

AIRPROX REPORT No 2010168

Date/Time: 4 Nov 2010 1226Z

Position: 5052N 00027W (2nm
NNE of Shoreham A/D -
elev 7ft)

Reporter: Shoreham ATC

Airspace: ATZ/FIR (Class: G)

Aircraft 1 Aircraft 2

Type: R44 DA42

Operator: Civ Pte Civ Trg

Alt/FL: NR 700ft
QNH (1021mb)

Weather: VMC NR VMC

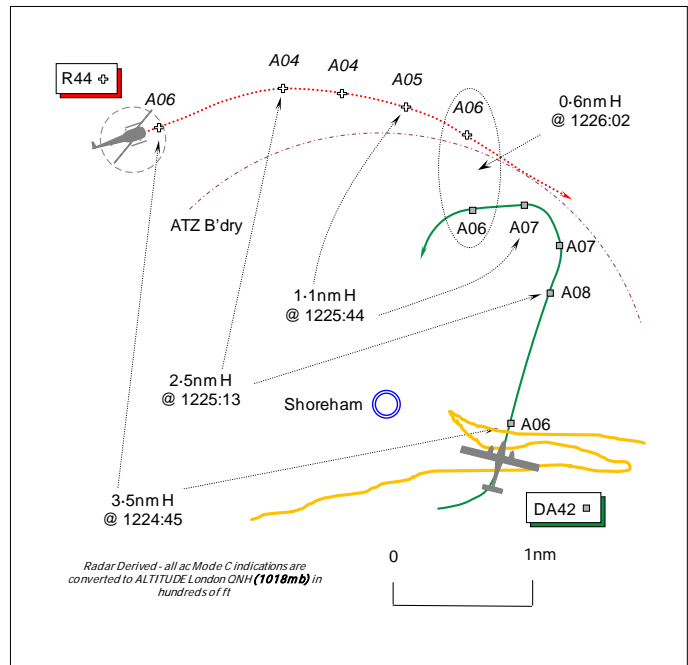
Visibility: NR 9km

Reported Separation:

NR NK

Recorded Separation:

Nil V @ 0.6nm H



CONTROLLER REPORTED

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE SHOREHAM AERODROME CONTROLLER (ADC) reports that the DA42 crew had completed an NDB/DME approach and joined the LH visual cct to RW20. When the DA42 was turning onto Final at about 1nm an R44 helicopter was seen from the Tower passing through the approach to RW20, he thought ahead of the landing DA42. Traffic information was given to the DA42 crew prior to their Final call, at which point the R44 was flying from W to E, ahead of and about 30ft below the DA42. Initially the DA42 crew was not visual with the R44, but then caught a glimpse of the helicopter to their L [as it cleared to the SE]. The R44 continued E'ly as if skirting the Shoreham ATZ, before turning R S'ly to intercept the coastline and continuing to the E. Subsequent blind calls to the R44 on the TOWER frequency elicited no response.

Calls to London FIS at LAC Swanwick, Farnborough Radar, Lydd, Chichester/Goodwood and Lee-on-Solent ascertained that the R44 helicopter pilot was not in receipt of an ATS from these Units.

The 1150UTC Shoreham METAR gives: 24019G29KT 9000 BKN016 15/13 QNH 1021 =

THE DIAMOND TWIN-STAR DA42 PILOT, a flying instructor, provided a comprehensive report stating that he was conducting an IFR instrument training sortie involving ILS training at Bournemouth and general handling enroute back to Shoreham. The flight concluded with a hold and NDB approach to RW20, followed by a go around into a simulated asymmetric cct to land.

