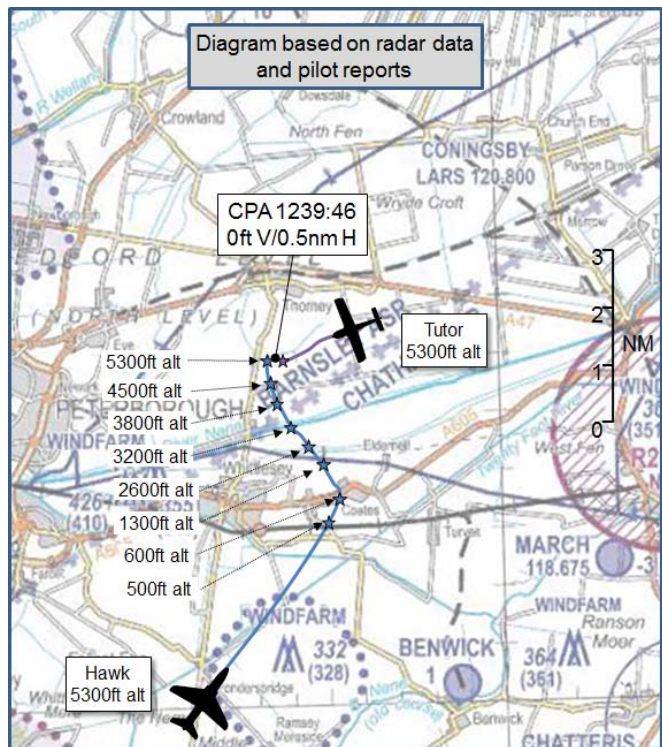


**AIRPROX REPORT No 2016065**

Date: 03 May 2016 Time: 1239Z Position: 5236N 00006W Location: SSW Fenland

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

| Recorded          | Aircraft 1         | Aircraft 2    |
|-------------------|--------------------|---------------|
| Aircraft          | Hawk               | Tutor         |
| Operator          | HQ Air (Trg)       | HQ Air (Trg)  |
| Airspace          | London FIR         | London FIR    |
| Class             | G                  | G             |
| Rules             | VFR                | VFR           |
| Service           | None               | Traffic       |
| Provider          | (Swanwick Mil)     | Wittering     |
| Altitude/FL       | 5300ft             | 5300ft        |
| Transponder       | C                  | C             |
| <b>Reported</b>   |                    |               |
| Colours           | Black              | White         |
| Lighting          | Nav, Landing, HISL | HISL          |
| Conditions        | VMC                | VMC           |
| Visibility        | >10km              | >10km         |
| Altitude/FL       | FL075              | 5000ft        |
| Altimeter         | RPS (1013hPa)      | QNH (1018hPa) |
| Heading           | 330°               | 270°          |
| Speed             | 300kt              | 110kt         |
| ACAS/TAS          | Not fitted         | TAS           |
| Alert             | N/A                | TA            |
| <b>Separation</b> |                    |               |
| Reported          | NK V/300m H        | 0m V/1km H    |
| Recorded          | 0ft V/0.5nm H      |               |



**THE HAWK PILOT** reports that he was climbing out of low-level. He was the pilot in the front seat with a QFI pilot in the rear seat. During the climb out of low-level he was in the process of obtaining radar contact from Swanwick Mil East. As part of that radar pick up he was asked to change his IFF code so that they could acquire him on radar. Whilst he was in the process of looking inside the cockpit to change his IFF, the pilot in the back seat informed him that he had just observed a light-aircraft close to their position. The aircraft was a single engine, low-wing light-aircraft. It was observed in the 3 o'clock position, initially coming towards their track but then turning left away in a southerly direction.

He assessed the risk of collision as 'Medium'.

**THE TUTOR PILOT** reports that he was informed 16 days after the incident that a Hawk pilot had filed an Airprox against an aircraft believed to be him. He recalls the incident as he was made aware of the Hawk by ATC, and maintained visual contact throughout, he did not consider it an Airprox at all and in his opinion it did not pass close enough to warrant altering his course. The weather conditions were good, although he cannot remember specific details such as wind speed and the transponder codes. ATC advised him of the contact, which he then saw on the TAS display, though the TAS did not alert. He gained visual contact immediately, and observed the Hawk crossing from left to right passing through his level as it went through his 12 o'clock position at a range of approximately 1km. He believed no avoiding action was necessary because it was clear that the Hawk would pass in front of him.

