

AIRPROX REPORT No 2013017

Date/Time: 6 Apr 2013 1235Z (Saturday)

Position: 514914N 0004052E
(9.5nm SSW of Earls Colne)

Airspace: London FIR (Class: G)

Reporting Ac Reported Ac
Type: Robin SU29
(A120T)

Operator: Civ Club Civ Pte

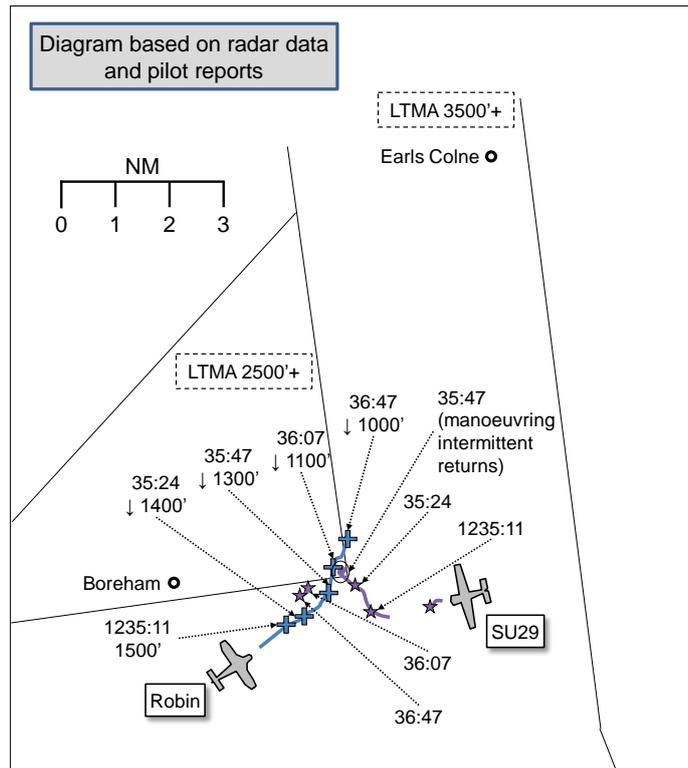
Alt/FL: 1900ft NR
(QNH 1024hPa)

Weather: VMC NR NR

Visibility: >10km 10km

Reported Separation:
0ft V / <50m H NR

Recorded Separation:
<0.3nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE ROBIN PILOT reports that she was a student flying a white aircraft with blue markings on the wingtips and the lower fuselage, squawking Mode 3/A 7000 with Modes C and S switched on. She was flying VFR on a solo navigation exercise routing from Earls Colne via River Crouch, Hanningfield Reservoir, Chelmsford and was returning to Earls Colne, heading 050° at 90kts, cruising at 1900ft, she thought, on the QNH of 1024hPa. She was not in receipt of any ATS. Having confirmed her location, she was about to contact Earls Colne when she saw a red and white ac less than 1500m away descending vertically in front of her ac in what appeared to be an aerobatic dive.

The Robin pilot expressed her surprised that she had not spotted the SU29 earlier, particularly as the Robin had a glass canopy and surmised that the other ac may have come out of the cloud base above her. She estimated the CPA as less than 50m H with the SU29 passing through her altitude. The Robin pilot initiated a right turn but was aware that the other pilot may not have seen her and may come out of the dive in any direction so she stopped the turn after approximately 15-20 degrees. Subsequently she saw the SU29 exit the dive to her L and below her ac before it entered a sweeping level curve behind her ac and headed off in the direction of Andrewsfield. The Robin pilot circled over Birch to re-establish her bearings and then set course back to Earls Colne.

The student's instructor supported her report and added that weather was SCT CU 2000-4000ft and that he estimated the cloud base was 2200ft AMSL.

