

## AIRPROX REPORT No 2011153

Date/Time: 29 Oct 2011 1504Z (Saturday)

Position: 5130N 00006W  
(Central London)

Airspace: Lon City CTR (Class: D)

Reporting Ac Reported Ac

Type: EC145 Gazelle

Operator: Civ Com Civ Pte

Alt/FL: 1200ft 1200ft  
QNH (1018mb) QNH

Weather: VMC CLBC NK CAVOK

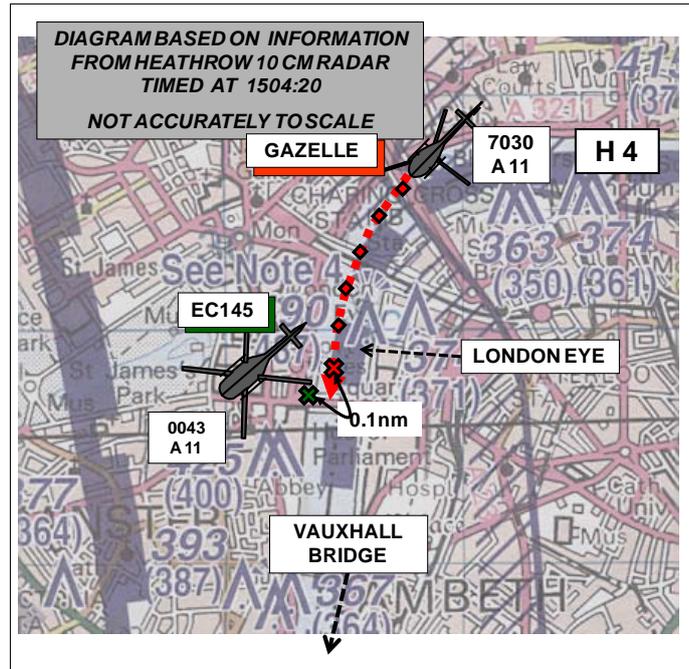
Visibility: >10km >10km

Reported Separation:

0ft V/100m H NR

Recorded Separation:

0 V/0.1nm H



## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

**THE EC145 PILOT** reports flying a CAT B Police task in a TCAS equipped helicopter with 2 observers, in the hover (into wind heading 210°) at 1200ft over Central London. Heathrow Special VFR passed him TI on 2 helicopters heading along the river Westbound to the London Eye. He acknowledged the call and repeated that he was on the N side of the river. He was initially visual with the 2 helicopters through his rear window but became unsighted as they moved into his 6 o'clock position. Shortly afterwards he received a TA on the TCAS at which stage he yawed his ac right and saw the Gazelle at the same altitude about 1nm away and heading straight towards him. He initiated avoiding action by transitioning into forward flight on a W'yly heading as the Gazelle began a left hand turn to orbit the London Eye. He estimates that the Gazelle came within 100 – 150m of his position at the same alt.

**THE GAZELLE PILOT** reports flying a VFR private pleasure flight down the Thames from Stapleford in a red helicopter fitted with SSR and Mode C but no TCAS, with all lights switched on. He requested permission from London City to fly down the river to the London Eye and return. When over the Lea Valley at 1200ft (QNH), London City gave him a squawk, permission to fly the route under Radar Control and instructed him to report over Isle of Dogs [the entry to HR4] and to fly not above 2000ft. He reported over the Isle of Dogs, was advised that an EC120 was behind him and flying a similar route and he advised that he was visual with it.

As he was flying down the Thames, he was advised that there was a helicopter over Westminster at 1200ft. He then replied that he was visual with that helicopter, which was in the hover facing W/SW. London City asked if he was carrying on to the W upriver and he replied that he was just going to the London Eye and returning. When he was approaching the London Eye, he advised that he was turning and returning down the river and he decided to turn left so that he kept his distance from the police helicopter. When he was in the turn, London City instructed him to move to the N side of the river until the following EC120 had passed; after it had passed they instructed him to move to centre of river, which he complied with.

As he was flying E and coming towards the O2, he asked if he could carry on down-river towards Queen Elizabeth Bridge and was given permission to do so.

When he left the London City CTR and was no longer under RC he requested a frequency change to Stapleford.