He assessed the risk of collision as 'Low'.

**THE WITTERING ZONE CONTROLLER** reports that he was monitoring a trainee controller during the period of this reported incident. Traffic intensities were generally moderate throughout the period with traffic loadings deliberately constrained to suit the experience of the Trainee. Though he has no clear recollection of this reported incident, all tracks were provided with accurate, timely and relevant Traffic Information; he and the trainee retained good situational awareness and operated with capacity to spare. Good weather prevailed throughout this period (CAVOK). All Air Traffic Services and Limitations were applied promptly in accordance with MMATM<sup>1</sup> and Unit FOB<sup>2</sup>. All details listed within Category of Occurrence have been ascertained post event by review of transcripts and reports.

He perceived the severity of the incident as 'Low'.

## Factual Background

The weather at Wittering was recorded as follows:

METAR EGXT 031150Z 26013KT CAVOK 12/03 Q1024 BLU

## Analysis and Investigation

### Military ATM

An Airprox occurred on 3 May 16 at 1340hrs on the SW edge of the Wittering MATZ. The incident took place between a Hawk aircraft that was pulling out of low level, and a Tutor conducting an air experience flight.

The two transmissions below, from the Wittering ATC Tape Transcript, are the only relevant transmissions regarding the incident.

| From      | To        | Speech Transcription   | Time    |
|-----------|-----------|--|---------|
| Wittering | Tutor     | {Tutor c/s}, traffic south 1 mile manoeuvring, no height information, believed to be climbing out of low level | 1239:37 |
| Tutor     | Wittering | Visual   | 1239:39 |

At 1239:26Z (Figure 1), the Hawk is 2.4nm to the south of the Tutor and transiting North, North West about to pull out of low level. The Tutor is transiting west.

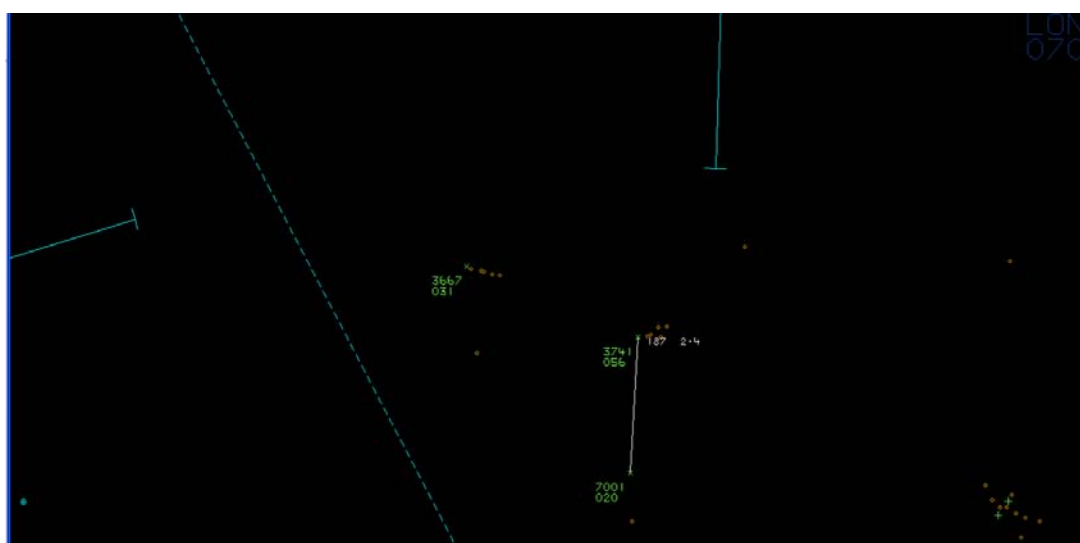


Figure 1: Geometry at 1239:26Z (Hawk squawking 7001: Tutor Squawking 3741)

<sup>1</sup> Manual of Military Air traffic Management

<sup>2</sup> Flying Order Book

At 1239:40Z (Figure 2), the Hawk is 0.7nm to the south west of the Tutor and transiting north-north-west climbing out of low-level. The Tutor is transiting west in level flight. At this time traffic information had been passed by Wittering ATC to the Tutor, and the pilot had reported visual.

