

## AIRPROX REPORT No 2014102

Date/Time: 3 Jul 2014 1715Z

Position: 5131N 00004W  
(Royal London Hospital)

Airspace: London/City CTR (Class: D)

Aircraft 1                      Aircraft 2

Type: EC135                      AS355

Operator: HEMS                      Civ Comm

Alt/FL: 1000ft                      1000ft  
QNH (1015hPa)                      QNH (NK hPa)

Conditions: VMC                      VMC

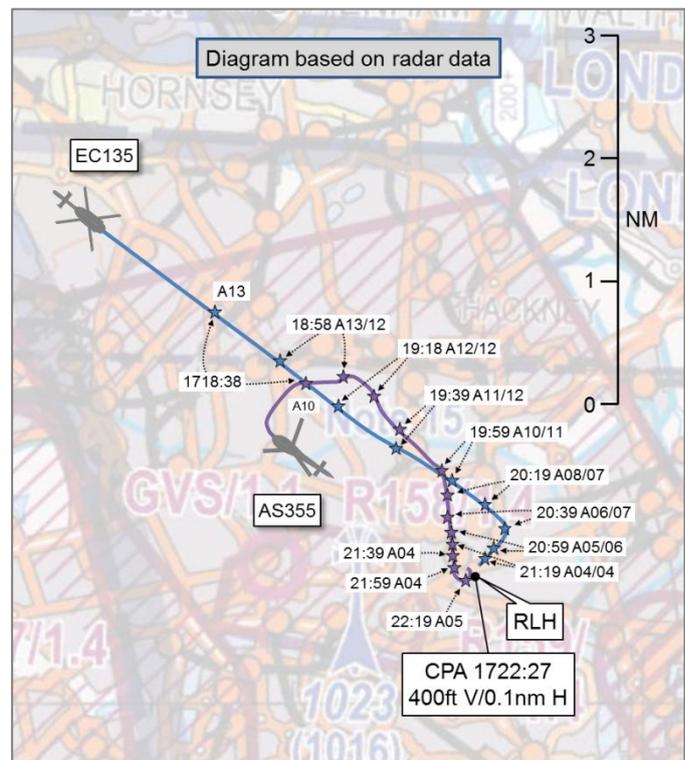
Visibility: 10km                      >20nm

Reported Separation:

0ft V/0m H                      NK

Recorded Separation:

400ft V/0.1nm H



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

**THE EC135 HEMS PILOT** reports on route to the Royal London Hospital (RLH) on a Category A flight. The yellow helicopter's lighting state was not reported. The SSR transponder was selected on with Modes A and C, and the aircraft was fitted with a TAS. The pilot was operating under VFR in VMC, in receipt of a Radar Control Service initially from London Heathrow (LHR) TWR and then London/City TWR. At approximately 5 miles from the RLH he was informed by LHR TWR of a Twin Squirrel that was in his 12 o'clock at a range of 5 miles (in the vicinity of the RLH). LHR TWR then 'counted him down' as he approached RLH and the other aircraft. At about 2 miles, he was passed to London/City TWR for the final approach. At about this time he became visual with the other aircraft, a maroon 'Twin Squirrel' helicopter. His routing to the RLH was on a southeasterly track; on reaching the RLH he put the aircraft into a right turn to make the approach into wind, which was approximately 240°. During final track and approach to land, the other aircraft closed to within what he estimated to be 200m. The other aircraft then maintained this close formation position throughout the approach, initially on the left side and then, during the final stages of the approach, on the right side in the 2 to 3 o'clock. The pilot stated that this formation flying was too close, uncoordinated and unpredictable.

He assessed the risk of collision as 'Medium'.

**THE AS355 PILOT** reports being tasked with aerial filming. The dark blue and silver aircraft had HISLs selected on, as was the SSR transponder with Modes A, C and S. The aircraft was not fitted with an ACAS or TAS. The pilot was operating under VFR in VMC, in receipt of a Basic Service from London Radar, he reported. The camera helicopter was positioned in the vicinity of Finsbury Park and both pilots 'were made known to each other'. The AS355 tracked the EC135 from a distance with its camera as it flew south, with a turn to the east, routing to the RLH. The EC135 passed north of the City and south of the camera helicopter, positioning downwind for the RLH. The EC135 pilot made a right turn onto the final approach for the helipad from the north east. The camera helicopter tracked slowly eastwards but remained at approximately 1000ft and clear to the north west of the RLH. The EC135 approach was filmed to its eventual landing on the rooftop helipad, at which point the camera zoomed out to reveal the RLH and Canary Wharf in the background. From this reveal it was easy to determine that the camera helicopter was at least 1000ft away from the hospital and clear of the EC135 at all times.

