

AIRPROX REPORT No 2013080

Date/Time: 14 Jul 2013 0846Z (Sunday)

Position: 5134N 00016W
(2.5nm NE of Damyns Hall)

Airspace: London FIR (Class: G)

Reporting Ac Reported Ac

Type: MD902 C172

Operator: Civ Comm Civ Pte

Alt/FL: 1600ft 1600ft
QNH (1024hPa) NK (NR hPa)

Weather: VMC CLBC VMC CLBC

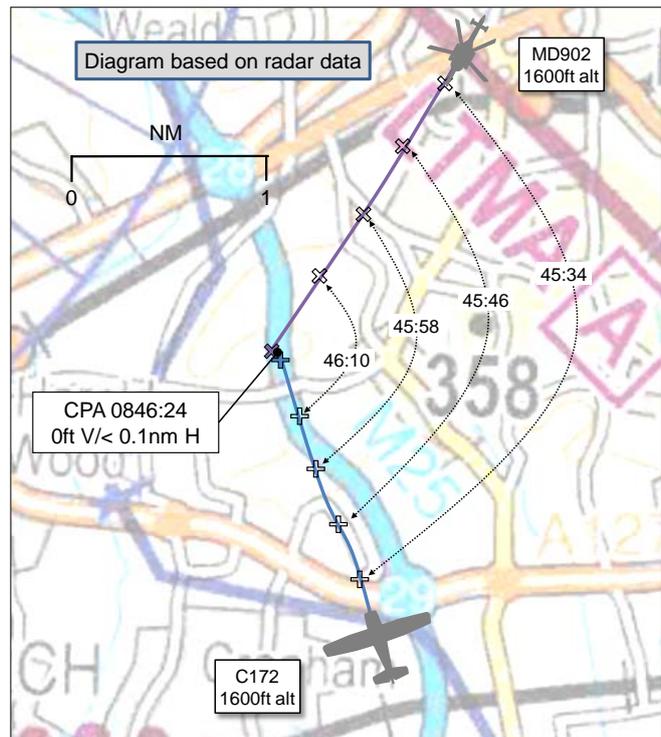
Visibility: 10km 8km

Reported Separation:

NR V/200m H 0ft V/NR H

Recorded Separation:

0ft V/0.1nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE MD902 PILOT reports flying a blue and yellow helicopter straight and level, heading 200°, at 120kts and returning to Redhill, having been on task near Chelmsford; he reported his workload as low. Landing lights, HISLs, strobe lights and navigation lights were all on, and the transponder was squawking Modes 3/A and C. The crew were receiving a Basic Service from Farnborough LARS North. When the helicopter was near Brentwood, the crew member in the front left-hand seat saw the C172 in his left, 11 o'clock position, around 200m away at the same level. He immediately alerted the pilot who turned the helicopter about 60° to the right to maximise separation. The pilot perceived that the C172 was already turning right to avoid them and estimated the minimum horizontal separation as 200m. The MD902 pilot recalls that the Farnborough LARS frequency had a high level of traffic on it and so he elected to report the Airprox by telephone after landing.

THE C172 PILOT reports heading 010° at 100kts, with the tail beacon, strobe lights and navigation lights turned on, and receiving a Basic Service from Farnborough LARS North. He had originally been heading from Biggin Hill to Duxford but Farnborough reported that the weather at Duxford was poor, and so he elected to divert to North Weald. He reports that he did not see the helicopter until 'very late' and thought this may have been partly due to the reduced visibility and the distraction caused by looking for the North Weald approach plate. Although he did not take any avoiding action, he felt he could have done 'if it had been necessary.'

THE FARNBOROUGH LARS CONTROLLER reports the sector was 'very busy' due to an airshow at Duxford and poor weather in the area. When he took over the position the MD902 was 'on task' in the Brentwood area, under a Basic Service, and he recalls acknowledging when the pilot reported overhead Brentwood at 1000ft. At around 0840, the pilot reported that his tasking was complete and that he was heading back towards Redhill; at 0848 the pilot reported changing frequency to Heathrow Special. At no point did the LARS controller observe another aircraft in close proximity to the MD902.

