

## **AIRPROX REPORT No 2014015**

**Date/Time:** 16 Feb 2014 1151Z (Sunday)

**Position:** 5302N 00107W  
(3nm ENE Hucknell)

**Airspace:** Lon FIR (Class: G)

**Aircraft 1**                      **Aircraft 2**

**Type:** Zenair 601XL              PA38

**Operator:** Civ Club              Civ Club

**Alt/FL:** 2750ft                      2400ft  
QNH (1006hPa)

**Conditions:** VMC                      VMC

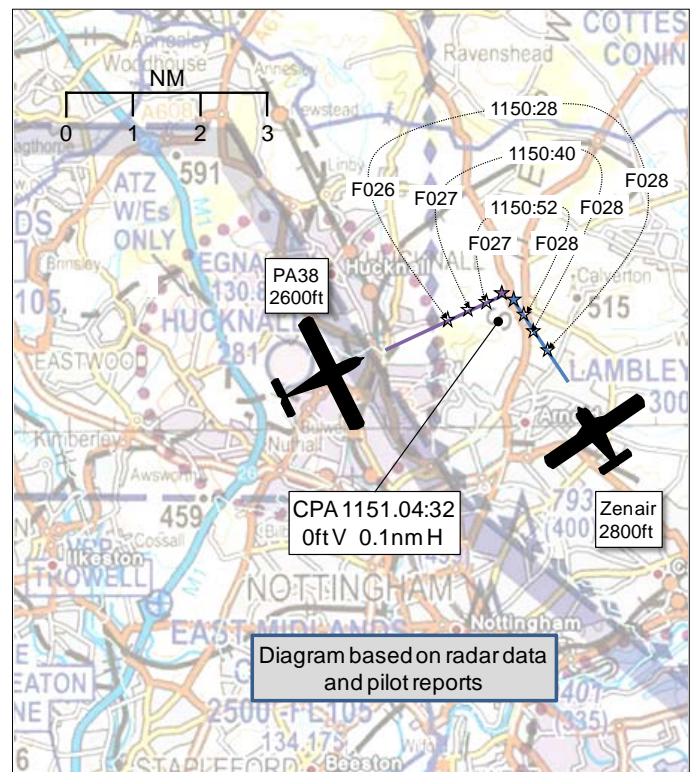
**Visibility:** 10km                      10km

**Reported Separation:**

0 V/200ft H                      200ft V/70m H

**Recorded Separation:**

0 V/0.1nm H



## **PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

**THE ZENAIR PILOT** reports flying a predominantly white aircraft with all lights illuminated and SSR transponder Modes 3A, C and S selected. TCAS was not fitted. He was tracking along the eastern edge of East Midlands airspace at 2750ft, and receiving a Basic Service from East Midlands, when he saw the PA38 appear from his port side, “very close”, at the same altitude, at 90° to his track. He took immediate avoiding action to the right and climbed before turning back on track. On looking back he could see the other aircraft, but wasn’t sure whether it had taken avoiding action or not. The incident was close enough to see details of the two people that were in the PA38, and upset and disturbed his passenger.

He assessed the risk of collision as ‘High’.

**THE PA38 PILOT** reports flying a blue and white aircraft with anti-collision lights on and SSR transponder Modes 3A and C fitted. The aircraft did not have TCAS fitted. He had just turned overhead Hucknell and had called on their A/G frequency as a courtesy call. He was flying at 2400ft to keep him beneath the East Midlands Zone. On leaving Hucknell zone’s lateral limits, heading east, he saw the Zenair heading in a northerly direction about 200ft above, and 70m away horizontally, it appeared to be climbing. He did not take avoiding action as it was clear that the Zenair would be above and to his right. The Zenair came directly out of the sun, which is why he believes he did not see it earlier; the visibility in that direction was not great, but he felt that it was necessary to transit in that direction initially to avoid the East Midlands Zone and the city of Nottingham. He deemed there was no risk of actual collision, but had he seen the aircraft earlier would have preferred to have a greater distance between them. The pilot opined that since the level of East Midlands Zone had been reduced down to 2500ft in that area, local airspace traffic, and particularly that departing and arriving at Nottingham, has less space to remain clear of each other.

