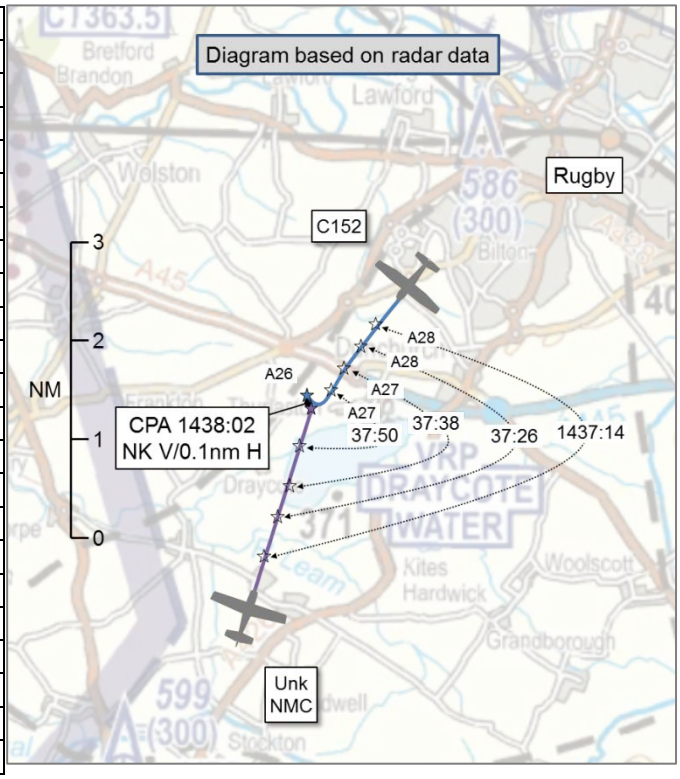
## AIRPROX REPORT No 2017095

Date: 22 May 2017 Time: 1438Z Position: 5220N 00119W Location: Draycote Water VRP

## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

| Recorded | Aircraft 1 | Aircraft 2 |
|---|---|---|
| Aircraft | C152 | Untraced aircraft |
| Operator | Civ Trg | Unknown |
| Airspace | London FIR | London FIR |
| Class | G | G |
| Rules | VFR | |
| Service | Basic | |
| Provider | Coventry | |
| Altitude/FL | 2600ft | |
| Transponder | A,C,S | |
| **Reported** | | Not reported |
| Colours | Mainly cream | |
| Lighting | Beacon | |
| Conditions | VMC | |
| Visibility | 10km | |
| Altitude/FL | 2700ft | |
| Altimeter | QNH (1013hPa) | |
| Heading | 209° | |
| Speed | 95kt | |
| ACAS/TAS | Not fitted | |
| **Separation** | | |
| Reported | 0ft V/100m H | NK |
| Recorded | NK V/0.1nm H | |




**THE CESSNA 152 PILOT** reports that he was on the return journey of a first solo land-away (second student solo navigation). He was cruising at 2700ft straight-and-level, in slight haze build up due to a hot day, but visibility was generally very good, with no cloud nearby. An aircraft was noticed 'in the distance' (he could not assess its range) at the same altitude on an almost reciprocal heading. A steep right turn was executed as an avoidance manoeuvre. He glanced left out the window whilst turning and saw the other aircraft pass him close enough to read the markings if he had looked longer. He did not remember what the markings were, and also could not look for long enough to judge the distance very well. If no avoiding action had been taken, he considered that there was a high risk of collision. He could not recollect whether the pilot of the other aircraft was talking on the Coventry frequency. He notified Coventry Approach about the incident after he had made the steep turn. He then telephoned them after landing at his destination.

He assessed the risk of collision as 'High'.

**THE UNKNOWN LIGHT AIRCRAFT** could not be traced.

**THE COVENTRY APPROACH CONTROLLER** reports that a student pilot under a Basic Service reported taking action to avoid an opposite direction aircraft at 2700ft in the vicinity of Draycote Water VRP. The other aircraft was presumed to be listening out on Birmingham's frequency as it was squawking 0010. The C152 pilot telephoned Coventry ATC later to report an Airprox.

