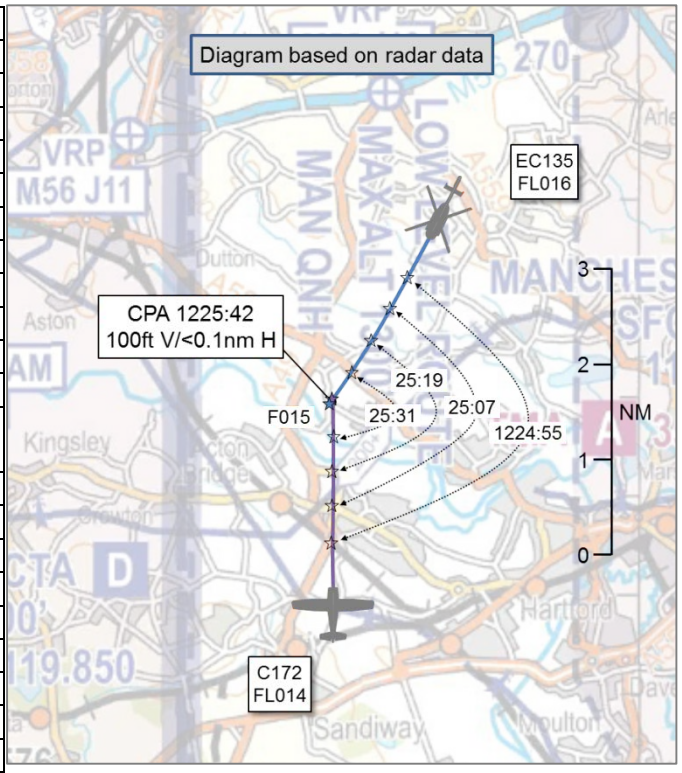
AIRPROX REPORT No 2015160

Date: 17 Sep 2015 Time: 1225Z Position: 5317N 00235W Location: 13.5nm SW Barton airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	EC135	C172
Operator	HEMS	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AFIS	Listening out
Provider	Barton	Manchester
Altitude/FL	1100ft	1000ft
Transponder	A/C/S	A/C/S
Reported		
Colours	Red	White
Lighting	Nav, HISL, Taxi, search	Strobes, landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1250ft	1000ft
Altimeter	QNH (995hPa)	QNH (1001hPa)
Heading	212°	347°
Speed	120kt	95kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	<100ft V/0m H	250ft V/1000m H
Recorded	100ft V/<0.1nm H	



THE EUROCOPTER EC135 PILOT reports that he was outbound from Barton on a planned HEMS crew navigation exercise within the Manchester Low Level Route (LLR). All the crew were 'eyes out', observing and looking to identify the simulated task area of Acton Bridge, near Northwich. He was listening out to Manchester on VHF 1, communicating with Barton on VHF 2; and standby was on Liverpool with the intention to call. On looking out he observed a fixed-wing Cessna aircraft 30° port side on a converging course at what seemed to be about 100m away at a slightly lower level. He made a right turn for avoiding action. He reported an Airprox to Barton.

He assessed the risk of collision as 'High'.

THE CESSNA 172 PILOT reports that he was operating a cross-country navigation exercise to overhead Warrington, before returning to his base. He was positioned to the right of the Manchester LLR he thought, anticipating other traffic. He became visual with a HEMS Eurocopter helicopter 3nm to his right on a converging course. He took the decision not to turn to starboard as would be protocol, in case of an infringement into Manchester Airspace. He was convinced the helicopter pilot was not aware of his presence. He illuminated his landing lights, decreased speed to 70kt and descended as much as he could; due to the terrain, 900ft was the minimum. The Helicopter passed in front and above him, without having made any alteration to the course it was flying. In his opinion, at no time were either aircraft in danger of collision. There were light winds and good weather in a very tight navigational corridor. The helicopter pilot was flying east to west across the LLR he thought. In hindsight, looking at his GPS track, the C172 pilot noted he would probably have been able to turn to starboard to route behind the helicopter, however, his experience of the LLR and a desire not to infringe Manchester airspace made him take the decision to slow down.