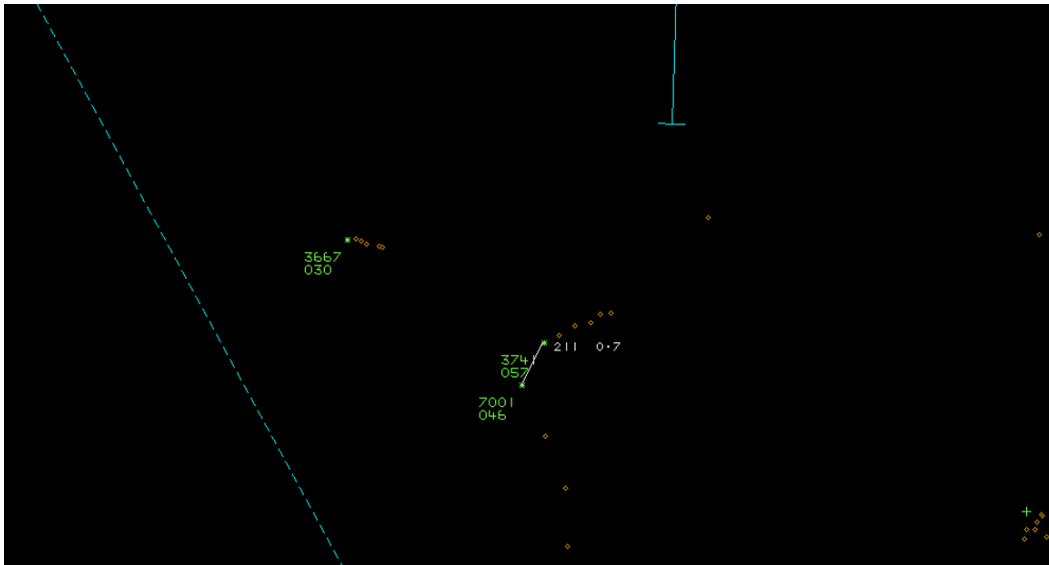


Figure 2: Geometry at 1239:40Z (Hawk Squawking 7001; Tutor Squawking 3741)

The Tutor pilot reported they were passed traffic information from ATC and were visual with the Hawk throughout the incident. The Tutor pilot felt the Hawk was not close enough (reported 1km approximately) to warrant altering course, and no avoiding action was necessary as they felt the Hawk would pass in front.

The Hawk pilot reported climbing out of low-level. During the climb-out they were in the process of obtaining a radar service from Swanwick Mil, whilst the front-seat pilot was changing the IFF, the rear-seat pilot observed the Tutor close to their position. The radar replays show that the Hawk IFF did not change until CPA had passed but this may be due to radar update rate. The pilot's report and radar replay indicate that the front-seat pilot was likely head in the cockpit changing the IFF as the aircraft closed on each other.

The Wittering ATC controller reported passing traffic information to the Tutor, this is confirmed by the Tutor pilot report and the tape transcript. The traffic information allowed the Tutor pilot to acquire the Hawk visually. CAP774 regulation state 'Traffic is normally considered to be relevant when, in the judgement of the controller, the conflicting aircraft's observed flight profile indicates that it will pass within 3nm and, where level information is available, 3,000ft of the aircraft in receipt of the Traffic Service or its level-band if manoeuvring within a level block'. In this instance, the Hawk was pulling up from low-level and would have taken time to show on the radar display. Upon identification, the controller had only a small amount of time to scan for a conflict and then pass traffic information, which was accurate and allowed for the pilot to visually acquire the Hawk.

The Hawk pilot pulled out of low-level on the edge of the Wittering MATZ; Wittering has a high level of Tutor activity, especially air experience flying, where routes stay close to the aerodrome. In this instance, an initial radar pick-up with Wittering may have allowed ATC to pass traffic information to the Hawk and facilitate a handover to Swanwick Mil.

### UKAB Secretariat

The Hawk and Tutor pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>3</sup>. If the incident geometry is considered as converging then the Hawk pilot was required to give way to the Tutor<sup>4</sup>.

<sup>3</sup> SERA.3205 Proximity.

<sup>4</sup> SERA.3210 Right-of-way (c)(2) Converging.