THE SU29 PILOT reports flying his red and white ac VFR out of North Weald on a local aerobatics and general handling exercise at 130kts in VMC with strobe lights operating; he had selected a mode 3/A code of 7000 and had Mode C switched on, he thought. [UKAB Note (1): The ac does not display an SSR code at any time during the radar replay and the pilot has been contacted so that he can check the serviceability of his transponder.]



SU29 (Photo courtesy of Sukhoi)

The pilot recalls operating on QNH and moving his practice area every 3

or 4 manoeuvres in order to minimise the noise impact for individuals on the ground but that he was operating in the general area E of Stansted and N of Chelmsford. During the sortie, the pilot recalls seeing 3 or 4 aircraft, none of which he considered close enough to present a collision risk and could not be certain if any of them were the Reporting ac.

UKAB NOTE (2): The Stansted weather at 1220Z was:

METAR EGSS 061220Z 06005KT 360V120 9999 SCT044 09/M03 Q1024=

UKAB NOTE (3): ANALYSIS OF THE STANSTED RADAR at 1235:11 shows the Robin 2.3nm SE of Boreham Heliport, tracking NE, Squawking Mode 3/A 7000 with Mode C indicating an altitude of 1500ft. At the same time the SU29 is displayed as a primary-only return 1.6nm E of the Robin tracking NW. At 1235:24 the ac are 1.1nm apart, the Robin continues on its track indicating 1400ft whilst the SU29 appears to manoeuvre between N and W. Between 1235:28 and 1235:47 the SU29 return appears to manoeuvre in a small area 0.5nm ahead of the Robin, which continues to track NE indicating 1300ft. At 1235:47 the primary return from the SU29 is lost at the measured CPA 0.3nm ahead of the Robin; it is likely that the actual CPA is not shown and it is likely to have been closer. Shortly afterwards the Robin is seen to turn left to track N and its Mode C indicates 1100ft. At 1236:07 the SU29's primary return reappears 0.8nm SW of the Robin and continues to manoeuvre in the area without approaching the Robin any closer.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of the reports from the pilots of both ac, a report from the student pilots instructor and radar video recordings.

The Board noted that this was an encounter in Class G airspace. A Member noted that the SU29 pilot had seen 3 or 4 ac during his sortie but did not consider them to be a collision risk and theorised that the relative perceptions of the inexperienced student pilot and the experienced aerobatic pilot may have contributed to the difference in their reports. The Board felt that although the student pilot may not have been confident in her assessment of the separation distances, the radar evidence indicated that the CPA was closer than would be considered normal during aerobatics and that it was therefore likely that the SU29 pilot had not seen the Robin.

On the subject of the SU29's transponder, the Board agreed that it was entirely possible for a GA pilot receiving no ATS to fly an entire sortie, or possibly several, without knowing that their transponder was unserviceable but they were content that the SU29 pilot had been advised to have his transponder checked. One of the GA Members questioned why the SU29 pilot had selected a Mode 3/A code of 7000 rather than 7004 to indicate that he was carrying out aerobatics; other Members felt that the use of 7004 amongst the GA community was probably not well understood and therefore quite unusual.

In assessing the Risk, the Board considered the measured and reported CPA distances and that it was unlikely that the SU29 pilot had seen the Robin. They agreed that the Robin pilot had taken appropriate actions given her experience level but that her avoiding action had probably not had a very large effect. While it was difficult to be certain how serious the collision risk had been, the safety of the ac had been compromised.

The Board discussed the safety barriers which were relevant in this Airprox; they concluded that they were aircrew rules and procedures, visual sighting and aircrew action. The Board felt that the Rules and procedures had not produced an effect as no ATC service was sought and the Rules of the Air had not prevented the encounter; the Robin pilot saw the SU29 enabling her to increase separation after the CPA but she did not see it early enough for her avoiding action to have had more than a minor effect. In assessing the combined effect of the barriers remaining to prevent a collision the Board agreed that they were minimally effective resulting in a score of 20 on the Event Risk Classification Matrix.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Apparent non-sighting by the SU29 pilot.

Degree of Risk: B.

ERC Score: 20.