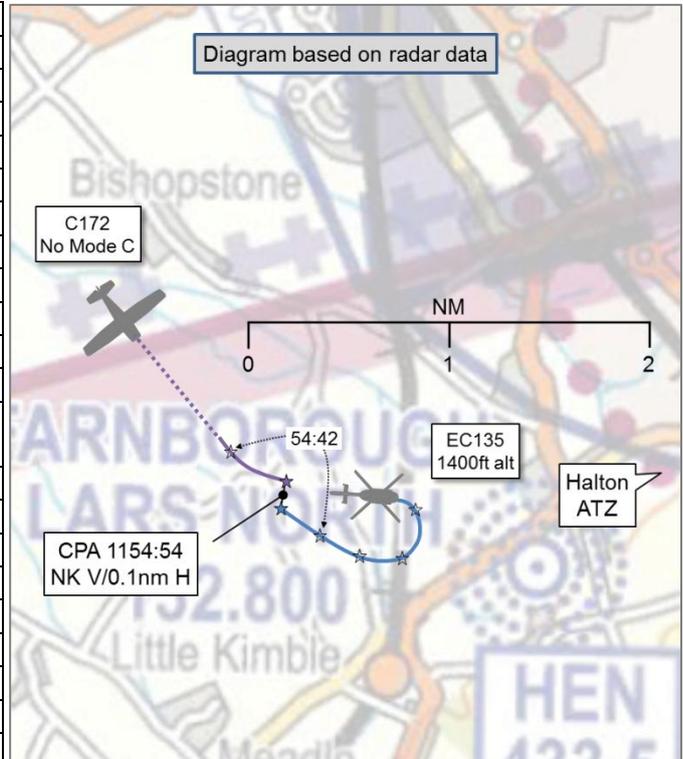


**AIRPROX REPORT No 2015031**

Date: 4 Apr 2015 Time: 1155Z Position: 5146N 00049W Location: 2km NW Henton NDB (Saturday)

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	EC135	C172
Operator	NPAS	Civ Trg
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Traffic	Listening out
Provider	Luton Radar	FRN LARS(N)
Altitude/FL	1400ft	NK
Transponder	A/C/S	A/S
<b>Reported</b>		
Colours	Blue/yellow	Green/white
Lighting	Strobes, nav, HISL	Beacon
Conditions	VMC	VMC
Visibility	30km	10km
Altitude/FL	1500ft	NK
Altimeter	QNH (1022hPa)	NK
Heading	350°	NK
Speed	75kt	NK
ACAS/TAS	TCAS I	Not fitted
Alert	Nil	N/A
<b>Separation</b>		
Reported	NK V/150m H	Not seen
Recorded	NK V/0.1nm H	



**THE EUROCOPTER EC135 PILOT** reports that whilst slowing the aircraft in readiness for a police task, prior to commencing a right-hand orbit, a clearance lookout was conducted and the other aircraft was seen. He reported sighting the other aircraft when it was 400ft on his right-hand side. An immediate left-hand level turn was initiated keeping the other aircraft in sight at all times with the assistance of police observers. He commented that there had been numerous other aircraft passing through or orbiting in the region at similar heights.

He assessed the risk of collision as 'High'.

**THE CESSNA 172 PILOT** reports that she did not know the exact location of the incident as neither she nor her passenger saw a helicopter during their flight. It was a training flight with another experienced pilot on a route she used regularly from Henton (HEN) to Westcott (WCO), which ensured that she remained clear of the London TMA. She carried out some general handling 3nm south-east of WCO and then returned to her airfield via HEN.