He assessed the risk of collision as 'None'.

**THE LONDON/CITY RADAR CONTROLLER** reports that it had been drawn to his attention that the EC135 pilot had filed an Airprox report. To the best of the controller's recollection, the EC135 pilot was handed to him inbound to the RLH from the northwest. At the time, the controller was working two other helicopters in a similar area. Traffic Information was passed to all parties and both pilots concerned in this matter reported visual with each other.

## Factual Background

The weather at London/City Airport was recorded as follows:

METAR EGLC 031720Z 21013KT 180V240 CAVOK 25/10 Q1016=

## Analysis and Investigation

### CAA ATSI

The EC135 pilot was operating a VFR flight inbound to the RLH and was in receipt of an Aerodrome Control Service from London/City TWR. The AS355 pilot was operating as an Enhanced Non Standard Flight within the London CTR (SVFR) and London/City CTR (VFR) for the purpose of 'news gathering and aerial filming/photography'. The AS355 pilot was in receipt of an Aerodrome Control Service from London/City TWR. The controller's workload and RTF loading was assessed as high.

ATSI had access to Heathrow SVFR and London/City RTF, area radar recording, together with the written reports from both pilots, the London/City controller and ATSU investigation report. The Airprox was not reported on the RTF or subsequently to the ATSU.

The AS355 pilot was initially operating within the London Zone and in receipt of a Radar Control Service from Heathrow Radar (SVFR). At 1710:55, the AS355 pilot requested permission to operate to the east of the city and was transferred to London/City TWR. The AS355 pilot contacted London/City TWR and was instructed to report if he intended to proceed any further east. Meanwhile, at 1711:58, the EC135 (CAT A flight) contacted Heathrow Radar (SVFR), reported 5nm northwest of Elstree at 1300ft on QNH 1017hPA, and requested permission to transit the London Zone to the RLH. The EC135 pilot was cleared to route direct through the London Zone at not above 1400ft VFR, and the Radar controller provided traffic information to the EC135 pilot regarding the AS355 operating 1.5nm west of the RLH at 1100ft.

At 1715:10, the City TWR advised the AS355 pilot about the EC135 entering the CTR from the northwest inbound to the RLH. At 1717:22, the Heathrow Radar controller updated the EC135 pilot on the AS355 "[EC135 C/S] *the twin squirrel is just right of your twelve o'clock four miles one thousand feet tracking north at the moment but has been orbiting*" and the EC135 pilot replied "*Looking not visual*". At 1717:40, the City TWR provided traffic information to the AS355 pilot about another helicopter, not involved in the incident, and then the following RTF exchange occurred:

AS355	"...have you got the position on the [EC135 C/S] aircraft from Elstree"
ATC	"er [AS355 C/S] I was about to call you he's currently three miles northwest of you due northwest showing thir-indicating one thousand three hundred feet"
AS355	"Okay that's understood it's just that we'd like to try and get a few shots of him on the way down to erm the Royal London if [1718:00] possible so we'll er we'll keep clear and give way to him but we'd like to track him down if we can do"
ATC	"[AS355 C/S] understood he looks like he's heading straight at you now range of two miles"
AS355	"[AS355 C/S] yeah we're visual we're good and er we're trying to get silhouette shots I'll remain clear to the northeast if ????? can do".

At the same time (1717:50) the Heathrow controller was providing an update to the EC135 pilot, "[EC135 C/S] *traffic is just to the right of your twelve o'clock still range now 3 miles one thousand*

feet tracking northeast". The EC135 pilot responded "Roger still not visual" and then "Heathrow we believe we might be visual with that traffic now". The Radar controller gave a further update on the position of the traffic before the EC135 pilot confirmed he was passing behind the AS355 and was transferred to London/City Tower.

At 1718:58, the EC135 pilot contacted London/City TWR and reported visual with the AS355 on his left-hand side. The controller instructed the EC135 pilot to report letting down at his landing site and provided a wind check which was acknowledged by the EC135 pilot, see Figure 1.

