

Figure 1: A109 squawking 7030; Apache squawking 7044

At 1425:53 (Figure 2), the A109 pilot enquired with Tower about the Apache in his 3 o'clock (range 2.2nm on radar replay). At approximately 1425:57, Approach called Traffic Information to the Apache pilot, "[Apache C/S] traffic left 10 o'clock two miles converging, heading slightly above, inbound to Northolt."

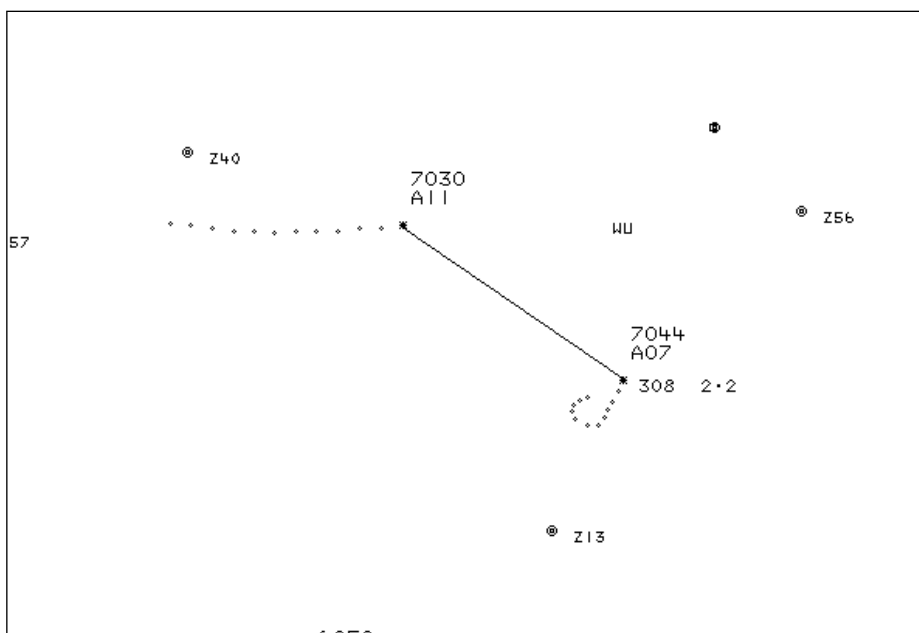


Figure 2: A109 visual with the Apache at 2.2nm at 1425:53

The A109 pilot requested further Traffic Information on the Apache at 1426:02 (Figure 3).

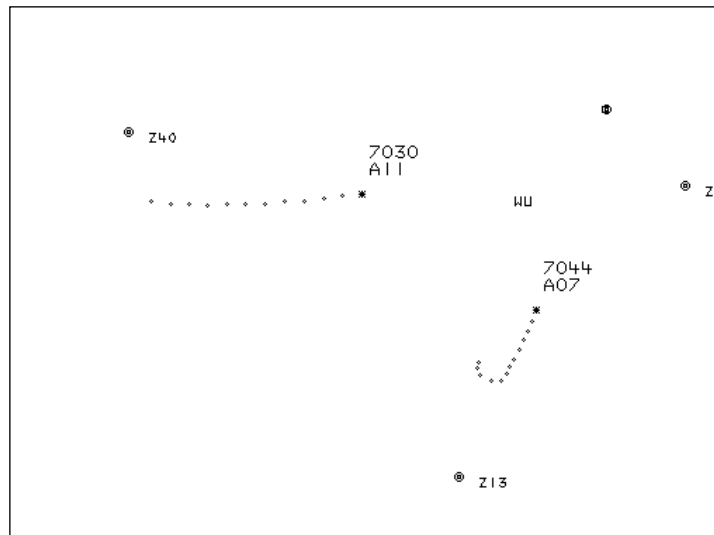


Figure 3: A109 requested a further update at 1426:02

At 1426:39 (Figure 4), the A109 pilot again mentioned concern about the Apache.

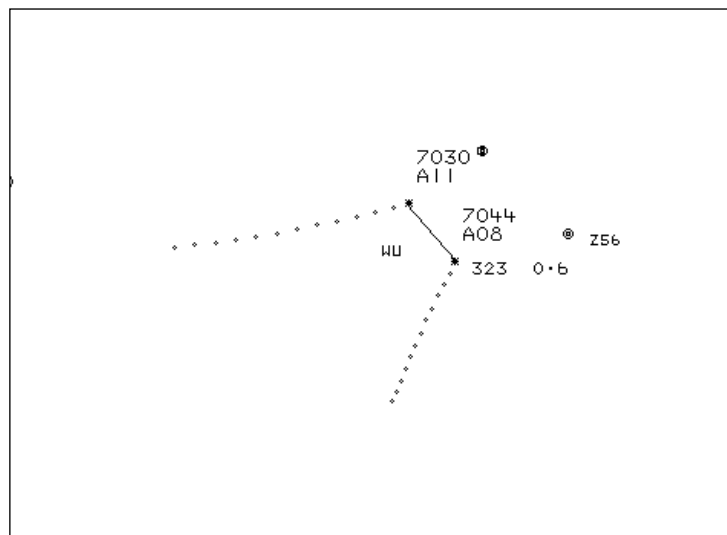


Figure 4: Aircraft geometry at 1426:39

The CPA is estimated at 1426:55 (Figure 5) at 0.2nm horizontally and co-height.