Factual Background

The weather observed at Cambridge at 0820 and 0850 was:

METAR EGSC 140820Z VRB03KT 4800 HZ BKN007 18/15 Q1025
METAR EGSC 140850Z VRB02KT 4500 HZ BKN007 18/15 Q1025

The weather observed at Stanstead at 0820 was:

METAR EGSS 140820Z 33004KT 260V030 6000 SCT011 20/16 Q1025

The weather observed at London City at 0850 was:

METAR EGLC 140850Z AUTO VRB03KT 9999NDV NCD 23/15 Q1024

The weather observed at Southend at 0850 was:

METAR EGMC 140850Z 12005KT 080V180 CAVOK 23/16 Q1024

Analysis and Investigation

CAA ATSI had access to Farnborough RT and area radar recordings, together with the written reports from the Farnborough controller and both pilots.

At the time of the AIRPROX, poor weather was being experienced around the London TMA resulting in a number of aircraft diverting, as they were unable to reach their final destinations. The unofficial weather at North Weald was reported as 5000 metres in haze and FEW at 1800ft.

The MD902 departed Redhill and contacted Farnborough LARS North at 0828:00, in the vicinity of Brentwood, reporting VFR at 1800ft on 1024hPa, and requesting a Basic Service. The Farnborough LARS North controller agreed a Basic Service confirming the London QNH as 1024hPa. The MD902 continued heading north-east to operate in the Chelmsford area.

At 0838:25 the C172 contacted Farnborough LARS North, routing VFR from Biggin Hill to Duxford, reporting overhead Swanley at 2000ft and requesting a Basic Service. The controller agreed a Basic Service and instructed the C172 to squawk 5032, confirming the London QNH as 1024hPa. The controller informed the C172 pilot, *“(C172)c/s just be aware the cloud-base at Duxford is currently around six hundred feet, I haven’t had any aircraft that have got in there recently they’re having to hold er to try and wait for the weather”*. The C172 pilot replied, *“(C172)c/s copy that”*.

At 0841:40 the MD902 pilot reported, *“er Farnborough er (MD902)c/s now complete er Chelmsford routing back to er Redhill er fifteen hundred feet one zero two four advise going en-route”*. The controller replied, *“(MD902)c/s that’s all copied report crossing the Thames”*. This was acknowledged by the MD902 pilot.

At 0844:46 radar showed the MD902 tracking south-westerly at an altitude of 1700ft. The C172 was in the MD902’s half-past ten at a range of 5.4nm, tracking north, on the east side of the M25, at 1600ft. The two aircraft continued to converge.

At 0845:00 the C172 pilot reported, *“Yeah er Farnborough north er (C172)c/s in view of the er weather at Duxford er I think we’ll er divert and er go to erm land at er North Weald er are you able to give me their weather”*. The Farnborough controller responded, *“Roger I’ll see if I can get an unofficial observation for you”*.

The ATSU indicated that there was no direct dial facility for North Weald and the controller needed to look up at the information display overhead the radar display in order to obtain the BT telephone number. The controller then became involved in a lengthy conversation with North Weald.

Meanwhile the two aircraft continued to converge and at 0846:15 the range between them was 0.5nm with both aircraft indicating an altitude of 1600ft. At 0846:22 the range between the aircraft had reduced to 0.1nm as shown in Figure 1 below.

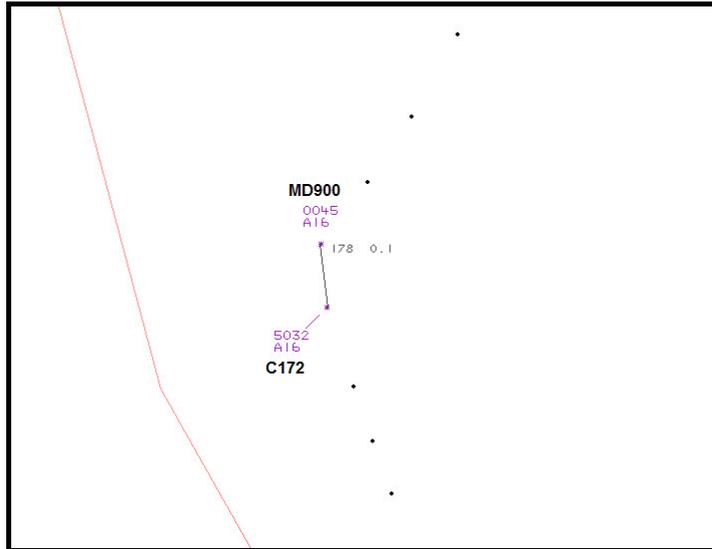


Figure 1 - Swanwick MRT at 0846:22

The CPA occurred between radar sweeps at 0846:24, when the estimated range between the two aircraft was 0.03nm (182ft), with the C172 tracking to pass behind the MD902 (see Figure 2). At 0826:26 the two aircraft, at a range of 0.1nm, had passed and were diverging at an altitude of 1600ft as shown in Figure 2 below.