## Comments

### HQ Air Command

Both aircraft were operating in accordance with extant procedures and SOPs. An Airprox was not declared on frequency, which led to a delay in the controllers and the Tutor pilot being informed of the incident and potentially a loss of perishable evidence in the form of controller or pilot recall. All Group headquarters have been requested to remind their units of the need to announce an Airprox on frequency and also review their procedures with respect to reaching the decision to submit Airprox reports post-mission.

Investigations into the incident suggested that the Hawk pilot may have been better served in requesting a climb out service from Wittering, though this would not necessarily have guaranteed timely TI on the Tutor aircraft as it cannot be ascertained at which point the Hawk would have shown on the Wittering radar display. Furthermore, the Hawk pilot's intentions were to climb to FL190 for transit back to base, and a call to Wittering would have increased pilot workload as a second frequency and squawk change would have been necessary on handover to Swanwick(Mil). Having spoken to the Hawk pilot, his reasons for initiating the climb-out from low level in that particular location were based upon airspace structure above; his decision to contact Swanwick(Mil) directly was to effect a crossing of CAS on the transit to base. He acknowledges that an earlier call to Wittering, before climb-out, may have been more prudent and could have allowed swifter identification of his aircraft for the passing of TI.

It is unfortunate that this encounter occurred as the Hawk pilot was in the process of acquiring a radar service from ATC. However, timely TI provided to the Tutor pilot permitted early acquisition of the Hawk, both visually and with on-board sensors, leading to an assessment that an alteration of course was not necessary.

## Summary

An Airprox was reported when a Hawk and a Tutor flew into proximity at 1240 on Tuesday 3<sup>rd</sup> May 2016. Both pilots were operating under VFR in VMC, the Hawk pilot in the process of obtaining a Traffic Service from Swanwick Mil and the Tutor pilot in receipt of a Traffic Service from Wittering.

### **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RT frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The military member highlighted that the Hawk pilot had initially been in the process of obtaining a radar service from Swanwick Mil, and that this had resulted in his focus being in the cockpit as he changed frequency and set the Swanwick Mil allocated squawk. This led to a discussion as to the most appropriate way of pulling out of low-level in the vicinity of busy airfields, and whether it might have been prudent to have contacted Wittering well before pulling out so that the Hawk would be pre-notified and could have been allocated a squawk before the pilot pulled up. That being said, the Board also acknowledged the pilot's intention to cross controlled airspace, and that the Air Traffic requirements to facilitate such a crossing had resulted in his belief that the initial call to Swanwick Mil was the best course of action at the time. The military member further highlighted that the radar coverage in the area of the Airprox can be limited at low-level, and that Wittering ATC would very probably not have seen a radar contact until it had pulled up; however, he acknowledged that a radio call to Wittering would have enabled quicker identification of the Hawk as it climbed from low-level, thus resulting in a higher level of SA for the Hawk pilot through generic Traffic Information. His conversation with the Hawk pilot had acknowledged that, in hindsight, an initial call to Wittering ATC may have been the better option due to the traffic mix in the area, and that the Hawk pilot had stated that he would call Wittering in future similar situations.

The Board commended the Wittering Air Traffic Controller for quickly seeing the Hawk climbing out of low-level and his prompt passing of Traffic Information to the Tutor pilot; this had resulted in the Tutor pilot gaining early visual contact with the Hawk as it climbed, and had allowed the Tutor pilot to determine the best course of action whilst maintaining visual contact with the Hawk as it climbed.

The Board then turned to the cause and risk of the Airprox. They quickly determined that the Tutor pilot had full SA throughout the incident, but they thought that the Hawk pilots had probably been startled by the unexpected presence of the Tutor as they were engaged in climbing out of low-level and contacting Swanwick(Mil). Noting the recorded 0.5nm separation and the different perspective of the incident that had resulted from the Hawk pilots' lack of SA, members agreed that the incident was probably best described simply as the Hawk pilot being concerned by the proximity of the Tutor. Turning to the risk of collision, the Board agreed that the Tutor pilot was visual with the Hawk throughout the incident and that no risk of collision had existed; they therefore assessed the risk as Category C.

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

Cause: The Hawk pilot was concerned by the proximity of the Tutor.

Degree of Risk: C.