He had the police helicopter in sight continuously until he turned left over the London Eye; on turning left he lost sight of the helicopter in the hover and continued E along the river to leave the CTR.

At no stage was he concerned about the proximity of the police helicopter.

He thought that the police helicopter was in the hover, pointing W/SW at the time of the incident and might have been surprised to see him as he turned from the hover. At no stage of the flight did he hear a transmission between Thames Radar and the police helicopter.

**THE THAMES/SVFR CONTROLLER** reported that the sectors were bandboxed; an EC145 was on station near Westminster and two helicopters were W'bound VFR on Helicopter Route H4, a Gazelle and an EC120. He instructed the Gazelle pilot to remain N [side] of the River Thames and to instruct the EC120 to remain S [side] of the river in order to achieve extra separation since the EC120 was closing with the Gazelle. TI was passed to all three helicopters and the pilot of Gazelle reported that he had the police helicopter in sight and vice versa. The Gazelle pilot had requested to turn back at the London Eye and the Controller reiterated that the ac was to remain on the N [side] of the river against the EC120 which was then heading in the opposite direction but on the S side.

The police helicopter then requested to return to Lippitts Hill, the controller approved this subject to the pilot being visual with Gazelle. Before he left the frequency the EC145 pilot requested the C/S of Gazelle.

He suspected that there might be an issue, so he telephoned the Metropolitan Police ASU and discussed the situation with the pilot. The pilot asked about the clearance and altitude that the Gazelle had been given, which was via H4 to the London Eye on the N side of the river at standard operating altitudes. The EC145 pilot was content with the clearance given but was extremely concerned about the airmanship of the Gazelle pilot. He stated that he had been facing into wind in a SW direction and when he turned to route back to base the Gazelle was filling his windscreen between 200 and 300m away at the same level. He questioned the airmanship of the other pilot in flying unnecessarily close to his ac and stated that he would be filing an Airprox in the interests of safety.

UKAB Note (2): An analysis of the recording of the Heathrow 10cm radar showed the incident clearly as described by ATSI and as depicted in the diagram above. The radar overlay depicting the River Thames is however, not accurate in the area of the incident and has not been depicted. The overlay of radar data onto the Helicopter Routes Chart has been done manually and cannot be regarded as fully accurate.

**ATSI** reports that an Airprox occurred at 1504:21 in the London City CTR (Class D airspace), at altitude 1200ft, between an EC145 helicopter and an SA341 Gazelle helicopter.

The EC145 was operating VFR on a CAT B flight to and from Lippitts Hill Helicopter Site and was in receipt of a radar control service from Heathrow SVFR/Thames Radar on frequency 125.625 MHz.

The Gazelle was operating on a VFR flight to and from Stapleford and was also in receipt of a radar control service from Heathrow SVFR/Thames Radar on 125.625 MHz.

An EC120B was also operating on the H4 helicopter route but was not directly involved in the Airprox.

The Heathrow SVFR and Thames Radar (combined) controller was providing an Approach Radar Control service in Class D airspace. CAP493, The Manual of Air Traffic Services Part 1, Section 3, Chapter 4, Page 1, Paragraph 3.1, states that:

'Separation standards are not prescribed for application by ATC between VFR flights or between VFR and IFR flights in Class D airspace. 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 as specified at ...'

CAA ATSI had access to recordings of RTF from Swanwick, area radar recordings and reports from both pilots and the radar controller.

The London City METARs are provided for 1450 and 1520 UTC:

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METAR EGLC 291450Z AUTO 21010KT 180V240 9999 SCT026/// SCT035/// 16/10 Q1018=  
METAR EGLC 291520Z AUTO 21011KT 180V240 9999 FEW024/// SCT030 16/10 Q1018=
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At 1348:40 the EC145 pilot contacted Heathrow SVFR/Thames Radar requesting a VFR clearance into the London City CTR and he was given a VFR clearance to enter the zone not above alt 2000ft.

At 1451:00, the Gazelle contacted Heathrow SVFR/Thames Radar over the Lee Valley requesting to route over Canary Wharf and "*down the river to the eye and back*"; the pilot was given a squawk of 7030 and a clearance to enter the London City CTR, VFR not above alt 2000ft.