**THE SWANWICK TERMINAL CONTROL LUTON INTERMEDIATE DIRECTOR** reports that the pilot of the EC135 reported an Airprox on her frequency. He had called her for a Basic Service en route to the Aylesbury area. As the aircraft approached the HEN NDB, she changed the service to a Traffic Service as there were several contacts observed on radar. She issued two pieces of Traffic Information; on a 7000 squawk with no Mode C and a 5021 squawk, also with no Mode C. She updated the Traffic Information as the EC135 pilot was in the turn, and the 7000 squawk subsequently disappeared from the radar display. The EC135 pilot was informed of this. Shortly afterwards, the pilot reported that he had had an Airprox with an aircraft climbing from below. Although not positively identified, this seemed to be the 7000 with no Mode C.

## Factual Background

The Heathrow weather was:

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EGLL 041150Z 03012KT 350V060 9999 SCT034 SCT037 10/04 Q1023 NOSIG=
EGLL 041220Z 03008KT 9999 SCT023 SCT028 09/04 Q1023 NOSIG=
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## Analysis and Investigation

### CAA ATSI

ATSI had access to reports from both pilots, the Luton Radar controller, RTF recordings and transcript of the Luton Radar frequency together with area radar recordings.

At 1150:40 the EC135 pilot contacted Luton Radar routeing north of Aylesbury at 1500ft requesting a Basic Service. A Basic Service was agreed and the EC135 was identified.

At 1153:09 the Luton Radar controller upgraded the service being provided to a Traffic Service and passed Traffic Information on an aircraft coming into the EC135 pilot's 12 o'clock at a range of 2nm passing left to right with no height information. The controller stated in her written report that the service was changed due to several contacts observed in the vicinity of the Henton NDB.

At 1153:28 (Figure 1) the Luton Radar controller updated the Traffic Information stating that the aircraft was north-west of the EC135 by 2nm tracking left to right and then advised of further traffic north of the EC135 by 2nm converging from the right-hand side. Neither aircraft was displaying height information.

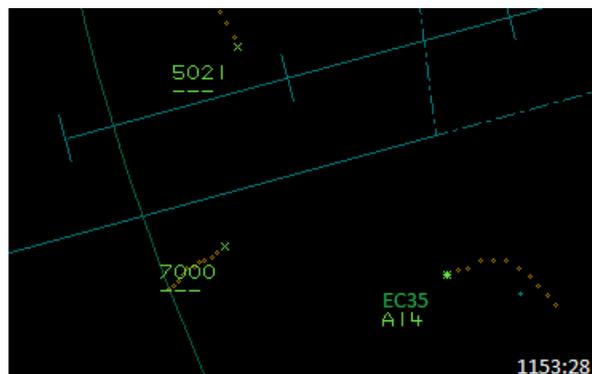


Figure 1.

The EC135 pilot entered a right-hand orbit. The Luton Radar controller updated the Traffic Information to the EC135 pilot stating that one contact had disappeared and the other one was passing on his western side with no height information tracking south-bound (Figure 2). The EC135 pilot reported being visual with the traffic.



Figure 2.

At 1154:39 an aircraft squawking 7000 appeared on the radar recordings 0.8nm north-west of the EC135 (Figure 3).

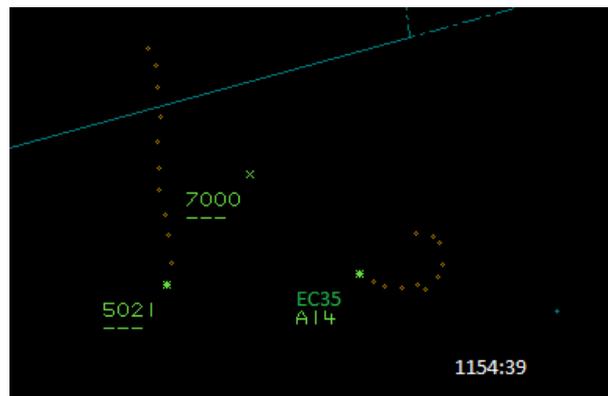


Figure 3.