He assessed the risk of collision as ‘Low – Medium’

## Factual Background

The weather at East Midlands was recorded as;

METAR EGNX 161150Z 25014KT CAVOK 07/01 Q1006

## Analysis and Investigation

### CAA ATSI

At 1136:30 the Zenair called East Midlands Radar; he reported at 2700ft on QNH 1006hPa and requested a Basic Service, which was agreed. The Zenair was not identified and was instructed to remain clear of controlled airspace. The PA38 left his departure aerodrome at 1137 and flew to northeast via Newton airfield, turned northwest and then set a westerly course towards Hucknall airfield. The PA38 pilot reported being at altitude 2400ft in order to avoid entering Hucknall's ATZ and also to avoid entry into East Midlands' controlled airspace. The QNH being used by the PA38 was not reported.

At 1141:30 East Midlands Radar passed activity information to the Zenair regarding parachuting at Langar. The Zenair reported turning slightly to the west to avoid the area. Figure 1 below shows the relative positions of the two aircraft, east of Hucknall, as detected by the Claxby radar at 1150:26.

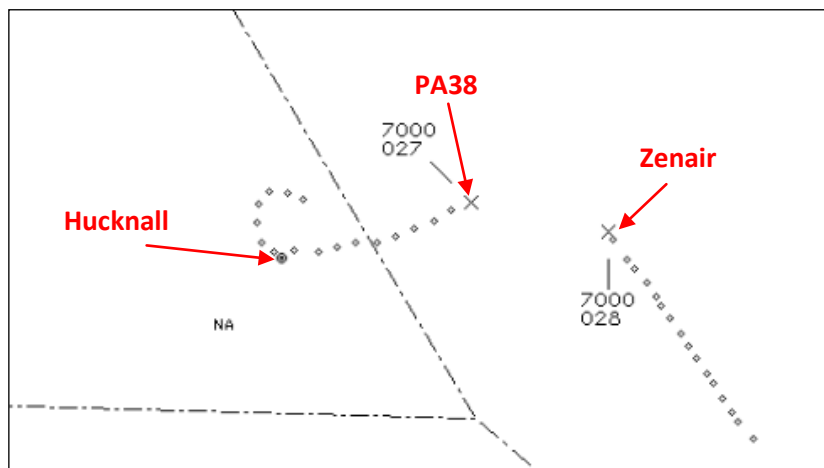


Figure 1: Claxby radar – 1150:26 UTC

At 1150:58 the aircraft were 0.3nm apart, both at FL027 (Figure 2). On the next update of the Claxby radar the returns merged. At 1151:14 both aircraft were detected again; the Zenair 100ft higher at FL028 and the PA38 now 0.4nm east of the Zenair (Figure 3).