He assessed the risk of collision as 'None'.

THE MANCHESTER APPROACH SOUTH CONTROLLER reports that Barton telephoned to say that a HEMS helicopter working them in the LLR had reported an Airprox with a light aircraft possibly working her and did she have any details. At the time she could see the HEMS helicopter in the corridor and there was a 7000 code close to it. Using the 'info' button on the radar she was able to get a callsign for the 7000 squawking aircraft. She passed this to Barton, though she could not be positive that this was the aircraft involved as it was unidentified to her. She could not recall if she was giving a Basic Service to its pilot at the time. She was dealing with a zone infringer in the same area during this time which took most of her attention. Apart from recalling Barton telephoning her about it, she could not remember any further details.

Factual Background

The weather at Manchester was recorded as follows:

METAR EGCC 171220Z 26008KT 9999 FEW045 15/10 Q1000 NOSIG

The Manchester LLR is 4nm wide. Within the LLR, pilots may fly without ATC clearance, subject to the following:

'They remain clear of cloud and in sight of the ground.

Maximum altitude 1300ft on Manchester QNH.

Minimum flight visibility 4km.'

To assist in reducing zone infringements pilots are requested to squawk 7366 and listen out on the Manchester Approach frequency.

Analysis and Investigation

CAA ATSI

Figures 1 & 2 show the radar recording before and after the aircraft had passed, 1225:41 and 1225:43 respectively, therefore the CPA was assessed as taking place at 1225:42. The C172 was transponding 7350 and the EC135 0020.

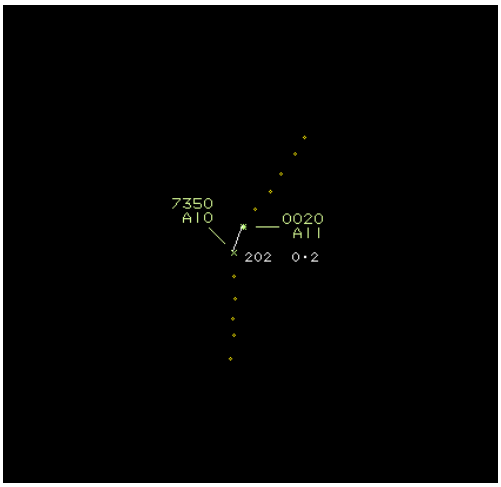


Figure 1 – 1225:41

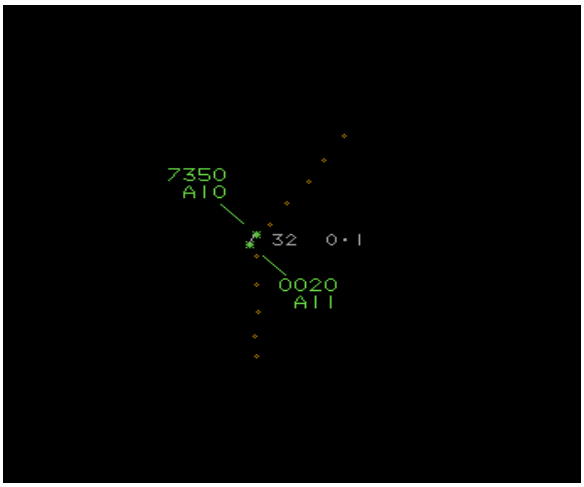


Figure 2 – 1225:43.

The EC135 pilot reported the Airprox to the Barton AFISO, but no report was made by the pilot of the C172 to Manchester. In his subsequent written report the C172 pilot stated that he had been visual with the EC135 "3 miles to my right on a converging course." The C172 pilot also stated that he "took the decision not to turn to starboard as would be protocol" because he was concerned about turning into Manchester's controlled airspace. The pilot was in communication

with Manchester; however, although the C172 was transponding a Manchester code, the Manchester controller had neither located the aircraft on her radar screen nor formally identified it at the time.

Under a Basic Service, pilots are ultimately responsible for the provision of collision avoidance and controllers are not expected to monitor individual flights. (CAP 774 2.1 refers).