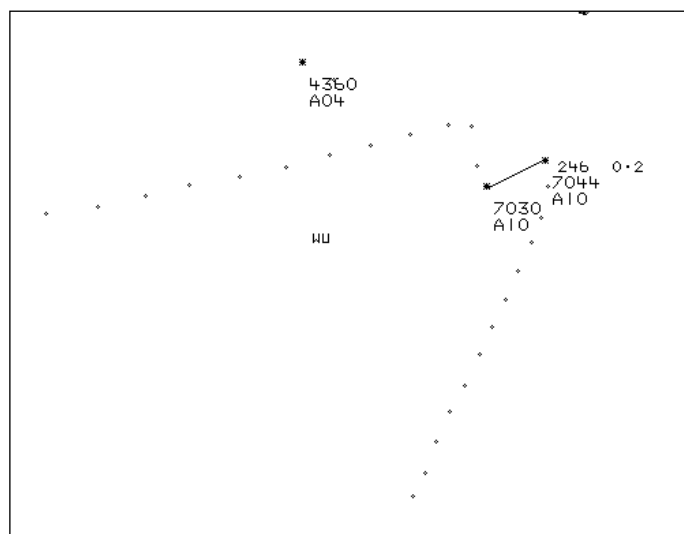


Figure 5: CPA at 1426:55

The Tower controller was experiencing a busy spell and the ATCO I/C plugged into the Ground position to assist. Tower had prioritised the airways departure and the Merlin VFR departure, prior to dealing with the A109 inbound. Having called Traffic Information on known traffic to the departures, the A109 pilot's query on the unknown Apache caused confusion in Northolt Tower. Approach was on the landline to pass the required information, however, the busy frequency and incomplete mental picture, resulted in the Tower controller reaching capacity; Approach was unable to pass information on the Apache. Approach had also been busy, resulting in a later than desired call to Tower. Traffic Information had been called to the Apache pilot and Approach believed that there was time to hand over the aircraft. An earlier prenote of the Apache would have allowed Tower to provide Traffic Information and produce a more robust sequence plan, however, the Apache pilot had called when 3nm south of Northolt, 1min prior to Traffic Information and 2min prior to CPA. To add more contexts, busy frequencies, a number of competing conflicts and a lengthy landline conversation, exacerbated the situation and added to the workload. The A109 was delayed inbound due to departures and workload demands and a late call by the Apache to Approach, meant delayed ATC liaison. As a result of these factors, both pilots were held in the Gutteridge area. The A109 pilot had repeatedly reported visual with the Apache and the Apache pilot was given Traffic Information on the A109 at 2nm.

The crews involved were operating under VFR in the Class D London CTR and responsible for their own collision avoidance. Both crews were aware of their lookout responsibilities and the occurrence reports stated visual contact at ranges of 2km for the Apache pilot and 1½nm for the A109 pilot. The Apache pilot was holding whilst attempting to gain situational awareness on other traffic. The A109 pilot felt 'pinned in' by the situation and, despite gaining visual contact, information on the Apache may have provided more assurance and afforded the pilot a clearer path for deconfliction.

The normal barriers to an Airprox would be ATC procedures and information, ACAS/TAS alerting and lookout. In this instance, lookout was effective and the crews were visual at range; TCAS was not required, although it was not fitted to the Apache. The crews continued in a closing geometry until the Apache passed behind the A109 in the Gutteridge Hold; both pilots were informed to hold at Gutteridge. The A109 pilot, despite being visual, was concerned with the closing geometry with the Apache and the fact that the track was unknown to Tower. Better liaison within ATC would have produced a deconfliction plan and more assurance to both crews. The controllers had high workloads and the Apache sighting by the A109 pilot had caused confusion in Tower; the situation was compounded by a protracted landline call that stretched capacities further.

A unit investigation found that the Apache routing required a change of frequency from Heathrow to Northolt Approach to Northolt Tower, possibly within 1-2nm. This procedure did not give controllers time to pass information and handover tracks, especially when they were busy or if they became distracted. The procedure has now been changed, such that traffic is passed directly from Heathrow to Northolt Tower.