**BIRMINGHAM ATC** confirmed that Birmingham were not aware of, or informed of, the Airprox report at the time. They were not providing a service to the 0010 squawk; it is a Monitoring Code. It has not been possible to determine the callsign of the 0010 aircraft. There is no Mode C level information associated with the 0010 aircraft.

### Factual Background

The weather at Coventry was recorded as follows:

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EGBE 221450Z 18012KT 9999 FEW048 23/12 Q1013=
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## Analysis and Investigation

### CAA ATSI

The C152 pilot was on the return leg of a first solo land-away. At 1430:10 the pilot contacted Coventry, reporting his position and level and requested a Basic Service. The Coventry controller was operating as both Coventry Tower and Approach on a single frequency, without surveillance equipment, and agreed to the Basic Service with the C152 pilot. It was not possible to identify the second aircraft, which was observed to be transponding the Birmingham Radar frequency monitoring code, but which would not have been identified by Birmingham Radar, nor provided with any ATC service. No corresponding Airprox report was received from the second aircraft, nor from Birmingham ATC. Figures 1-3 show the situation running up to CPA.

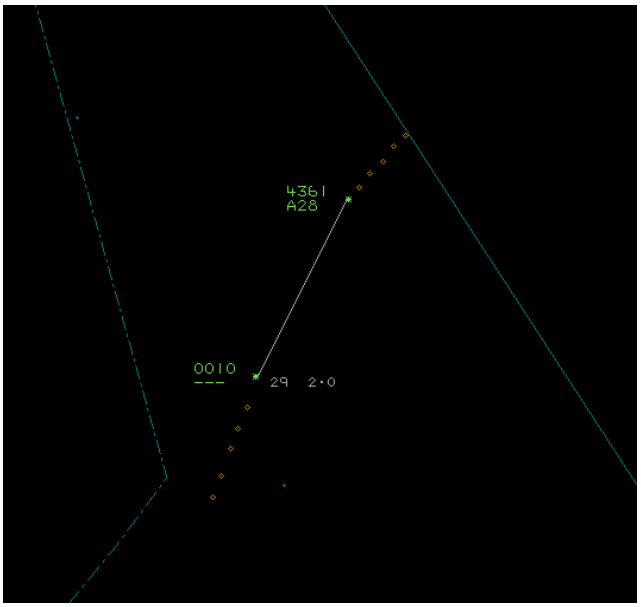


Figure 1 – 1437:25. 4361=C152, 0010=Unknown.

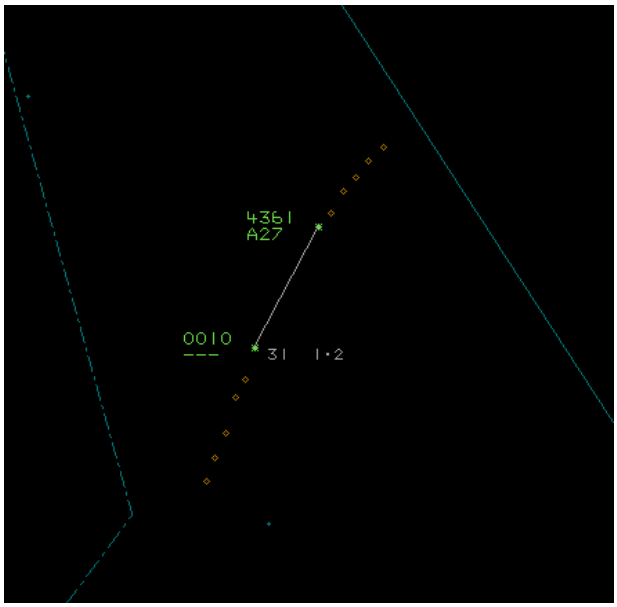


Figure 2 – 1437:45.