At 1154:56 the EC135 pilot reported that he had “*just had an Airprox with an aircraft that’s climbed up towards us er is now flying out to the east*”. Figure 4 shows the EC135 north-west of Henton with the aircraft squawking 7000 just to the north of the EC135 at the closest lateral point 0.1nm. The Luton Radar controller stated that the aircraft had just appeared on radar and was climbing through the EC135’s level (this was not actually possible to determine as the 7000 squawk had no associated Mode C). For clarity of position, Figure 4 shows the EC135’s label in a different position to that seen by the Luton Radar controller. On the original recordings the 7000 squawk was garbling with the EC135’s label which may have led the controller to believe that the EC135’s Mode C belonged to the 7000 squawk.



Figure 4

The Luton Radar controller upgraded the service being provided to a Traffic Service due to concern about the contacts observed on radar. CAP774, UK Flight Information Services<sup>1</sup>, states that:

‘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 Luton Radar controller passed Traffic Information on aircraft observed on radar to the EC135 pilot prior to the Airprox. It is likely that the controller did not see the aircraft squawking 7000 prior to the EC135 pilot reporting the Airprox on frequency because the 7000 squawk was only visible on radar for 17 seconds prior to the Airprox occurring.

<sup>1</sup> Chapter 3, Paragraph 3.5.

## 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 hazard<sup>2</sup>. If the incident geometry is considered to be head-on or nearly so both pilots were required to turn to the right<sup>3</sup>.

### Summary

The Airprox occurred in Class G airspace near Henton NDB between an EC135, whose pilot was in receipt of a Traffic Service from Luton Radar and a C172, whose pilot was listening out on the Farnborough LARS N frequency. The C172 was not shown on radar until just prior to the Airprox; Traffic Information about the C172 was not passed to the EC135 pilot. The EC135 pilot did not sight the C172 until it was to his right at a range of 400ft, when he carried out an appropriate left turn for avoiding action. The C172 pilot did not see the EC135. The minimum horizontal distance between the two aircraft was recorded as 0.1nm.

### **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 first considered the actions of the pilots. The Board noted that the Airprox occurred within see-and-avoid Class G airspace where a good look-out had been imperative. The EC135 pilot had been in receipt of a Traffic Service from Luton radar and would have been expecting Traffic Information about any conflicting traffic, especially as he had been regularly informed about other traffic in his vicinity. However, because it was an intermittent, late showing contact, he had not been advised about the close proximity of the C172. Nevertheless he had visually observed the C172, albeit at a late stage as he orbited and turned right towards it, and had taken appropriate action to avoid it. Turning to the C172 pilot, the Board were disappointed that she had not seen the orbiting EC135, especially in clear weather with a reported visibility by the pilot of 10km: given that she was effectively in straight-and-level flight, with plenty of opportunity to look out, the EC135 was there to be seen as it orbited ahead of her.

The Board agreed that it was understandable why the controller had not issued Traffic Information to the EC135 pilot; the C172 had only showed on the controller's radar display just before the Airprox had occurred, and its SSR label may have been overlapping with that of the EC135. Only if she had been concentrating on that part of the radar screen at the time would the conflict have been readily apparent.

The Board quickly decided that the cause of the Airprox was a sighting issue. The EC135 pilot had reported that he had only sighted the C172 at a range of 400ft, and the C172 pilot had not seen the EC135 at all. Consequently it was decided that the cause of the Airprox was a late sighting by the EC135 pilot and a non-sighting by the C172 pilot. The Board then turned its attention to the risk. The Board opined that although the EC135 pilot had taken avoiding action to prevent a collision, safety margins had been much reduced below the normal because the two aircraft had passed 0.1nm apart at a similar altitude. Consequently the Airprox was categorised as risk Category B.

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

Cause: A late sighting by the EC135 pilot and a non-sighting by the C172 pilot.

Degree of Risk: B.

<sup>2</sup> SERA.3205 Proximity.

<sup>3</sup> SERA.3210 Right-of-Way (c) (1) Approaching head-on.