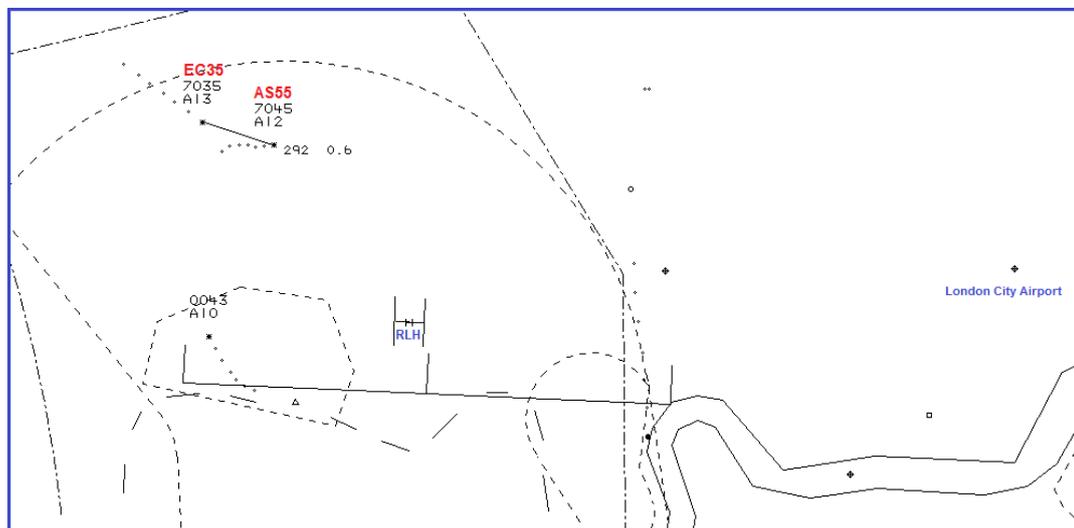


Figure 1: Swanwick MRT at 1718:58

At 1719:14, the EC135 passed 0.4nm southwest of the AS355, which had turned onto a southeasterly track with both aircraft indicating an altitude of 1200ft. The tracks of the two aircraft converged and, at 1720:04, radar showed the AS355 was 0.2nm behind the EC135 and 100ft above as the tracks of the aircraft crossed, see Figure 2.

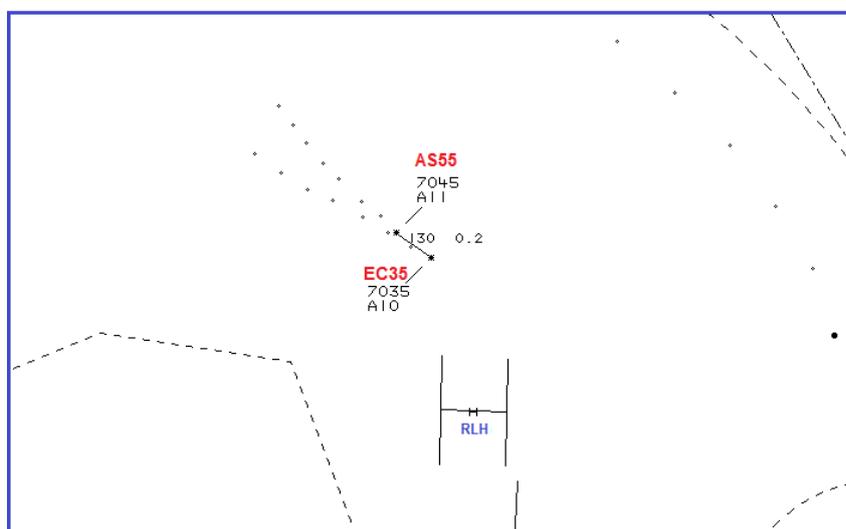


Figure 2: Swanwick MRT at 1720:04

The EC135 routed to the east of the RLH and the AS355 to the west. At 1720:51, the EC135 pilot reported on short final for the RLH and a further wind check was provided (210/13kt). The horizontal distance between the two aircraft was 0.5nm, see Figure 3.

