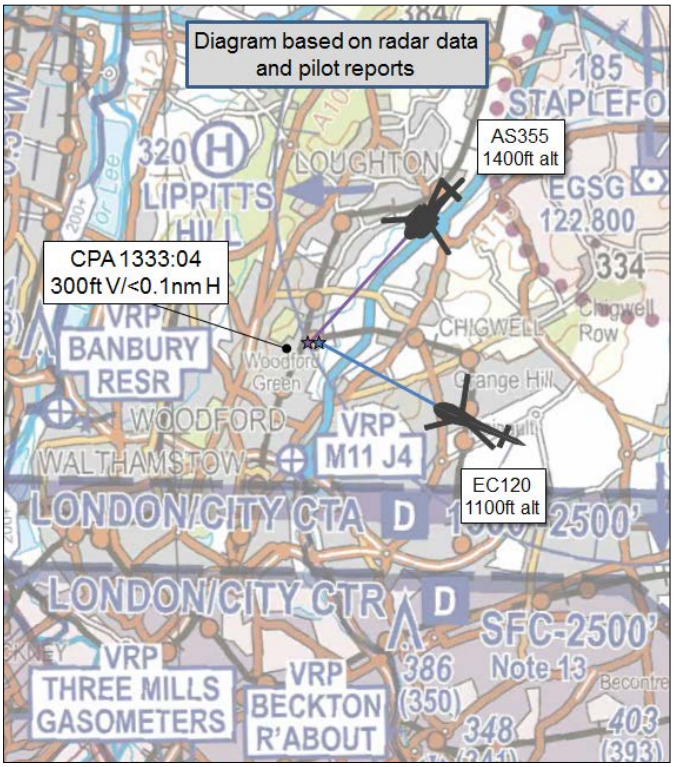
AIRPROX REPORT No 2017185

Date: 06 Aug 2017 Time: 1333Z Position: 5136N 00003E Location: North London

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	EC120	AS355
Operator	Civ Pte	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Basic
Provider	Thames	City Tower
Altitude/FL	1100ft	1400ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Black, Green	Dark Green
Lighting	Anti Cols	Position lights, Anti-cols
Conditions	VMC	VMC
Visibility	>10km	30km
Altitude/FL	1500ft	1500ft
Altimeter	QNH (1022 hPa)	Rad Alt
Heading	300°	NK
Speed	115kt	110kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	10ft V/100m H	200ft V/600m H
Recorded	300ft V/<0.1nm H	



THE EC120 PILOT reports that the AS355 suddenly appeared in front of him; he hadn't seen it earlier due to it merging into the urban background. It was slightly lower, by just a few feet, and travelling north to south in a straight line. It was close enough to see the front-seat passenger.

He assessed the risk of collision as 'High'.

THE AS355 PILOT reports that he was not informed about the Airprox until 3 weeks after the event and therefore his recollection was sketchy. He couldn't remember which particular flight the incident occurred on, because he regularly flies 10 flights throughout the day. However, he did remember remarking to his passenger that an EC120 was passing quite close and assumed it was operating with Farnborough because it wasn't on the City Tower frequency. He didn't deem the nature of the pass as anything more than of mild interest; his flights are frequently filled with monitoring other aeroplanes, helicopters, and helium balloons. He first saw the other aircraft cross ahead and could see that he would pass behind.

He assessed the risk of collision as 'Low'.

THE THAMES CONTROLLER reports that an Airprox was not reported on frequency and she had no recollection of the events.

Factual Background

The weather at London City was recorded as follows:

EGLC 061320Z AUTO 22011KT 160V250 9999 NCD 22/08 Q1022=

Analysis and Investigation

CAA ATSI

The EC120 was on a VFR flight not in receipt of an ATC service, although listening out on the Thames Radar frequency. The AS355 was conducting a VFR flight into the London City CTR; at 1331:40, the AS355 pilot contacted Heathrow Radar, and a Basic Service was agreed (Figure 1).