### **UKAB Secretariat**

The A109 and Apache pilots shared an equal responsibility for collision avoidance and not to fly into such proximity as to create a danger of collision<sup>3</sup>. If the incident geometry is considered as converging then the A109 pilot was required to give way to the Apache<sup>4</sup>, unless ATC authorised otherwise.

<sup>3</sup> Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).

<sup>4</sup> *ibid.*, Rule 9 (Converging).

## Comments

### HQ Air Command

All VFR/SVFR helicopter flying in the London CTZ is subject to ATC clearance. In addition, pilots are required to fly the precise routes as depicted on the map entitled Helicopter Routes in the London Control Zone; 'Corner cutting' is to be avoided. In order to obtain sufficient lateral separation from opposite direction traffic, pilots may temporarily deviate to the right of the route. These procedures, in conjunction with ATC information and clearances, are often sufficient to avoid conflict in the high density traffic area within the London CTZ. However, the process may create circumstances where aircraft are funnelled into relatively close proximity.

Notwithstanding this, a high level of situational awareness is required by operators and Air Traffic personnel alike in order to sequence traffic and maintain safe separation. In this situation, the expected level of Traffic Information was not provided to the A109 pilot, resulting in concern due to his lack of appreciation of the Apache pilot's intentions. However, good lookout and sound decision making resulted in the successful resolution of the conflict, with a low risk of collision assessed by both crews.

It is worthy of note that the effectiveness of the TAS barrier may be called into question in this instance, as the A109 pilot reported that he was unsure if an alert occurred due to concentration on radio traffic and visual avoidance.

### JHC

The situation was allowed to develop due to a procedure that placed a high workload on both controllers and aircrew. There was a requirement for swift frequency changes without the benefit of sufficient time to allow controllers to make and receive liaison calls if they were working close to capacity. It is noted that the procedure for Heathrow to Northolt Tower transit has been changed following a Unit Investigation.

## Summary

An Airprox was reported when an Agusta A109 and an AH64 Apache flew into proximity at 1427 on Wednesday 22<sup>nd</sup> October 2014. Both pilots were operating under VFR in VMC, the A109 pilot in contact with Northolt Tower and the Apache pilot in receipt of a Radar Control Service from Northolt Approach.

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

Information available included 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 Board focussed first on the air traffic control aspects of the Airprox. Members were surprised that the Approach controller had cleared both helicopter pilots to route towards the same reporting point without passing Traffic information to both pilots prior to handing them over to the Tower controller. However, the Board noted that the procedure extant at the time of the occurrence required Heathrow to hand traffic over to Northolt Approach, who would in turn hand the traffic over to Northolt Tower. They agreed that this lengthy procedure meant that there was urgency for Northolt Approach to pre-note Tower, and little time was left for Traffic Information to be passed. The Board recognised that the Approach controller's plan had been to pass the pre-note on the Apache to Tower so that Traffic Information could be passed to the A109 pilot (who was already on the Tower frequency) but that, unfortunately, the Tower controller had become overloaded and could not assimilate the information that Approach was trying to pass on. As a result, the Board agreed that ATC had lost the ability to enhance the pilots' situational awareness. Members agreed that both the Approach controller's decision to clear both pilots to the same point, and the lack of co-ordination between the

controllers, had been contributory factors; however, they were heartened to hear that the procedure had already been changed so that pilots are now handed directly from Heathrow to Northolt Tower, thereby reducing the work-load on pilots and controllers. Some members noted that the A109 pilot had requested, and had been cleared to route directly from Iver to Gutteridge missing out Uxbridge Common, and there was some discussion regarding the appropriateness of deviating from the published Helicopter Routes, however it was agreed that this had not directly contributed to this Airprox.

Regardless of the undoubted ATC confusion and uncertainty, the Board noted that both pilots were flying on VFR clearances and were ultimately required, regardless of any Traffic Information received or not, to see-and-avoid other aircraft in accordance with their responsibilities under the Rules of the Air. They noted that the A109 pilot had seen the Apache early, and had been concerned about its proximity, which was understandable considering he was having difficulty establishing the Apache pilot's intentions. The Board agreed that this was the root cause of the Airprox. Nevertheless, given that they saw each other's aircraft at range, and took timely and effective action to prevent collision, the Board agreed that the degree of risk for this incident was Category C.

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

<u>Cause:</u>	The A109 pilot was concerned by the proximity of the Apache.
<u>Contributory Factor(s):</u>	<ol style="list-style-type: none"> <li>1. The Northolt Approach and Tower controllers cleared both helicopter pilots to the same reporting point.</li> <li>2. A lack of timely coordination between the Northolt Approach and Tower controllers, caused by Tower controller overload.</li> </ol>
<u>Degree of Risk:</u>	C.
<u>ERC Score<sup>5</sup>:</u>	2.

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<sup>5</sup> Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.