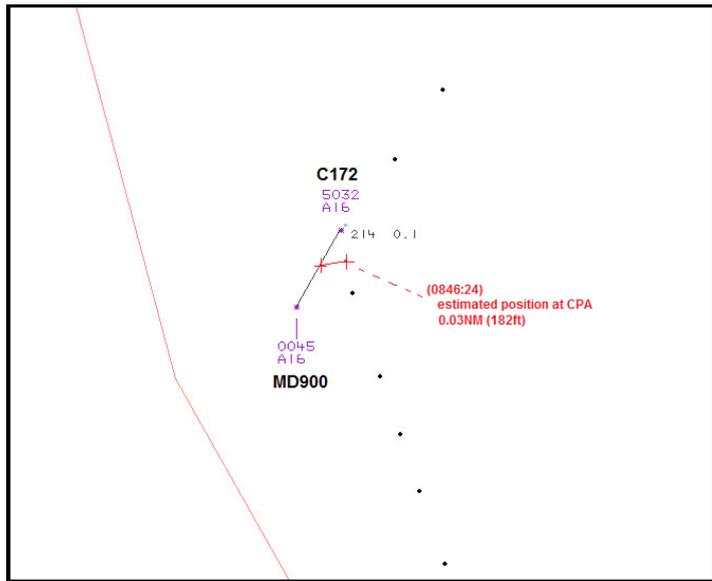


Figure 2 - Swanwick MRT at 0846:26

The MD902 pilot's written report indicated that, as a result of sighting the C172 at a range of approximately 200m, he turned right by 60° to increase separation. The traffic loading on the RT frequency was such that he was unable to report the Airprox at the time.

The written report from the C172 pilot indicated that the MD902 was not sighted until very late; he assessed that cockpit distractions, such as looking for the North Weald approach plate and poor visibility, may have contributed to the late sighting. He also reported that he could have taken avoiding action had it been necessary.

Meanwhile, at 0847:10 the following RTF exchanged occurred:

ATC: *"And er (C172)c/s North Weald weather when ready to copy"*

C172: *"Yeah go ahead"*

ATC: *"(C172)c/s it's er the visibility five thousand metres in haze, their cloud few at one thousand eight hundred"*

C172: *"Yeah five thousand metres in haze and er few at one thousand eight hundred feet, in which case we'll land at North Weald (C172)c/s"*

ATC: *"(C172)c/s roger that's copied I have pre-noted them so they are expecting you"*

C172: *"(C172)c/s copied thanks"*

At 0848:33 the MD902 reported, *"er Farnborough (MD902)c/s just approaching the Thames, I'll go en-route thanks"*. The controller responded, *"(MD902)c/s roger goodbye"*.

At 0849:01 the controller cautioned the C172 that Stapleford ATZ was active and the pilot responded that he almost had North Weald in sight; shortly afterwards the pilot changed squawk to 7000 and transferred to North Weald on frequency 123.52MHz.

The written report from the Farnborough controller indicated that he had not observed any other aircraft in close proximity to the MD902. Neither the MD902 pilot, nor the C172 pilot, mentioned sighting the other aircraft whilst on the frequency. The MD902 pilot subsequently telephoned Farnborough ATSU to report the Airprox.

The ATSU written report indicated that pilots will often request weather information from Farnborough and that this can often be lengthy and time consuming. Farnborough controllers will either ring the airfield concerned or may ask an available assistant to do this. There was an assistant available but it was unknown what tasks they were involved with at the time.

ATSI Analysis:

The two aircraft were in receipt of a Basic Service from Farnborough LARS North.

'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/FISOs. It is essential that a pilot receiving this service 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 flight¹.'

The controller was busy and RT loading was reported as high. It is likely that the Airprox occurred as the controller's attention was focused on obtaining the telephone number and weather for North Weald.