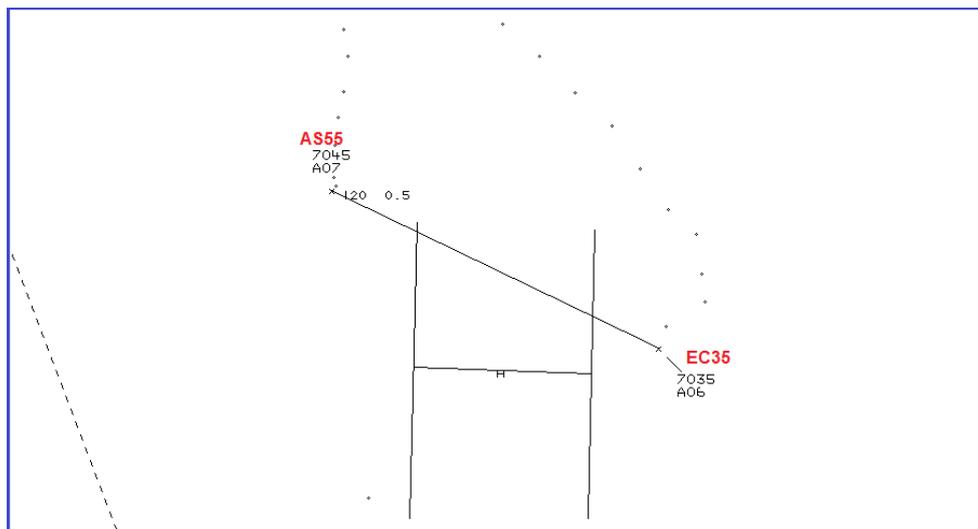


Figure 3: Swanwick MRT at 1720:51

At 1721:14, the AS355 was 0.3nm northwest of the EC135 and 100ft above, see Figure 4.

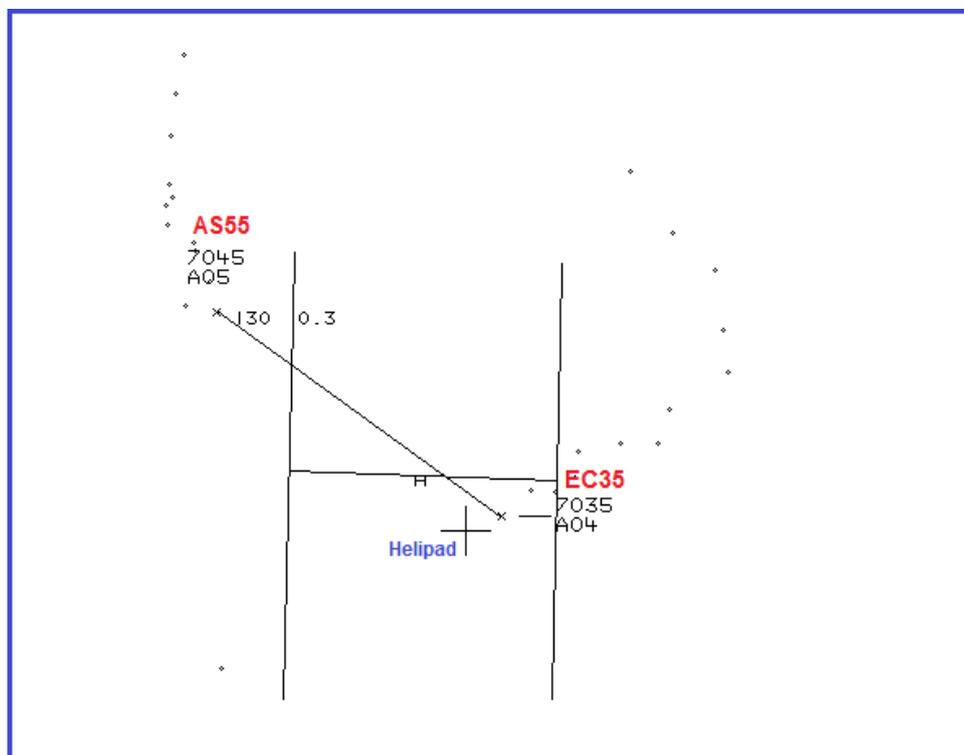


Figure 4: Swanwick MRT at 1721:14

The radar return from the EC135 suffered from radar jitter as it approached the helipad before then fading from radar. The AS355 pilot continued south before commencing a left hand orbit and passing 0.1nm southwest of the helipad at 1722:36, see Figure 5.