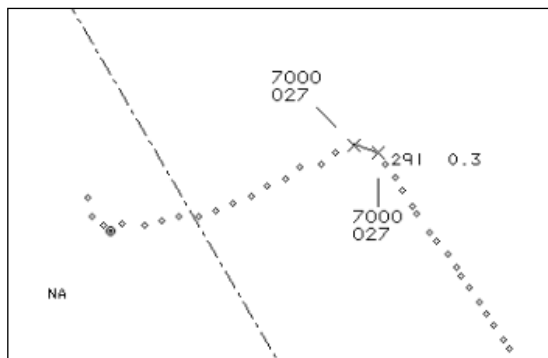


Figure 2: Claxby radar – 1150:58 UTC

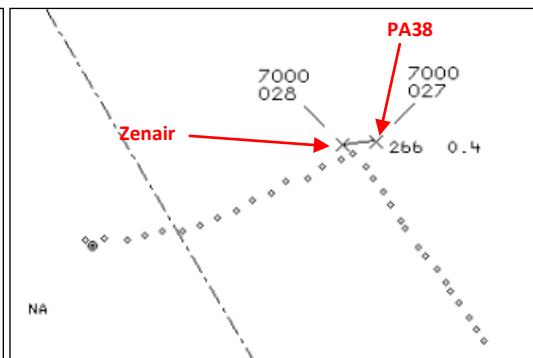


Figure 3: Claxby radar – 1151:14 UTC

Further analysis of the available radar suggests that the PA38 passed through the Zenair's 12 o'clock at 1151:04 and 0.115nm ahead. For 30 seconds preceding the encounter the Zenair's Mode C was transponding FL028 (altitude 2611ft on QNH 1006hPa) and its Mode C changed to FL027 (A2511ft) six seconds before the aircraft tracks crossed, indicating it was likely in the region of altitude 2574ft or below at that time. The closest point of approach occurred after the PA38 had crossed through the Zenair's 12 o'clock: at 1151:06 the PA38 was in the Zenair's 2 o'clock, range 0.7nm and between 0-100ft below. The PA38 pilot reported sighting the Zenair late, out of the sun. The Zenair pilot reported sighting the PA38 to the left at a range of approximately 0.1nm. At 1154:20 the Zenair requested to change frequency and this was acknowledged by East Midlands Radar.

The Airprox occurred in Class G airspace where pilots are ultimately responsible for collision avoidance. Both aircraft appeared to have sighted each other at close range immediately prior to the PA38 passing through the Zenair's 12 o'clock, 2 seconds ahead of the aircrafts' closest point of approach. The Zenair was in receipt of a Basic Service from East Midlands and had not been identified. Under a Basic Service there is no obligation on controllers to provide traffic information or monitor a flight.

### **UKAB Secretariat**

Both pilots shared an equal responsibility for collision avoidance and for not flying into such proximity as to create a danger of collision<sup>1</sup>. The geometry was a 'converging' situation and so the PA38 pilot was required to give way<sup>2</sup>.

### **Summary**

An Airprox was reported between a Zenair at 2611ft (radar derived height), under a Basic Service from East Midlands, and a PA38 at 2574ft (radar derived height), not under an ATS. The Zenair pilot took avoiding action and the aircraft passed within 0.1nm of each other at approximately the same level.

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

Information available included reports from the pilots of both ac, radar photographs/video recordings, and reports from the appropriate ATC and operating authorities.

The Board first considered the actions of the PA38 pilot and commented that it was commendable that he had called Hucknall as he turned overhead. Some members of the Board thought it might also have been useful if he had called East Midlands as he left Hucknall in order to arrange a Traffic Service which would have supplemented his lookout in the less than ideal into-sun visibility he reported. However, it was acknowledged that the time constraints were tight and that this may not have been possible. The constant bearing of the Zenair, and the fact that he was looking into sun, would have meant that, although the PA38 pilot was required to give way, the Zenair would have been difficult for him to see. Therefore, it was unsurprising that he didn't have time to take avoiding action.

The Board noted that the Zenair pilot was receiving a Basic Service from East Midlands but, that said, they hadn't identified him on radar and there was no obligation for them to give Traffic Information anyway. The Board commented that the Zenair pilot might also have been better served in seeking a Traffic Service but, again, they recognised that circumstances would probably not have allowed sufficient time for the required identification

<sup>1</sup> Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).

<sup>2</sup> *ibid.*, Rule 9 (Converging).

and information to have been established before the event. Nevertheless, he did see the PA38 and, although it was a late sighting, the Board opined that it had been his avoiding action that had undoubtedly reduced the risk of this incident.

In determining the cause, the Board agreed that it was a late sighting by both pilots. The PA38 pilot had not taken avoiding action, and the Zenair had taken only late avoiding action; the Board agreed that although this avoiding action had probably prevented a collision, safety margins had still been much reduced below the normal and the risk category was B, safety not assured.

### **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: A late sighting by both pilots.

Degree of Risk: B

ERC Score<sup>3</sup>: 20

---

<sup>3</sup> Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.