The C172 pilot was very likely distracted by the diversion, weather and looking for an approach plate and, when he sighted the MD902, considered that avoiding action was not necessary.

The MD902 pilot sighted the C172 and turned right to avoid it, believing that the C172 had also turned right.

¹ CAP774, Chapter 2, Page1, Paragraph 1

Within Class G airspace, regardless of the service being provided, pilots are ultimately responsible for collision avoidance. A pilot who considers that he requires a regular flow of specific traffic information must request a Traffic Service. The controller was not required to monitor the two aircraft and had not observed them in close proximity. The controller was therefore unable to provide any warning.

UKAB Secretariat

Both aircraft were being flown in Class G airspace and both pilots had the responsibility to ensure that their aircraft did not collide or come in to such proximity to each other as to create a danger of collision.²

The aircraft were converging, and the C172 had the MD902 on its right; consequently the C172 should have given way to the MD902.³

Summary

The Airprox occurred in class G airspace between an MD902 and a C172. Both pilots were receiving a Basic Service from Farnborough LARS North but the controller did not observe the two aircraft in proximity and was not able to provide any warning. The aircraft were both flying at 1600ft amsl and were converging with the MD902 on the C172's right. Both pilots were operating VFR in VMC, however the weather at the C172's destination had deteriorated and the pilot had elected to divert to North Weald and reports that his work-load was increased as he divided his attention between looking-out and finding the North Weald approach plate.

The C172's pilot reports that he saw the MD902 'very late' and did not take any avoiding action. A member of the MD902's crew saw the C172 around 200m away and the pilot made a right avoiding action turn resulting in a CPA of 0ft vertically and <0.1nm horizontally.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac and the Farnborough LARS controller, transcripts of the relevant RT frequencies, radar video recordings, and reports from the appropriate ATC and operating authorities.

The helicopter and the GA pilot members lead the discussion and noted that both aircraft were being flown in a perfectly normal manner, with the pilots going about their business under a Basic Service. There was some discussion about the Air Traffic Service they had elected to adopt as some members felt that, given the haze and deteriorating weather observations, a Traffic Service would have been more appropriate. Whilst it was agreed that a Traffic Service may have helped the pilots to see the other aircraft earlier, it was also noted that the pilots had reported the visibility as 8km and 10km at the time of the Airprox and so they had more than adequate conditions to rely on visual lookout. Board members then discussed the role of the Farnborough controller and wondered if, despite being under a Basic Service, Traffic Information could have been passed. An advisor informed the Board that Farnborough LARS is extremely busy at weekends, as was clearly the case on this particular Sunday, and it would have been unlikely that the controller would have had the capacity to offer more than the terms of the Basic Service required. If the pilots had requested a Traffic Service the controller could have assessed his workload and priorities to try to provide the services requested but, given the high traffic loading, he may not have been able to offer more than a Basic Service anyway. It was agreed that given the traffic densities on the day it was not reasonable to expect the Farnborough LARS controller to have spotted the conflict, and so Traffic Information should not have been expected by default.

² Rules of the Air 2007, Rule 8, Avoiding aerial collisions

³ Rules of the Air 2007, Rule 9, Converging

The MD902 was being operated on behalf of a police force and the Board was surprised that it was not fitted with a TCAS; although not a panacea for all situations, in this circumstance of meeting another squawking aircraft TCAS would have been able to detect, provide indications, and offer flight vectors to resolve this confliction.

When discussing the risk associated with this Airprox the Board noted the late sighting by both pilots despite their reportedly good weather conditions. Although the C172 pilot reported that he could have taken avoiding action 'if it had been necessary', the Board felt that this was probably a misperception; at a CPA of less than 0.1nm, members felt that, at that distance, some sort of avoidance manoeuvre would have been warranted. Notwithstanding the C172 pilot's statement and the fact that the MD902 pilot's actual avoiding action had been effective, the Board considered that this had been a close encounter where normal safety margins had been much reduced; they graded the Degree of Risk as B.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Late sighting by both pilots, resolved by the MD902 pilot.

Degree of Risk: B

ERC Score⁴: 20

Recommendation: The National Police Air Service reviews the equipping and employment of TCAS (and P-FLARM) in Police Helicopters.

⁴ 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.