

## **AIRPROX REPORT No 2011118**

Date/Time: 31 Aug 2011 1641Z

Position: 5242N 00114E  
(3nm NW Norwich)

Airspace: Lon FIR (Class: G)

Reporting Ac Reported Ac

Type: AW139 Tiger Moth

Operator: CAT Civ Pte

Alt/FL: 1600ft 1500ft  
QNH (1016mb) QNH

Weather: VMC CLBC VMC CAVOK

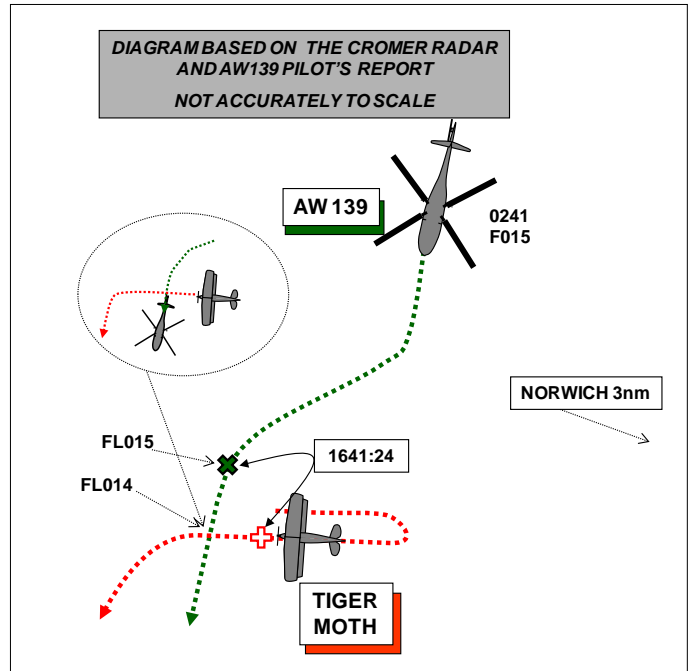
Visibility: 9999 10km

Reported Separation:

200ft V/500m H 800ft V/NR H

Recorded Separation:

NR (See UKAB Note (2))



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

**THE AW139 PILOT** reports flying a red TCAS 1 equipped helicopter inbound to Norwich with all external lights on and squawking with Modes C and S. They had flown their cleared route direct from Excalibur platform (track 190°) and were in receipt of a TS from Norwich APR who cleared them to join left base for a visual approach to RW09. As they were approaching Aylsham [7nm N of Norwich] Radar informed them that there were two contacts roughly in the Felthorpe area [a light ac strip 3nm NW of Norwich i.e. in their 1 o'clock at 5nm].

East abeam Aylsham, they made visual contact with one of the ac in their 1230 position and informed Radar who replied that this was one of the contacts and that the second ac was now no longer a factor. Neither ac had appeared on their TCAS system. With the traffic in sight, Radar asked them to contact TWR. At the same time as being asked to change frequency, the crew agreed that the contact was a bi-plane on a converging course from R to L at a similar level, so they initially took avoiding action turning R to pass behind it.

While taking avoiding action, the bi-plane then turned hard to its R (using about 60° AOB), back through 180-200° which meant it was turning back on itself and towards them. Since they were not sure that its pilot had seen them the PF (P1) took further avoiding action by initiating an immediate descent, as the bi-plane, by then clearly distinguishable as being blue with silver wings, passed down their LH side about 200ft above.

The P2 then contacted TWR and informed them that they had just come close to some traffic whilst trying to join for left base RW09. They asked TWR if the bi-plane was communicating with ATC, to which they answered that he was not. The flight continued and they landed back at base where he reported the incident assessing the risk as being high.

On the ground they informed Norwich ATC that an Airprox was being filed; ATC acknowledged and informed them that the bi-plane was based at Felthorpe Airfield.

**THE TIGER MOTH PILOT** reports flying a blue ac with no radio or SSR fitted on a private local flight from Felthorpe. At the time he was 3nm N of Felthorpe but he only saw the helicopter after it had

passed under him about 1000ft below. He took no avoidance as the ac had passed below him and assessed that there was no risk, but reported the incident to the QFI on landing.

**THE FELTHORPE FLYING GROUP** representative reports that he understands that the AW139 pilot helicopter reported an Airprox with a blue and silver Tiger Moth near Felthorpe airfield. He spoke to the Tiger Moth pilot who stated that he saw the helicopter clearly before it passed an estimated 500 to 700ft below him; his passenger had also seen it. The Tiger Moth was at 1500ft at a position near the disused airfield at Oulton, 3nm WNW Aylsham, 6nm N of Felthorpe, in the open FIR.

He further understands from Norwich ATC that that the helicopter pilot was informed about the Tiger Moth, reported seeing it and only later decided to file an Airprox. In the open FIR the rule of 'see and avoid' pertains and if the helicopter pilot saw the Tiger Moth and was concerned about its proximity, he should have taken avoiding action – the Tiger Moth pilot saw no need for any such action.

**THE NORWICH APR CONTROLLER** reports that the AW139 helicopter was inbound from Southern North Sea gas rigs. On crossing the coast at Cromer he called traffic operating around Northrepps Airfield. Further traffic was then called near Felthorpe, two primary contacts height and type unknown. After about a further 3nm the AW139 helicopter reported that one of the contacts was in sight and since the other contact was no longer a factor he transferred the helicopter to TWR.

The pilot subsequently advised that he would be filing an Airprox.