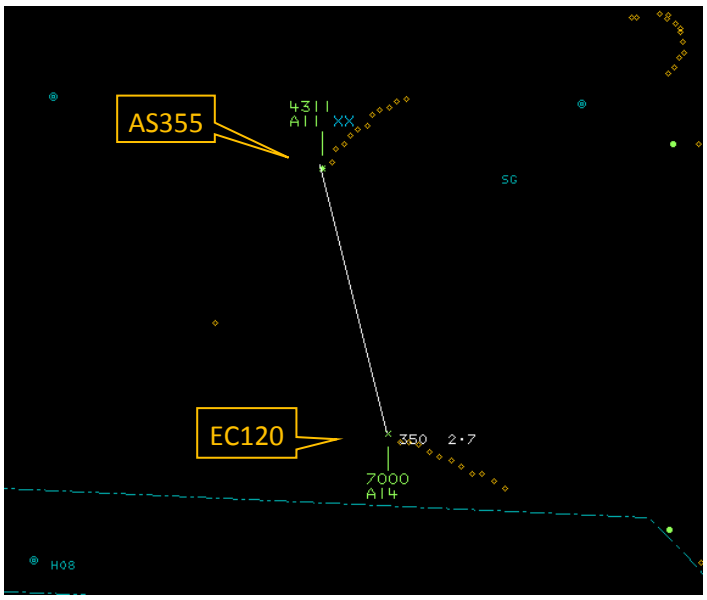


Figure 1 – 1331:40

The controller requested that the AS355 pilot squawk ident and report the aircraft's level. The pilot reported their level as 1300ft, and, at 1332:00, the controller instructed the pilot to remain outside of controlled airspace, which was acknowledged. At 1332:20, the AS355 was instructed to contact London City Tower (Figure 2).

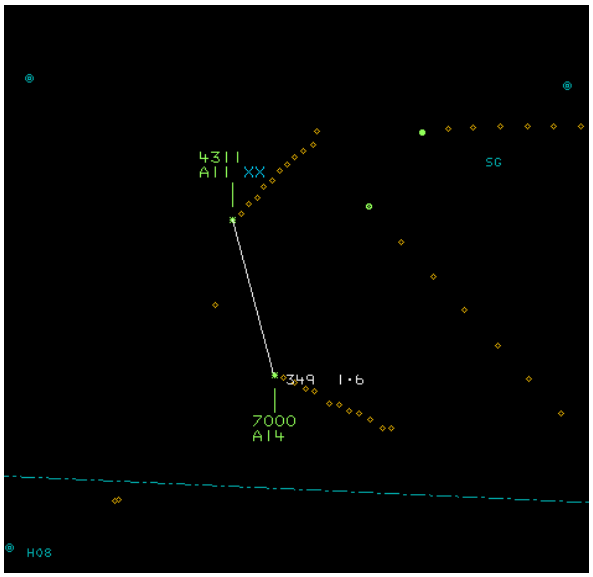


Figure 2 – 1332:20

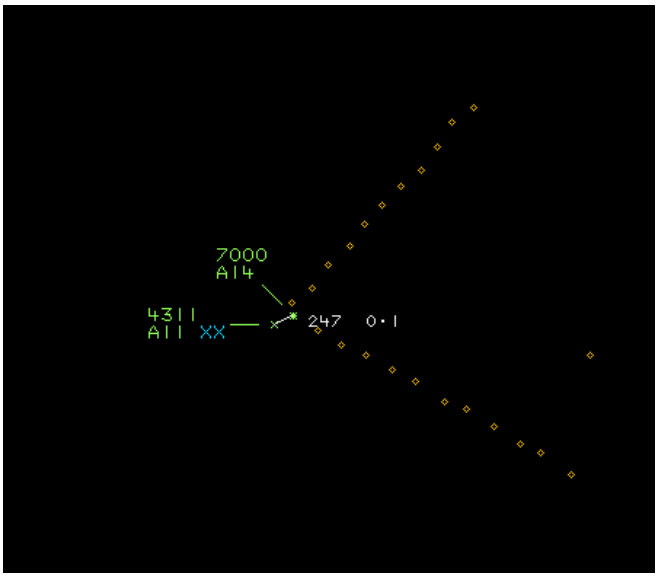


Figure 3 – 1333:04

CPA took place at 1333:04 with the aircraft separated by 0.1nm laterally and 300ft vertically (Figure 3). Neither aircraft was observed to deviate from their track or level.

The Airprox took place in Class G airspace, where both pilots were responsible for their own collision avoidance. Although prior to the Airprox the AS355 was in receipt of a Basic Service from a controller who was using surveillance equipment, that controller was busy with their

primary tasks, controlling and passing Traffic Information to a number of helicopters within the London CTR, operating on helicopter routes in and around London. The AS355 was passed to London City Tower as it was requesting to enter the London City CTR. The pilot of the AS355 believed that they were receiving a Basic Service from London City Tower. ATSI were unable to verify this as, due to the time elapsed since the event before the report from the AS355 was received, the London City R/T was no longer available.

The Airprox was not reported to any ATC unit. The AS355 pilot reported having seen the EC120 "passing quite close", but was not concerned by its presence. No report was received from the London City controller who would not have been aware of the presence of the EC120, nor that an Airprox was subsequently reported by that aircraft.

UKAB Secretariat

The EC120 and AS355 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1]. If the incident geometry is considered as converging then the EC120 pilot was required to give way to the AS355[2].

Summary

An Airprox was reported when an EC120 and an AS355 flew into proximity at 1333 on Sunday 6th August 2017. Both pilots were operating under VFR in VMC, the EC120 pilot was not in receipt of an ATS and the AS355 pilot in receipt of a Basic Service from London City.