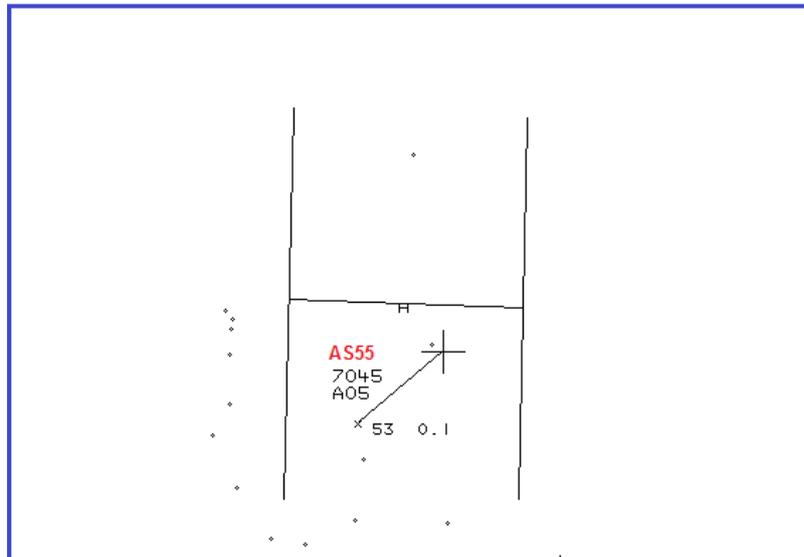


Figure 5: Swanwick MRT at 1722:36

Within Class D airspace, separation standards are not prescribed for application by ATC between VFR flights. However, ATC has a responsibility to prevent collisions between known flights and to maintain a safe, orderly and expeditious flow of traffic. This objective is met by passing sufficient traffic information and instructions to assist pilots to 'see and avoid' each other<sup>1</sup>.

The City TWR was aware that each pilot was operating under VFR and had the other in sight. The TWR workload and RTF loading was high and the controller was likely assured when the AS355 pilot confirmed that he would remain clear of the EC135. However the EC135 pilot was not on frequency at the time of the transmission and remained unaware of the AS355 pilot's intentions to fly alongside in proximity. The EC135 pilot was likely occupied flying a priority approach and the AS355 pilot had not obtained the EC135 pilot's agreement to fly in proximity, nor had the City TWR made the EC135 pilot aware of the AS355 pilot's intentions.

Both pilots were operating under VFR and with each other in sight and were responsible for their own collision avoidance. The AS355 pilot had indicated his intention to keep clear of the EC135 whilst filming/photographing.

### UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance and not to fly into such proximity as to create a danger of collision<sup>2</sup>. Aircraft are not permitted to be flown in formation unless the commanders of the aircraft have agreed to do so<sup>2</sup>. There is no definition of 'formation' in the Air Navigation Order or Rules of the Air although Air Traffic regulations do stipulate maximum separation between formation elements when inside CAS. ICAO Annex 2 states:

'Formation flight is defined as more than one aircraft operating as a single aircraft with regard to navigation and position reporting.'

### Summary

An Airprox was reported when an EC135 and an AS355 flew into proximity at 1815 on Thursday 3<sup>rd</sup> July 2014. Both pilots were operating under VFR in VMC, within the Class D London/City CTR, in receipt of an Aerodrome Control Service from London/City Tower.

<sup>1</sup> MATS (Part1), Section1, Chapter 5, paragraph 5.3

<sup>2</sup> Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).

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

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

The Board first considered the pilots' actions. The EC135 pilot was inbound to the RLH with a patient on board; a Cat A flight. Whilst on the London Heathrow SVFR frequency, he was passed Traffic Information on the AS355 but was not made aware that the AS355 pilot wished to conduct filming. For his part, the AS355 pilot, operating on the London/City TWR frequency, was passed Traffic Information on the EC135 and requested of them to film the EC135, stating that he would keep well clear, which the London/City TWR acknowledged (this RT exchange occurred about 1min before the EC135 pilot transferred to the London/City TWR frequency). Both pilots established visual contact with one another, and the AS355 pilot closed on the EC135 in order to obtain the film shots. The Board opined that, even though the AS355 pilot might have assumed that the EC135 pilot was aware of his intentions, good airmanship and courtesy would suggest that a confirmatory radio call to the EC135 pilot would have been in order before closing towards him. In doing so without such a call, the Board agreed that he manoeuvred close enough to the EC135 to cause its pilot concern, that this was the cause of the Airprox, and that the lack of communication to the EC135 pilot was a contributory factor.

Some members felt that the EC135 pilot could also have requested the AS355 pilot's intentions once he saw him flying around his aircraft, or requested that he remain clear by a greater margin; this would have clarified what was happening. That being said, all members agreed that he was rightly concentrating on his arrival at the RLH, and that it was for the AS355 pilot to ensure he did not interfere with the Cat A flight. Although it was acknowledged that the EC135 pilot was clearly concerned, the Board recognised that the AS355 pilot had remained visual throughout, and was conducting what he considered as 'normal' aerial filming with no risk of collision. However, notwithstanding the actual outcome, members emphasised the danger of conducting uncoordinated aerial filming in close proximity to a Cat A flight wherein there was a risk that the HEMS pilot could be sufficiently distracted that an overshoot had to be performed with potential consequential harm to the patient through delay in delivery of critical support facilities.

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

**Cause:** The AS355 pilot flew close enough to the EC135 to cause its pilot concern.

**Contributory Factor(s):** The AS355 pilot's intentions were not communicated to the EC135 pilot.

**Degree of Risk:** C.

**ERC Score<sup>3</sup>:** 10.

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<sup>3</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.