At 1453:00, the EC120 pilot contacted Heathrow SVFR/Thames Radar requesting to route from the Lee Valley along helicopter route H4 to Battersea; the pilot was given a clearance to enter the zone not above alt 2000ft and to follow H4 at standard operating altitudes (Max 2000ft as published in the UK AIP AD 2-EGLL-1-22, 29<sup>th</sup> July 2010). The EC120 pilot was given TI on the Gazelle and he reported visual with it.

At 1502:00, the Gazelle was given a further clearance to follow H4 on standard operating altitudes and was passed TI on the EC145, which was in the hover on the N bank of the Thames. The Gazelle reported visual with the EC145 and was instructed to remain on the N side of the Thames when he turned, against the EC120 that would then be opposite direction. The EC120 was then instructed to remain on the S side of the Thames against the Gazelle and was also given TI on the EC145. At 1502:40, the EC145 was given TI on both the other helicopters and the pilot acknowledged the information and reported remaining on the N side.

At 1504:00, the Gazelle reported turning at the London Eye and returning on the S side of the river; the controller corrected the pilot and reiterated the instruction to remain on the N side of the river and this was readback by the pilot.

The radar recordings show the Gazelle to be 0.2nm N of the EC145 at 1504:12 as the former was in the left turn tracking S.

The radar recordings show the EC145 stationary with the Gazelle passing 0.1nm (- the CPA) to the E of it at 1504:21, both ac indicating an alt of 1100ft; the EC145 then started to move W as the Gazelle turned to the E.

UKAB Note (1): The transcript of the Thames Radar frequency shows that the Police Helicopter called, "*complete*" at 1504:30. The controller responded with, "*C/S roger do you have that Gazelle off your right hand side in sight*" and the Police pilot replied, "*affirm*" and the controller responded, "*C/S with that traffic in sight you can route straight back to Lippits Hill on a direct track not above altitude two thousand feet VFR*". The radar recording shows the CPA as being at 1504:21.

Both ac were operating VFR in Class D airspace under a RCS. The radar controller passed TI to all three helicopter pilots. The Gazelle reported visual with the EC145 before turning at the London Eye.

Radar recordings show that the Gazelle remained over the Thames, turning left at the London Eye, passing 0.1nm from the EC145 which was in the hover on the N bank of the river facing SW, away

from the Gazelle. The EC145 pilot yawed the helicopter to the right in response to a TCAS TA and became concerned by the proximity of the Gazelle.

The helicopters had been provided with appropriate and timely TI by the controller while operating VFR in Class D 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 recordings, reports from the air traffic controllers involved and a report from the appropriate ATC authority.

A pilot Member experienced in this type of police operation informed the Board that pilots can feel very vulnerable operating in the hover, pointing into wind and away from traffic on the helicopter route behind them. Despite having 'land/river' separation, this can be quite small and at weekends when there is often heavy police tasking as well as sightseeing ac the area can be congested.

[Post Meeting Note: There were 2 demonstrations in Central London on the day of the incident.]

A controller Member experienced on the SVFR position pointed out that police pilots can request increased separation if the situation warrants it, but in his experience this is rarely done. He also agreed that on Saturday afternoons there are many such 'sightseeing' flights, all being flown legitimately but occasionally by pilots not fully familiar with H4. The Maximum alt for this section of H4 (outside the Heathrow CTR and VFR in Class D airspace) is 2000ft and the highest local obstacle is the London Eye (490ft) so traffic must operate at least 500ft above it. Most ac (as in this case) operate about 1000ft but there is no reason not to fly higher but still below 2000ft. Since the Gazelle pilot was aware of the police helicopter, in the Members' view good airmanship would have been to give it more vertical separation; this would not have in any way spoiled their view of the Eye.

Members noted however, that although the police pilot lost sight of the Gazelle for a short period, the latter pilot had the police helicopter in sight throughout; that being the case Members agreed unanimously that, although there might have been a lapse of airmanship, there was no risk of collision.

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

Cause: The Gazelle pilot flew close enough to the EC145 to cause its pilot concern.

Degree of Risk: C.