

AIRPROX REPORT No 2011132

Date/Time: 17 Sep 2011 1358Z (Saturday)

Position: 5140N 00001E (5nm W LAM)

Airspace: LFIR (Class: G)

Reporting Ac Reported Ac

Type: EC145 PA34

Operator: Civ Comm Civ Club

Alt/FL: 100ft↑ 600ft
QFE (994mb) QNH (1004mb)

Weather: VMC CLBC VMC CLBC

Visibility: >10km 10km

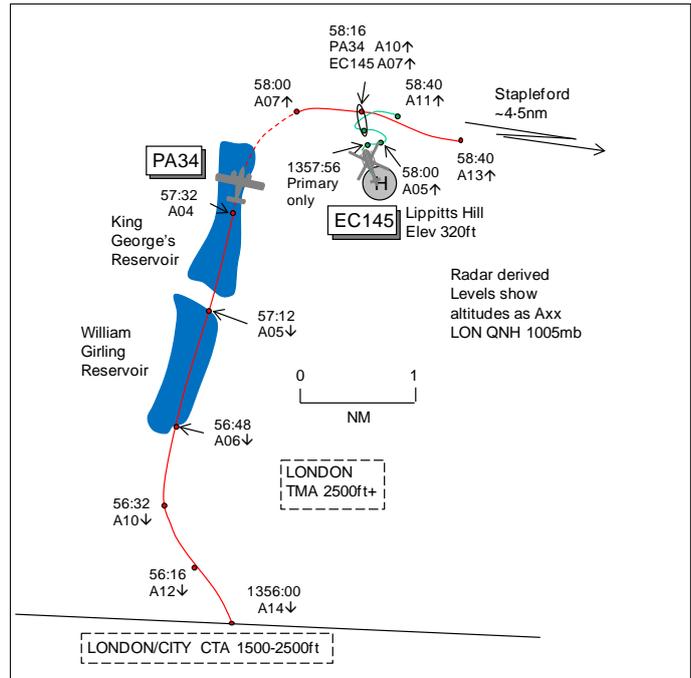
Reported Separation:

100-200ft V/ Not seen

1000m H

Recorded Separation:

300ft V/>0.1nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE EC145 PILOT reports on departure from a private site at Lippitts Hill, VFR and in communication with his base operations, squawking a discrete code with Modes S and C. The visibility was >10km flying clear below cloud in VMC and the ac was coloured white/red/orange with nav, anti-collision beacon and HISLs all switched on. He was departing via a clear area to the NW and as he cleared the trees at the far end of the RW TCAS issued an alert (circular symbol indicating +100ft about 1000m away). Heading 340° at 60kt and climbing through 100ft QFE 994mb the crew member in the rear informed him of the presence of a white coloured twin-engine ac flying extremely low up the reservoirs in an erratic fashion, ~1000m away. In response to this and the TCAS alert he elected to manoeuvre his helicopter down and R before visually searching for the ac. Once confident that he was clear, he rolled L and looked for the contact. He saw it in a climbing R turn towards him and he positioned his helicopter below the ac so that he could read its registration. He followed the ac at distance and filed an Airprox on contacting Heathrow SVFR. He was confident the ac was from Stapleford so after landing he telephoned Stapleford Operations and informed them that he was filing an Airprox against the twin engine ac. He assessed the risk as high.

THE PA34 PILOT reports flying a local sortie from Stapleford, VFR and in communication with Heathrow SVFR and then Stapleford Radio, squawking with Modes S and C. The visibility was 10km flying clear below cloud in VMC and the ac was coloured white/purple with strobe lights switched on. He was returning to Stapleford from a pleasure flight over London. Stapleford was using RW22 for arrivals and departures and the cct was very busy with training traffic. He elected to return from London on a N'y route via the Lee Valley Lakes [Reservoirs] as this allowed him to conveniently and more safely join the Stapleford cct from the deaside. Once clear of the London City CTR he descended to altitude 600ft QNH 1004mb to afford his pax a pleasurable view of the lakes and Epping Forest. Heading 360° at 120kt upon reaching W abeam LAM he entered a climbing R turn, eventually levelling at altitude 1200ft to position for a crosswind join at Stapleford. He did not see any rotary craft which he was subsequently told was on climb out from the Epping Forest area.

THE HEATHROW SVFR CONTROLLER reports mentoring a trainee when the PA34 flight, which had been conducting a pleasure flight over central London, reported leaving his frequency to return to Stapleford. About 2min later at 1401 the EC145 flight made its initial call on frequency and

reported, "...a twin-engine plane with the registration (PA34 reg) flying low over the reservoir...we nearly hit it". He took over from the trainee and asked the EC145 pilot if he wished to file an Airprox. The pilot replied in the affirmative and it was agreed the event would be logged at Swanwick and the pilot would complete the Airprox paperwork when he returned to base. A contact showing 7000 was seen close to the EC145, TI was passed and the EC145 pilot reported that this was the other ac concerned. This radar contact was identified using Mode S as PA34 c/s. The non-standard flight paperwork relating to PA34 c/s listed the PA34 registration as one of the ac used for this operation.

ATSI reports that this was an AIRPROX in Class G uncontrolled airspace between an EC145 and a PA34, reported by the EC145 pilot, in the vicinity of Lippitts Hill, NE London at a height of 100ft QFE 994mb [420ft amsl]. The EC145 departed a helipad in the vicinity of Lippitts Hill on an operational flight. The pilot reported manoeuvring at low level to initially stay clear of the PA34.