UKAB Secretariat

The EC135 and C172 pilots 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 an EC135 and a C172 flew into proximity at 1225 on Thursday 17th September 2015. Both pilots were operating under VFR in VMC, the EC135 pilot in receipt of an AFIS from Barton and the C172 pilot in receipt of a Basic Service from Manchester Approach. The EC135 pilot reported that he observed a fixed-wing Cessna aircraft 30° port side on a converging course about 100m away at a slightly lower level. He made a right turn for avoiding action. The C172 pilot reported that he became visual with the EC135 3nm to his right on a converging course. He took the decision not to turn to starboard in case of an infringement of Manchester's airspace. The minimum separation was recorded as 100ft vertical and 0.1nm horizontal.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Board was briefed by the NATS advisor of the circumstances leading up to the Airprox. The Manchester controller had noticed that an aircraft not involved in the Airprox had entered the Manchester CTR near Nantwich without a clearance. This aircraft was squawking the listening-out code 7366 and she made a transmission to the unknown aircraft's pilot informing him to head northwest to re-enter the LLR. However, the pilot of the Airprox C172, who was also squawking 7366 and was in a similar position, had interpreted incorrectly that this transmission had been directed to him; he carried out the instruction, contacting the controller accordingly. The controller issued this pilot with a local squawk, soon realised that the C172 was not the infringing aircraft, and then allowed it to continue in the LLR. No ATC service was provided to this aircraft.

The Board then discussed the subsequent actions of the C172 pilot. He reported that he had sighted the EC135 to his right at a range of 3nm on a converging course. Although he had realised that he should have made a right turn to avoid the EC135 in accordance with the Rules of the Air, he had decided not to because he had been concerned that he might have infringed Manchester's airspace. No doubt unsettled and perhaps questioning his navigation as a result of the airspace infringement call, some Board members wondered whether this had affected his decision not to turn right when in fact he had had ample space to do so. The Board noted that the C172 pilot had illuminated his landing lights, reduced speed and descended to avoid the EC135. Notwithstanding, and although commending the pilot for turning on his lights to make his aircraft more obvious, the board opined that he could have done more to resolve the confliction, especially because he reported that he had seen the EC135 at 3nm range. Even if he had been worried about making a right turn, some members opined that he could probably have carried out an orbit to remain clear of the EC135, or have spoken with Manchester again to see if a right turn was acceptable to them.

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

The Board then turned its attention to the actions of the EC135 pilot. It was noted that the pilot had reported that all the crew were 'eyes out' looking for their task area at Acton Bridge. It was also noted that the Airprox had occurred approximately 1nm northeast of Acton Bridge. Some members wondered if the crew had been overly concentrating their attention on the task area at the expense of their lookout. In this respect, the Board questioned the suitability of holding a training exercise in the LLR, which can be very busy airspace with restricted dimensions (4nm width and 1300ft maximum altitude)

The Board then considered the cause and risk of the Airprox. They noted that, despite the pilot of the C172 observing the EC135 at a range of 3nm, he had not turned away but had continued towards it; although the C172 pilot had taken some action to avoid the EC135, the two aircraft closed to 100ft vertical and less than 0.1nm horizontal separation at the time of the Airprox. Some members thought that this amounted to the C172 pilot flying into conflict with the EC135. However, the majority of the Board believed that the C172 pilot had made credible attempts to avoid the EC135, and had simply allowed himself to come too close to it rather than flying into conflict per se. In the end, the Board agreed that the cause of the Airprox was that the C172 pilot had flown close enough to cause the EC135 pilot concern. The Board noted that the C172 pilot had been concerned about his perceived proximity to the Manchester CTR, and that this had undoubtedly affected his actions in not turning right; this was considered to be a contributory factor. Turning to the risk, although the aircraft had come into close proximity at the time of the Airprox, the Board agreed that both pilots had the other aircraft in sight (the C172 pilot at 3nm), were taking avoiding action, and that, as a result, there was no risk of a collision; the Board agreed that the Airprox should be categorised as risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The C172 pilot flew close enough to cause the EC135 pilot concern.

Contributory Factor: The C172 pilot was concerned by his perceived proximity to the CTR boundary.

Degree of Risk: C.