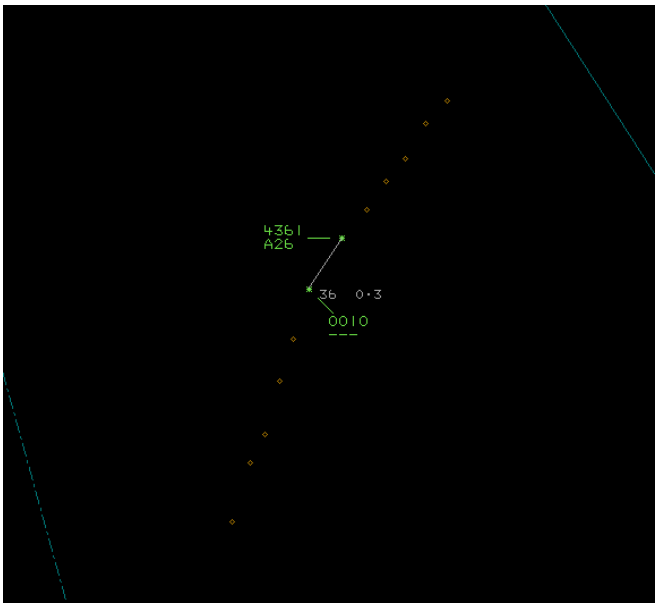


Figure 3 – 1437:58.

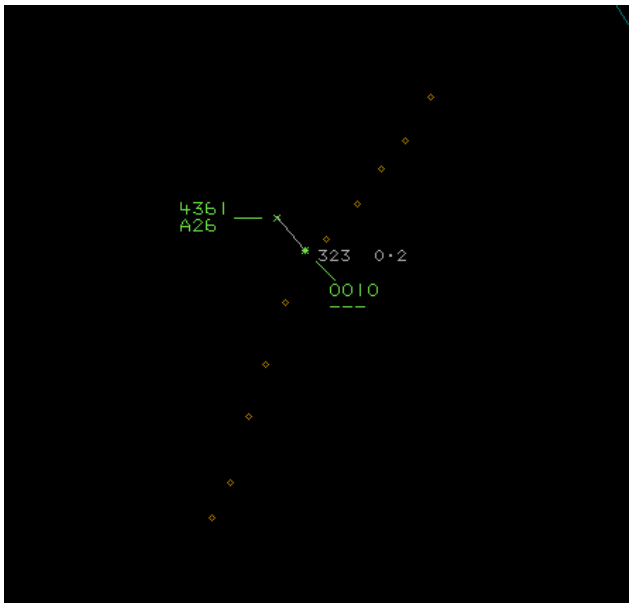


Figure 4 – 1438:04.

The exact point of CPA could not be determined due to the sweep-rate of the area radar, but was estimated to be approximately 1438:02. Figure 4 shows the situation at 1438:04.

The C152 pilot reported carrying out an avoidance manoeuvre to the Coventry controller at 1438:10.

Figure 5 at 1438:25 is included to show the avoidance manoeuvre completed by the C152 pilot.

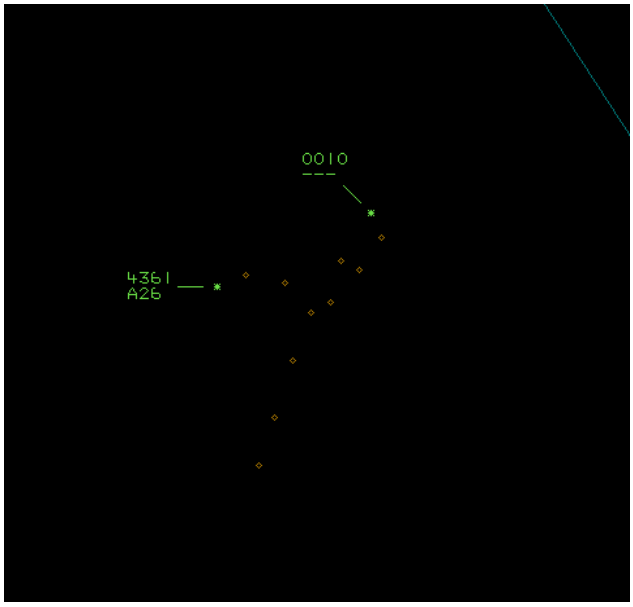


Figure 5 – 1438:25.