Downwind on their final circuit to land, they called 'Downwind' and were told by TOWER to 'report final No 1'. He checked the area of the Base-Leg and Final, saw no other ac to conflict and turned onto Base. Because his student did not allow sufficiently for the wind, their aeroplane possibly drifted onto a slightly wider Base-leg than normal. Conditions were fairly lively and the student was focused on controlling the aeroplane. Checking Final prior to the Final turn, again he saw nothing to conflict. At the start of the Final turn, flying at 100kt descending through about 700ft QNH (1021mb), he

called 'turning Final' and on releasing the transmit switch he thought he heard '..below passing right to left' or words to that effect from TOWER. Having heard no other RT from any other ac in the cct he assumed the call was for them and applied sufficient back pressure to level his aeroplane briefly until either he caught a glimpse of the other ac or TOWER advised that they were clear of the traffic (he could not recall which came first). He did not see the other ac until they had passed – an R44 helicopter sighted ½nm away. On realising that they were clear of the traffic, he reverted to close monitoring of his student (who was finding the conditions challenging) and the final approach and landing, which were completed without further incident. His student pilot did not see the conflicting ac at any point during the cct.

He had some recollection that they may have been given traffic information by TOWER about the R44 passing W to E to the N of the aerodrome and that he scanned that area and saw nothing; however, he cannot recall at exactly which point that happened. At no time during the course of the event did he hear the R44 pilot on frequency and he believed they were the only ac airborne on frequency at the time.

LATCC (Mil) RAC reports that although the AID of the R44 helicopter was quickly ascertained from the recorded Mode S data, contacting the pilot proved somewhat more problematic. Despite checking with various aerodromes in SE England, in addition to those contacted by Shoreham, the destination of the R44 could not be established. The helicopter is registered in the US and the owner registered as a holding company in New York City. Efforts to identify the pilot through this company were completely unsuccessful. Through the helpful assistance of the local FAA Office, the R44's engineering records were checked and the identity of the engineer who last worked on the helicopter established. Telephone enquiries met with no response, so the RAC wrote to the engineer who eventually made contact and believed the R44 was based at Wycombe Air Park, which was not correct. Further enquiries suggested a name but a search of CAA records, registrations and both pilot and radio licensing, drew a blank. Through another line of enquiry the pilot was eventually contacted on 4 Mar and provided a brief response, by e-mail that day, and subsequently rendered a brief Airprox report.

THE ROBINSON R44 HELICOPTER PILOT provided a brief report stating that he was operating VFR from a private landing site. He was flying in an easterly direction at 100kt along the south coast in VMC, he thought at 800ft amsl, but not in contact with any ATSU; a squawk was selected with Mode C on. The ac was turned NE to avoid the Shoreham ATZ but the DA42 was not seen. He suggested that training ac often fly ccts outside of the Aerodrome boundary.

His helicopter is coloured Blue and the HISL was on.

ATSI reports that the Airprox occurred to the NNE of Shoreham Airport, between the DA42 circuiting inside the Shoreham ATZ and the R44 just outside the ATZ boundary, which is a circle of radius 2nm centred on the midpoint of RW12/20, extending from the surface to 2000ft aal. Shoreham ATC were providing a combined Aerodrome and Approach Control service, without the aid of surveillance equipment.

The DA42 was operating on a local flight from Shoreham Airport and at 1151:45, a BS was agreed whilst the crew completed general handling and the QNH (1021mb) passed. At 1211:10 the DA42 was cleared to commence an NDB/DME approach to RW20 and the pilot requested a go around into the visual cct. Following the go-around, at 1223:02 the Shoreham controller advised the DA42 pilot to, *"....report downwind for 2-0 left hand circuit circuits clear."*

At 1224:45, the DA42 pilot reported Downwind and the controller instructed him to report Final for RW20. The radar recording at 1225:13 shows the DA42 late downwind squawking A0401 indicating an altitude of 800ft London QNH (1018mb) with the R44 helicopter, squawking A7000 at an altitude of 400ft London QNH, 2.5nm NNW of the airport tracking E around the Shoreham ATZ. At 1225:44, the radar recording shows the DA42 inside the Shoreham ATZ, on Base-leg for RW20, indicating 700ft ALT, with the R44, indicating 400ft ALT, in the DA42's R 2 o'clock at a range of 1.1nm. The R44 continued to track E remaining just outside the Shoreham ATZ. It was at 1226:04, that the

Shoreham controller first advised the DA42 pilot of the presence of the R44, “..caution a helicopter below you not on my frequency clear now.” At this point the radar recording shows the DA42 turning onto final at 1.6nm from the Airport with the R44 passing 0.6nm behind and just outside the ATZ; both ac are indicating 600ft ALT.