The PA34 had departed Stapleford earlier in the day and had been conducting a pleasure flight over London. LTC Heathrow Special VFR (LL SVFR) was providing a RCS to the PA34 flight on 125.625MHz whilst it operated inside the London City CTR. Outside CAS the PA34 flight was provided with a BS. The EC145 pilot called LL SVFR on the same frequency after lift-off. LL SVFR services were being provided by an ATCO on extension training under the supervision of an OJTI.

ATSI had access to the following in the course of its investigation: both pilots' reports, LL SVFR controller report, transcript of frequency 125.625MHz, recorded area surveillance. NOTE: radiotelephony is not recorded at Stapleford or at Lippitts Hill.

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The PA34 exited the London City CTR at 1355:37 (UTC) displaying a LL SVFR SSR code and flew outside CAS to Banbury Reservoir where it turned onto a N'y track to fly low-level along the centre of William Girling and King George's Reservoirs.

At 1357:32 the PA34 disappeared from surveillance coverage displaying an altitude of 400ft.

At 1357:56 the first, primary only, surveillance position indication symbol of the EC145 appeared 0.3nm N of the Lippitts Hill Helipad (LHH).

At 1358:00 the PA34 pilot requested a frequency change to Stapleford Radio, which was approved, and LL SVFR's service was terminated.

At 1358:00 the PA34's position indication symbol reappeared 0.9nm NW of the LHH at an altitude of 700ft. The EC145 was now also displaying Mode C information and was at altitude 500ft having tracked E from its previous position.

The PA34 continued climbing on an E'y track as the EC145 also climbed whilst executing a LH turn.

At 1358:16 the ac passed abeam each other, on reciprocal tracks, laterally distant by 0.15nm: the PA34 was at altitude 1000ft and the EC145 at altitude 700ft. The ac were approximately 0.6nm N of the LHH.

At 1358:20 the EC145 pilot called LL SVFR stating that a twin-engine ac had been sighted over 'the reservoirs' and that the EC145 nearly collided with it. By 1358:40, when the EC145 flight's initial RT message ended, the EC145 had climbed to 1100ft and turned R, following the E'y track of the PA34. The PA34's SSR code had changed to 7000 and the ac was at altitude 1300ft.

There followed a dialogue between the LL SVFR controller and EC145 during which the ac sighted by the EC145 was identified as the PA34.

A map of the Lippitts Hill area is provided at Appendix A. The map has been annotated with the position indication symbols for both the PA34 (in red) and the EC145 (in yellow). The PA34's flight

along the King George Reservoir was at a level such that it disappeared from surveillance coverage for 28sec. During this time it is assumed that the ac continued on a N'y track to the end of the reservoir where it turned on to an E'y heading. It climbed from altitude 400ft to altitude 700ft in this time.

The initial lift profile of the EC145 was not visible on the surveillance recordings therefore it is not possible to verify the orientation of the ac prior to it being recorded on an E'y track at 500ft. It is likely that, prior to this, the EC145 crew had observed the PA34's flight along the reservoir. The distance between the LHH and the last observed position of the PA34 over the King George Reservoir is 1.3nm.

The minimum distance (CPA) between the 2 ac occurred at 1358:16; this was equal to 280m.

The LL SVFR controller had access to surveillance derived information; however, neither ac were displayed on the controller's situation display immediately prior to their recorded CPA. Therefore, the LL SVFR controller could have been of no assistance to either flight with regard to the Airprox that was subsequently reported.

As the Airprox occurred the PA34 flight was transferred from the LL SVFR frequency, its BS having been terminated. The EC145 pilot called LL SVFR thereafter. Given the very low-level of the Airprox it was not possible to fully verify either pilot's account using surveillance derived information.

Appendix A



PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authorities.

Members noted that the Airprox per se occurred when the MD902 climbed through 100ft QFE (430ft QNH) on a NW'ly departure track with the PA34 passing 1000m to the W of the landing site tracking N'ly and showing 100ft above on TCAS. A crewman in the MD902 saw the PA34 flying low over the reservoirs and alerted his pilot to it. The PA34 pilot reported flying at 600ft QNH whilst recorded radar shows the PA34 fading from radar at altitude 400ft 1.3nm WSW of the helicopter site tracking N'ly. It appeared to Members that the MD902 crew were concerned that the PA34 was low-flying and closing towards their projected flightpath. Members believed that the PA34 pilot had not broken any rules flying low over the reservoirs; his only need was to comply with Rule 5 of the RoA (500ft clear of persons, vessels, vehicles or structures on the ground). The MD902 pilot had taken action quickly to increase separation by turning R away from the PA34 before he judged that it would be safe to turn L back to the W while looking for it. It was then that he saw the PA34, as it was turning R towards the E and climbing, and he elected to pass close to it to identify the ac. This resulted in the measured CPA but it was a separation distance chosen by the MD902 pilot, post the initial evolution of the encounter. Although the PA34 pilot was unaware of the helicopter's presence, the site is marked on the topographical charts and it should have been given 'due regard' during the flight planning phase. While flying low it would have been more difficult for the PA34 pilot to see the helicopter until it lifted-off and climbed above the tree line from its elevated site on a hill and this would be exacerbated by his cross-cockpit view from the LH seat.

Members were in no doubt that the MD902 crew was concerned during a critical stage of flight. However, in the circumstances, with both crews discharging their responsibilities in this Class G airspace, the Board agreed that this incident had quickly become benign, owing to the MD902 crews actions, allowing it to be classified as a sighting report where normal procedures, safety standards and parameters pertained.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Sighting report.

Degree of Risk: E.