

## AIRPROX REPORT No 2010013

Date/Time: 4 Mar 1623

Position: 5121N 00006E (3nm NE Biggin Hill - elev 599ft)

Airspace: FIR/ATZ (Class: G)

Reporter: Biggin Hill ATC

1st Ac 2nd Ac

Type: PA28 C550B

Operator: Civ Pte Civ Comm

Alt/FL: 1800ft amsl 2400ft QNH (1025mb)

Weather: VMC Haze VMC NR

Visibility: 3km 10km

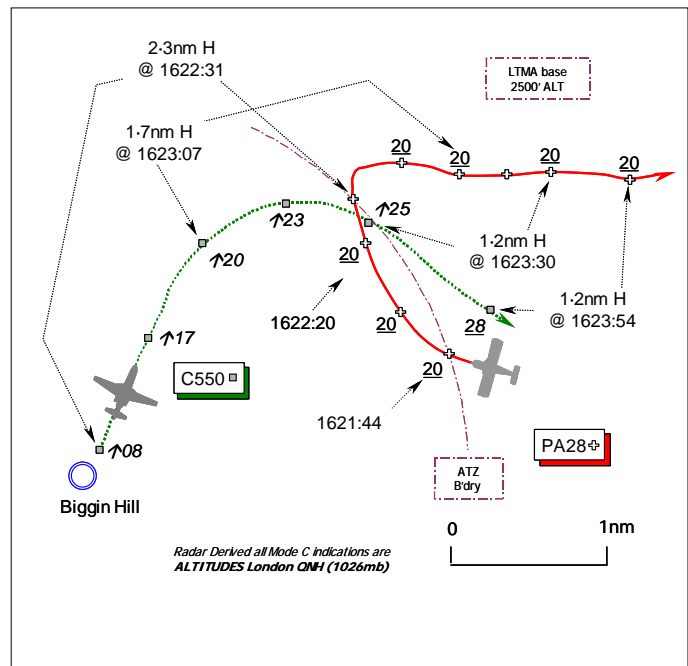
Reported Separation:

Not seen 600ft V/2nm H

Recorded Separation:

500ft V @ 1.2nm Min H

Nil V @1.7nm H



## CONTROLLER REPORTED

### PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

**THE BIGGIN HILL COMBINED AERODROME AND PROCEDURAL APPROACH CONTROLLER** (ADC) reports that he was acting as an On the Job Training Instructor (OJTI) supervising a trainee controller.

At 1619, the IFR C550 was cleared for takeoff from RW03 for a Lydd 2 (LYD 2) Standard Departure Route (SDR). At the same time as the C550 became airborne he noticed an ac squawking A7000 entering the ATZ from the NE, indicating 2000ft Mode C and tracking directly towards the climb-out and the C550. A blind transmission was made to 'the pilot of the ac entering the ATZ to the NE of Biggin Hill', which the PA28 pilot answered. He was then able to confirm using VDF and DME that this was the ac conflicting with the C550. He passed avoiding action to the PA28 pilot based on visual observations from the VCR with specific TI on the departing C550. TI was then passed to the C550 crew about the PA28. The flights then continued en-route.

**THE PA28 PILOT** reports that he was flying with another pilot on a VFR flight from, and returning to, White Waltham. His aeroplane is coloured white with red and blue stripes. He reports that the in-flight visibility was 3km in haze and he was flying into sun.

Flying at 1800ft ALT, at 90kt, he was not in receipt of an ATS but 'listening out' on the Biggin Hill frequency [129.4MHz] when he realised that they had strayed into the ATZ. He turned N to exit the Zone expeditiously, which was when Biggin ATC contacted them on the RT, asked for his callsign and told them to turn R onto a heading of 090° for collision avoidance. They did so and then routed S to Sevenoaks VRP, as instructed, reported overhead the VRP, then flew W and descended to 1400ft to avoid the Class D Gatwick CTA (1500-2500ft amsl), reporting S abeam Biggin Hill and later Kenley, as requested.

At no time did they see the C550 involved due to the restricted visibility, and the fact that they were looking for Biggin Hill aerodrome. He made the mistake of not talking to Biggin ATC because he was

intent on seeing the aerodrome, and by the time he realised from the DME reading that they had strayed into the ATZ, they were concentrating on exiting the Zone. Furthermore, at that time the frequency was fairly busy.