The controller’s written report indicates that the helicopter passed ahead of the DA42 on Final approach and at the point the controller sighted the helicopter, it may have been perceived to have been crossing ahead and below the DA42. The radar recording, however, shows the R44 passing 0.5nm clear astern of the DA42, the latter descending through 500ft ALT on Final, with the helicopter just outside the ATZ boundary.

The Manual of Air Traffic Services (MATS) Part1, Section 2, Chapter 1, Page 1, Paragraph 2.1, states:

“Aerodrome Control is responsible for issuing information and instructions to aircraft under its control to achieve a safe, orderly and expeditious flow of air traffic and to assist pilots in preventing collisions between:

- a) aircraft flying in, and in the vicinity of, the ATZ;
- b) aircraft taking-off and landing.”

The Shoreham controller passed an appropriate warning to the DA42 pilot regarding the close proximity of the helicopter. Radar recordings show that the helicopter was operating just outside the boundary of the Shoreham ATZ in Class G airspace. No RT call was made by the pilot of the helicopter to Shoreham ATC.

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, a report from the air traffic controller involved and the appropriate ATC authority.

In a GA Member’s view the separation between ac was quite a lot and it was plain that the R44 pilot was aware of the Shoreham ATZ as he had reported he turned NE to remain clear. Whilst the recorded radar data reveals that that the R44 helicopter pilot had remained outwith the Shoreham ATZ, he did pass very close to the boundary as he flew around the NE’ly quadrant. Furthermore, it was clear that, notwithstanding the challenging wind conditions, the DA42 crew had turned onto Base-leg and Final well inside the ATZ. Controller Members thought it most unwise for the R44 pilot to fly this close to the Shoreham ATZ boundary as he crossed beneath the approach to RW20, especially without communicating with ATC. Pilot Members concurred and emphasised that better airmanship on his part would have been to make a short call to Shoreham ATC advising of his route and height, which would have provided a warning to the controller of his transit beneath the approach. This could also have improved the R44 pilot’s own situational awareness about other traffic in the vicinity, as the Shoreham controller might well have considered it prudent to advise him of the DA42 before it passed 0.6nm to the S and which the R44 pilot reports he did not see at all.

The Board had no doubt that this controller reported Airprox was filed with the best of intentions based on what the Shoreham controller believed he had seen at the time. Controller Members recognised that ac ranges were difficult to judge visually from the VCR with different types of ac of greatly varying sizes. Moreover, the ADC did not have the benefit of an ATM to help him determine the relative geometry. The ADC had perceived that the R44 was inside the ATZ and was on a heading to cross through the approach, ahead of and below the DA42, hence his conscientious warning to the crew. However, the ATSI report and radar recording show this was not the case with the R44 passing clear astern of the DA42. Whilst the warning to the DA42 crew was passed with good intent and made them aware of the other ac, it was plain to the Members that no actual conflict

had existed. The Board concluded, therefore, that this Airprox had been the result of a controller perceived conflict and that no Risk of a collision had existed in these circumstances.

The difficulties associated with tracing the pilots of the foreign registered ac based in England and operating in UK airspace was highlighted by this Airprox and discussed. The Board's CAA Flight Operations Advisor believed that this rather parlous situation will be improved in the next 2-3 years. The Board was briefed that following pressure from across Europe, EASA is progressing a requirement for operators of non-State registered ac to make a formal declaration to the State in which the ac is being operated, which should improve lines of communication.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A controller perceived conflict.

Degree of Risk: C.