The Coventry controller was providing ATC services to other pilots outside the Coventry ATZ, none of whom were operating in the area of the CPA, as well as aircraft on the ground and in the vicinity of the airfield. Without access to surveillance-derived data or pilot reports, the Coventry controller would not have been aware of the other aircraft, and there is no evidence to suggest that Birmingham Radar was speaking to the pilot of the other aircraft.

Because both aircraft were operating in Class G airspace the pilots were responsible for their own collision avoidance.

**UKAB Secretariat**

The C152 and the pilot of the unknown aircraft shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1]. Because the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right[2].

## Summary

An Airprox was reported when a C152 and an unknown aircraft flew into proximity at 1438 on Monday 22nd May 2017. The C152 pilot was operating under VFR in VMC, in receipt of a Basic Service from Coventry. He carried out an avoiding turn against the unknown aircraft. The two aircraft passed about 0.1nm apart, the C152 pilot reported that it had been at the same altitude.

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(1) Approaching head-on.

## PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the C152 pilot, the controller concerned, area radar recordings and reports from the appropriate ATC and operating authorities.

The Board was disappointed that the unknown light aircraft could not be traced. Nevertheless, although this meant that the Board could not allow for the pilot's perception of what had occurred when coming to their conclusions, members felt that there was sufficient information available from the other reports with which to come to a conclusion. The Board commented that it would have been particularly advantageous to have discovered why the pilot of the unknown aircraft was 'listening out' on the Birmingham frequency rather than request an Air Traffic Service. Some members wondered if the frequency had been busy at the time, others wondered whether the pilot, erroneously, expected to be contacted by ATC if there was the possibility of a close encounter with another aircraft.

The Board noted that the C152 pilot was on the return journey of a first solo land-away. He had requested, and been provided with, a Basic Service from Coventry ATC. The controller involved had been carrying out the Tower and Approach functions with no access to surveillance derived data. As a result, the controller could not have known of the presence of the unknown aircraft and only became aware of the situation when the C152 pilot reported having taken avoiding action.

The Board agreed that, in the absence of any TAS in the C152, the only means of preventing a collision in the circumstances was through see and avoid. Although it was not known if the pilot of the unknown aircraft had sighted the C152, it was clear from the radar recording that there was no indication that its pilot had made any avoiding action turn (nor was it possible to establish whether he had made any change to the aircraft's level because it was not squawking Mode C). For his part, the C152 pilot had reported that he had observed the other aircraft, albeit late, and had made a sharp right turn as avoiding action; bearing in mind his inexperience, the Board commended him for his actions which had materially increased separation and averted a possible collision.

From the information available, the Board agreed that the cause of the incident was a late sighting by the C152 pilot and a probable non-sighting by the pilot of the unknown aircraft. Turning to the risk, members agreed that although the C152 pilot had seen the unknown aircraft late, he had carried out effective avoiding action to prevent a collision. The radar recordings showed that the two aircraft passed <0.1nm apart, with the C152 pilot reporting that they were co-altitude; accordingly, the Board determined that safety had been much reduced below the norm, and they assessed the risk as Category B.

## PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by the C152 pilot and a probable non-sighting by the pilot of the unknown aircraft.

Degree of Risk: B.

Safety Barrier Assessment[3]

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

**ANSP:**

**Situational Awareness and Action** were assessed as **not used** because the unknown aircraft pilot was only listening out on the Birmingham frequency rather than taking advantage of their ability to provide Traffic Information if he had requested a service.

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

**Flight Crew:**

**Situational Awareness and Action** were assessed as **not available** because the C152 pilot was in receipt of a Basic Service from Coventry (and no radar surveillance was available) and the pilot of the unknown aircraft was only listening out on the Birmingham frequency. Consequently neither pilot was able to be provided with Traffic Information about the presence of the other aircraft.

**See and Avoid** were assessed as **partially effective** because the C152 pilot only saw the other aircraft at a late stage. It was considered that the pilot of the unknown aircraft probably did not observe the C152.