He contacted Biggin Hill ATC after landing to apologise for straying, he thought 0.4nm, into their ATZ, and to explain that on this VFR flight, although he had tuned the Biggin VOR/DME frequencies into the NAV equipment, he had been unable to see Biggin Hill aerodrome because of looking into sun through the late afternoon haze.

**THE CESSNA C550B PILOT** reports that he was departing from RW03 at Biggin Hill bound for Nice under IFR. His ac has a white and red livery and the HISLs were on. The assigned squawk was selected with Mode C; Mode S and TCAS are fitted. In receipt of a FIS (sic) from Biggin Hill Approach on 129.4MHz, climbing to 2400ft Biggin QNH (1025mb) in VMC at 170kt on departure from RW03, they noticed on the TCAS an ac 2nm away to the NNE. They never saw the other ac visually whilst looking out for it – only on the TCAS display. The other ac passed 2nm away down their port side some 600ft below his ac. When flying the SDR, the initial turn is at 1nm towards the E, but no TCAS alert occurred at any time. They were flying in VMC at all times.

**ATSI** reports that Biggin Hill ATC is not equipped to provide any surveillance services. It is, however, supplied with an Aerodrome Traffic Monitor (ATM), fitted in the VCR, which displays surveillance data provided by LTC Swanwick.

The ADC and Approach positions at Biggin Hill were bandboxed and were being operated by a Mentor and a trainee. The C550 crew was issued with its outbound clearance from Biggin Hill, whilst taxiing for departure from RW03: *“Lydd 2 departure right turn 1 DME on track Detling squawk 2-2-0-3”*. The SDRs are notified in the UK AIP at AD 2-EGKB-1-9. The LYD 2 departure is for flights to the S via G27 (R803), routeing DET-LYD. Note 2 adds: ‘Departures from RW03, after noise abatement, turn right to intercept DET RDL 278° to DET’. The C550 crew was instructed to climb to 2400ft QNH (1025mb). Prior to departure, at 1621, the C550 pilot was informed about traffic to the E that would be crossing overhead the upwind end of the runway at 1600ft. After acknowledging this information, the C550 crew was cleared for take-off, with confirmation of its R turn at 1 DME. The radar recordings show that, at the time, this traffic, which was joining the cct, was about 2.2nm SE of the airport. Additionally, another ac, squawking 7000 - the subject PA28, which had not contacted Biggin Hill, is shown 2.7nm ENE of the airport, tracking W, at an altitude of 2000ft unverified Mode C.

The mentor reported that at the time the C550 was airborne, he noticed, on the ATM, the unknown traffic entering the ATZ from the NE, tracking towards the RW03 climb-out. The Biggin Hill ATZ is defined in the UK AIP, Page AD 2-EGKB-1-5, as a ‘Circle radius 2.5nm centred on the longest notified runway (03/21), surface to 2000ft aal. Aerodrome elevation is 599ft. The ADC made a blind transmission at 1622:00 *“The station to the Northeast of Biggin Hill callsign”*. The PA28 pilot responded and was instructed to remain outside the ATZ. After apologising, the PA28 pilot said at about 1622:20 that he was at a range of 2.1nm and would turn further R to head N. The radar recordings show the PA28 in a R turn at 2000ft unverified Mode C London QNH (1026mb), 2.3nm NE of the aerodrome. After checking the VDF and DME, the mentor confirmed he was able to establish visual contact with the PA28. Observing that the PA28 was still tracking towards the RW03 climb-out, the mentor transmitted *“[PA28 C/S] turn right route eastbound avoiding action traffic is a Citation just airborne from runway 0-3 will be routeing eastbound climbing to altitude 2 thousand 4 hundred feet IFR”*. The pilot reported turning and establishing on an easterly heading. TI was then issued to the C550 crew *“traffic information is a light aircraft...approximately 3 and a half miles to the northeast of Biggin Hill tracking eastbound”*. Following co-ordination with LTC, the C550 crew was instructed to climb to an altitude of 3000ft. The pilot read back the climb instruction, adding he was turning R.

