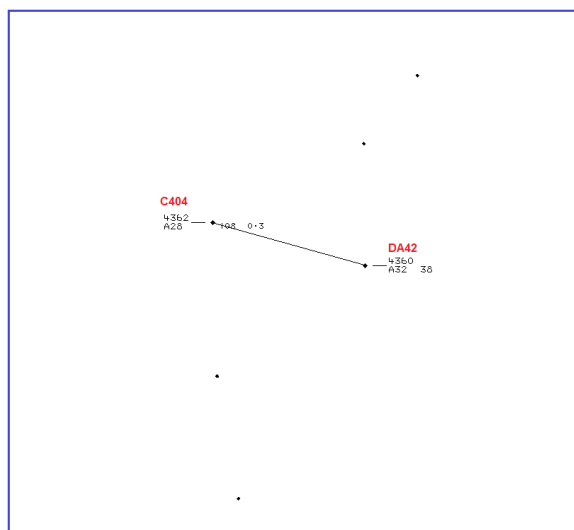


Figure 5: Swanwick MRT at 1522:06

At 1522:40, the DA42 pilot reported *“Er request file initial Airprox er incident at time er fifteen er twenty three, D A forty two er three thousand seven hundred feet, approximately five miles south of Draycote, other traffic approaching from our ten o’clock, left to right er avoiding action taken”*. This was acknowledged by the controller and the C404 pilot confirmed he would also be filing an Airprox report.

The C404 pilot established communication with Coventry and a Traffic Service was agreed. The controller immediately passed Traffic Information regarding traffic at a range of 4nm. This was updated when the distance between the two aircraft was 2.5nm and again at 2nm. The C404 pilot reported visual with the other traffic which he confirmed was a DA42. CAP774, UK Flight Information Services¹ state:

‘A Traffic Service is a surveillance based ATS, where in addition to the provisions of a Basic Service, the controller provides specific surveillance-derived traffic information to assist the pilot in avoiding other

¹ Paragraphs 3.1 and 3.5.

traffic...however, the controller is not required to achieve deconfliction minima, and the pilot remains responsible for collision avoidance.

Under a Traffic Service the controller shall pass traffic information on relevant traffic, and shall update the traffic information if it continues to constitute a definite hazard, or if requested by the pilot. However, high controller workload and RTF loading may reduce the ability of the controller to pass traffic information, and the timeliness of such information.'

The DA42 pilot was in receipt of a Basic Service where the avoidance of other traffic is ultimately the pilot's responsibility and where a controller is not required to monitor the flight. The DA42 pilot sighted the C404 and made an avoiding turn to the left. CAP774² states:

'A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.

Basic Service relies on the pilot avoiding other traffic, unaided by controllers. It is essential that a pilot receiving this ATS remains alert to the fact that, unlike a Traffic Service and a Deconfliction Service, the provider of a Basic Service is not required to monitor the flight.'

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 hazard³. If the incident geometry is considered as head-on or approximately so then both pilots were required to turn to the right⁴. If the incident geometry is considered as converging then the C404 pilot was required to give way to the DA42⁵.

Summary

The Airprox occurred in Class G airspace between a C404 whose pilot was in receipt of a Traffic Service from Coventry Radar and a DA42 whose pilot was in receipt of a Basic Service from the same controller. The controller passed Traffic Information to the C404 pilot about the DA42 which was updated as the two aircraft converged and came into proximity. As the DA42 pilot was in receipt of a Basic Service there was no formal requirement for the Coventry Radar controller to identify or monitor the DA42. The DA42 pilot reported seeing the other aircraft and levelled off before shortly commencing a steep avoiding turn to the left. As a result of the Traffic Information passed by the controller, the C404 pilot commenced an avoiding action left turn. It was while making this turn that he became visual with the DA42. Minimum distance between the aircraft was recorded as 400ft vertically and 0.3nm horizontally.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Board discussed the actions of the Coventry controller and noted that both aircraft were on the same Coventry frequency. The Board noted that the controller had been providing a Traffic Service to the C404 pilot and had issued him with Traffic Information about the DA42 on three occasions before the Airprox occurred. Members wondered if the controller could also have issued Traffic Information to the DA42 pilot as a reciprocal to that which he had given to the C404 pilot. They recognised that the DA42 pilot was only in receipt of a Basic Service and, although he had been issued with a conspicuity SSR code (as had others), he had not been required to be identified so the

² Paragraph 2.1.

³ SERA.3205 Proximity.

⁴ SERA.3210 Right-of-way (c)(1) Approaching head-on.

⁵ SERA.3210 Right-of-way (c)(2) Converging.

controller would not necessarily have been aware that the DA42 was the specific conflicting traffic. Notwithstanding, several Civil ATC members reasoned that, subject to the controller's workload, which was unknown to the Board, he could have established the identity of the DA42 well before the two aircraft had moved into close proximity (by requesting he squawked 'Ident' for example). It would then have been possible to provide Traffic Information to the DA42 pilot as well as the C404 pilot.

Turning to the actions of the pilots, the Board noted that the DA42 pilot had reported that he had been aware that a pilot, who had been in receipt of a Traffic Service, was being regularly updated about another aircraft manoeuvring in his vicinity. He thought that this probably concerned his aircraft. The Board wondered therefore whether he had assimilated the C404 pilot's RT transmission that he would descend to 3000ft to avoid the unknown aircraft and, given the frequency of the Traffic Information, whether he could himself have been more proactive in helping avoid the conflict. If he had been aware of the C404's descent then the Board were surprised that he had continued to descend himself to that altitude. Nevertheless, the Board noted that he sighted the C404 in his 10 o'clock position early enough to monitor its flight and see if its pilot would turn away from his aircraft (the C404 pilot was required to give way to the DA42). Seeing no response, the DA42 pilot entered into an appropriate avoiding action turn, although the Board opined that there was a fine line between inaction on becoming aware of a potential conflict and conducting an early avoiding manoeuvre to break the conflict's geometry.

The Board noted that the C404 pilot had received Traffic Information from ATC to indicate that the conflicting traffic (the DA42) had been at an altitude of 4200ft. To avoid this traffic he had descended to 3000ft. Further Traffic Information indicated that the other aircraft had descended to 3700ft. The Board could understand why the pilot had not changed course as a result of the Traffic Information; he had believed that he had been vertically separated from the traffic by conducting a descent. Understandably, it was not until ATC informed him that the traffic was now at 3100ft that he then took further avoiding action in azimuth away from the traffic. The Board agreed that the C404 pilot had done all that he reasonably could to avoid the conflict, and that it was simply unfortunate that every change in flight path that he made was inadvertently countered by one from the DA42 pilot. The Board noted that it was only after the C404 pilot had commenced this turn that he had seen the DA42 (probably as it also turned and changed its aspect and plan-form).

The Board then turned its attention to the cause. The DA42 pilot had seen the C404 and had taken appropriate avoiding action. The C404 pilot had acted on the Traffic Information received from ATC and had also carried out an appropriate avoiding action turn before sighting the DA42. The Board considered that it had been the action taken by both pilots that had resolved the Airprox. Accordingly, it was considered that the cause of the Airprox was simply a conflict in Class G resolved by both pilots. In considering the risk, because the avoiding action turns had been timely and effective and there had been no risk of collision, the Airprox was categorised as risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict in Class G resolved by both pilots.

Degree of Risk: C.