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 and reports from the appropriate ATC operating authorities.

The Board first looked at the actions of the EC120 pilot. Although he reported that the AS355 was only 10ft in front of him, the Board thought it likely that this estimation was probably down to the fact that he was startled by the sudden appearance of the AS355 in his view. The Board noted that the radar replay indicated a separation of 300ft, although previous sweeps had seen the EC120's Mode C change from A14 to A13 and back again, implying that he was perhaps on the boundary between levels. Similarly the S355's level had also climbed 100ft and back again, so it was possible that if both aircraft are operating on the boundaries of the levels recognised by the radar, the vertical separation was likely to be in the range 100ft to 300ft.

For his part, the AS355 pilot was operating in and out of the area on various sorties throughout the day and, consequently, did not remember the incident well. Members opined that had he thought the incident to be a close call, it would have stuck in his mind, which lead them to believe that he was happy with the separation. Nevertheless, the incident highlighted the need for robust look-out, because he only saw the other aircraft as it was passing through his 12 o'clock, directly in front; although he did not feel the need to take avoiding action, his options would have been limited if he had needed to.

Board members who were familiar with flying in this area commented that it was a busy choke point in which it was difficult to get a radar service. Thames Radar were often extremely busy, as in this instance, and, without radar, London City could only offer a Basic Service to anything transiting into their airspace. Consequently, members commended electronic conspicuity to both pilots: neither aircraft was fitted with a CWS, yet both aircraft were transponder equipped and a suitable CWS would have provided them each with valuable situational awareness of the other.

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(2) Converging.

In determining the cause of the Airprox, the Board noted that the EC120 pilot had only seen the AS355 as it suddenly appeared in front, and that the AS355 pilot had also only seen the EC120 as it crossed ahead, i.e. after there was any opportunity to change the course of events. As such, they agreed that the incident had effectively been a non-sighting by both pilots. Accepting that there may have been a degree of startlement in the EC120 pilot's assessment of height separation, it was clear that the 2 aircraft had come within a few hundred feet at most before the pilots had seen each other. As a result, the separation was judged to be such that safety had been much reduced below the norm; risk Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Effectively a non-sighting by both pilots.

Degree of Risk: B.

Safety Barrier Assessment[3]

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

ANSP:

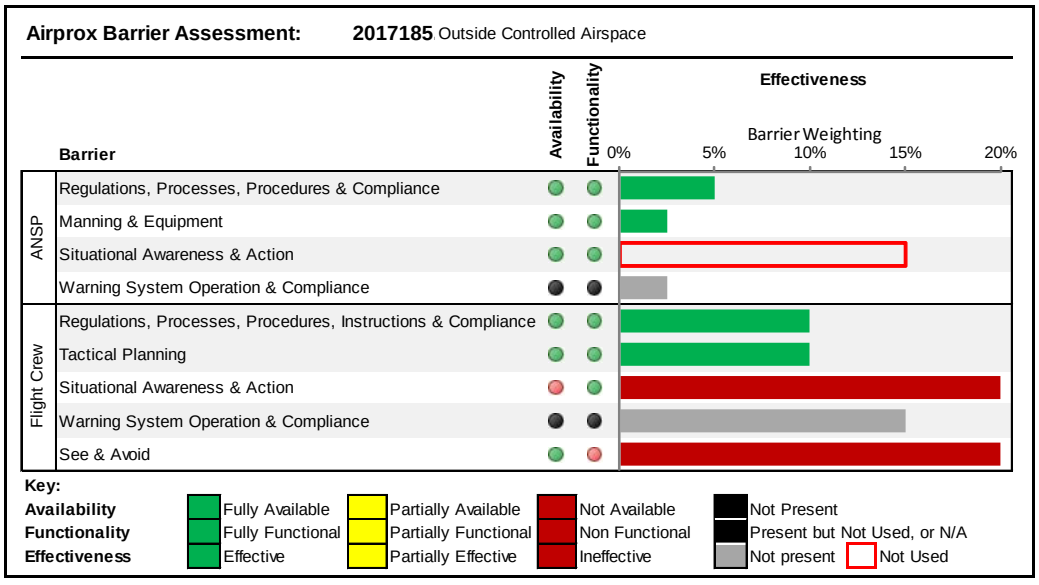
Situational Awareness and Action were assessed as **not used** because the AS355 was receiving a Basic Service from London City (who didn't have radar) and the EC120 was not receiving an ATS when he could have requested a Traffic Service.

Flight Crew:

Situational Awareness and Action were assessed as **ineffective** because neither pilot was aware of the other aircraft.

Warning System Operation and Compliance were assessed as **not present**; neither aircraft was fitted with a CWS.

See and Avoid were assessed as **ineffective** because neither pilot saw the other in time to take any avoiding action.



[3] The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the UKAB Website.