[UKAB Note (1): The Heathrow 23cm Radar recording shows the PA28 maintaining 2000ft London QNH (1026mb) unverified Mode C – about 1400ft aal - as it crosses the lateral boundary into the Biggin Hill ATZ. The PA28 continues in a wide R turn maintaining altitude and the C550 is first shown climbing on runway heading passing 800ft Mode C at 1622:31, as the PA28 exits the ATZ to the NE of the aerodrome. The PA28 turns easterly and at 1623:07, is 1.7nm ENE of the C550, which is co-

altitude climbing through 2000ft London QNH unverified Mode C having commenced its right turn. The C550 continues to turn inside the track of the PA28. At 1623:30, minimum horizontal separation of 1.2nm is reached, as the tracks of the subject ac start to diverge the C550, passing 2500ft London QNH, enters the Class A London TMA. The PA28 maintains 2000ft throughout within Class G airspace as it clears easterly, horizontal separation increasing after 1623:54.]

Rule 45 of The Rules of the Air Regulations 2007, requires certain conditions to be met for ac wishing to enter an ATZ. Of relevance to this Airprox:

‘An aircraft shall not fly, take off or land within the aerodrome traffic zone of an aerodrome unless the commander of the aircraft has complied with (certain) paragraphs’.

This includes:

‘If the aerodrome has an air traffic control unit the commander shall obtain the permission of the air traffic control unit to enable the flight to be conducted safely within the zone’. Additionally: ‘the commander of an aircraft flying within the aerodrome traffic zone of an aerodrome shall: (a) cause a continuous watch to be maintained on the appropriate radio frequency notified for communications at the aerodrome; or (b) if this is not possible, cause a watch to be kept for such instructions as may be issued by visual means; and (c) if the aircraft is fitted with means of communication by radio with the ground, communicate his position and height to the air traffic control unit, the flight information service unit or the air/ground communication service at the aerodrome (as the case may be) on entering the zone and immediately prior to leaving it’.

The MATS Part 1, Section 2, Chapter 1, Paragraph 2, states the responsibilities of Aerodrome Control:

‘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’.

The ADC did well to observe and establish the identity of an unknown ac entering the Biggin Hill ATZ [without permission]. In accordance with the responsibilities of Aerodrome Control, he issued instructions to the PA28, intended to resolve a conflict with the outbound C550 and passed the pilot of the latter information about the presence of the other traffic. There is no requirement to separate IFR/VFR traffic in Class G airspace.

## **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 and a report from the controller involved and the ATC authority.

The comprehensive ATSI report had confirmed the essential elements of this Airprox between the C550 Citation departing IFR and the PA28, whose pilot had inadvertently entered the Biggin Hill ATZ whilst in transit under VFR. It was evident to the Board that the mentor had recognised what was happening from observation of the ATM, astutely obtained RT contact with the PA28 pilot who was fortunately monitoring the Biggin Hill Tower frequency and having already realized his error, was already endeavouring to exit the ATZ to the N. The controller was then able to issue further avoiding action instructions by turning the PA28 to the E and thereby ensuring that any conflict between the PA28 and the C550's SDR was expeditiously resolved. This Airprox was, therefore, a good example of the intrinsic benefit of monitoring local frequencies when transiting close to an aerodrome, which subsequently enabled the PA28 pilot to receive a prompt warning about the outbound C550. Controller Members believed that the mentor showed sound appreciation of the developing situation, exercised good judgement and provided a helpful ATS to the C550 flight – an Aerodrome Control and Procedural Approach Service - not a FIS as the C550 pilot thought. Although ATC was not required to effect separation between these IFR and VFR flights, the mentor acted wisely by ensuring the

PA28 was turned out of the way promptly and by swiftly passing TI to both flights. It was plain that the PA28 pilot had inadvertently entered the Biggin Hill ATZ without permission, which Members agreed unanimously was the Cause of this Airprox.

Despite neither pilot being in visual contact with the other ac, the PA28 was displayed on the C550's TCAS, apparently as proximate traffic because the C550 pilot reports neither a TA nor an RA. The PA28 pilot's prompt compliance with the mentor's instructions ensured that the two ac were 1.7nm apart when the C550 climbed through the PA28's altitude and although horizontal separation reduced to a minimum of 1.2nm, by that point 500ft of vertical separation had already been achieved as a result of the C550's climb. Moreover, by following the SDR the C550 was always going to turn astern of the PA28 if the latter maintained an eastbound course, which convinced the Board that no Risk of a collision had existed.

**PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: The PA28 pilot inadvertently entered the Biggin Hill ATZ without permission.

Degree of Risk: C.