UKAB Note (1): The Norwich METAR was:

METAR: EGSB 311620Z 05006KT 9999 BKN045 15/07 Q1016=

**ATSI** reports that the Airprox occurred at 1640:59, 5.6nm N of Norwich Airport in Class G airspace.

The AW139 was inbound to Norwich IFR from the N, having departed the Exalibur Oil Platform and was in receipt of a TS from Norwich Radar.

The Tiger Moth was operating VFR on a local detail from Felthorpe airfield, situated 3nm NW of Norwich Airport. The Tiger Moth was non-radio and not in receipt of an Air Traffic Service. Felthorpe airfield is an unlicensed airfield with two grass runways 16/34 and 05/23.

CAA ATSI had access to RTF and area radar recordings, together with the written reports from the controller and both pilots. Norwich does not currently record their radar, but intend to introduce a recording system in the near future.

At 1633:39, the AW139 helicopter was identified by Norwich Radar at 1600ft on QNH 1016 and a TS was agreed; at the time radar recordings show the AW139 to be 23.3nm N of Norwich airport.

The AW139 pilot requested a visual join for RW09 so the controller instructed the AW139 to join left base for RW09 and to report field in sight. The pilot was advised to keep a good lookout when crossing the coast in the Cromer Northrepps area, due to traffic observed in the vicinity of the Northrepps airfield; the pilot acknowledged the joining instructions and reported good VMC, 'keeping a good lookout for Cromer'.

At 1638:58, the pilot reported field in sight and the controller instructed him to continue for the visual left base join; radar recordings show the positioned 10.3nm N of the airfield. The controller passed TI on two contacts, one overhead Felthorpe airfield and another contact 2nm N of Felthorpe airfield, the helicopter pilot acknowledged the instructions to join left base and reported looking for the traffic. Radar recordings did not show the other traffic.

At 1640:15, the AW139 pilot reported visual with one of the ac in his half past 12 position, the controller responded confirming this to be one of the previously mentioned contacts and added that

the second contact was heading to the W of Felthorpe and was no longer a factor. The AW139 was then transferred to the TWR.

The AW139 pilot's report indicated that shortly after being asked to change frequency, the crew identified the other ac as a bi-plane on a converging course and they took avoiding action. At 1640:59 the AW139 is observed commencing a R turn, altering course from 180 to 248° and indicating FL015 (converts to an alt of 1581ft, QNH 1016 with 1mb equal to 27ft). This is considered to be the position of the Airprox.

At 1641:27, radar recordings show the AW139, 5nm NW of Norwich airport turning L towards the airfield indicating FL015.

At 1642:02, radar recording, shows the AW139, 3.7nm NW of the airfield indicating FL012. Another contact then appears in its 5 o'clock at a range of 1.1nm. The two ac are on diverging tracks and it is thought likely that the second contact is the Tiger Moth.

The Airprox occurred in Class G airspace, when the AW139 was in receipt of a TS, and the Tiger Moth being non-radio and not in receipt of an ATS, came into close proximity. CAP774, UK Flight Information Services, Chapter 3, Page 1, Paragraph 1 and 5, states:

'A Traffic Service is a surveillance based ATS, where in addition to the provisions of a Basic Service, the controller provides specific surveillance derived traffic information to assist the pilot in avoiding other traffic. Controllers may provide headings and/or levels for the purposes of positioning and/or sequencing; however, the controller is not required to achieve deconfliction minima, and the avoidance of other traffic is ultimately the pilot's responsibility.

The controller shall pass traffic information on relevant traffic, and shall update the traffic information if it continues to constitute a definite hazard, or if requested by the pilot. However, high controller workload and RTF loading may reduce the ability of the controller to pass traffic information, and the timeliness of such information.'

The Radar controller passed TI to the AW139 pilot, which aided the pilot's situational awareness and probably assisted him in acquiring the Tiger Moth visually and taking appropriate avoiding action.

UKAB Note (2): The recording of the Cromer radar shows the incident. The AW139, squawking 0241 with Mode C indicating FL015 approaches the CPA from the N (tracking 190°) and commences initially a right turn at 1640:44 onto 230°. At 1641:16 it reverses to the L to pass closely behind a primary-only contact that pops up in its 11 o'clock at a distance of less than ½nm and initially tracks W before disappearing for 2 sweeps. At the 1641:46 just after the ac had crossed the primary takes up a heading of 195°. Since the primary had disappeared at the CPA the lateral separation could not be measured accurately but is estimated as being 0.2nm; the AW139 was at FL014 at the CPA but the vertical separation could not be determined.

## **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 recordings, reports from the air traffic controller involved and reports from the appropriate ATC and operating authorities.

This incident took place in Class G airspace where 'see and avoid' is the principal method of collision avoidance. Members noted that as a result of accurate and timely TI by Norwich APR, the AW139 crew had the Tiger Moth in sight throughout the evolution and having it, at least initially, on their right were obliged to give way to it under the RoA (Rule 9 (3)) and manoeuvred their ac in good time to do so. Members also agreed that the Tiger Moth pilot had most likely not seen the helicopter as he headed E since; had he done so, he would not have initiated the tight turn back towards it. This turn, Members suggested, had surprised the helicopter crew but, although the Tiger Moth was by then on

their left (and should have given way), its pilot had not seen them but the helicopter pilot had sufficient time to descend and increase the vertical separation as the other ac passed behind them.

Although Members considered that the Tiger Moth pilot had probably not seen the helicopter until after it passed, they agreed that, since the AW139 crew had seen the former throughout and had taken avoiding action twice, there had been no risk of collision.

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

Cause: A conflict in Class G airspace resolved by the AW139 crew.

Degree of Risk: C.