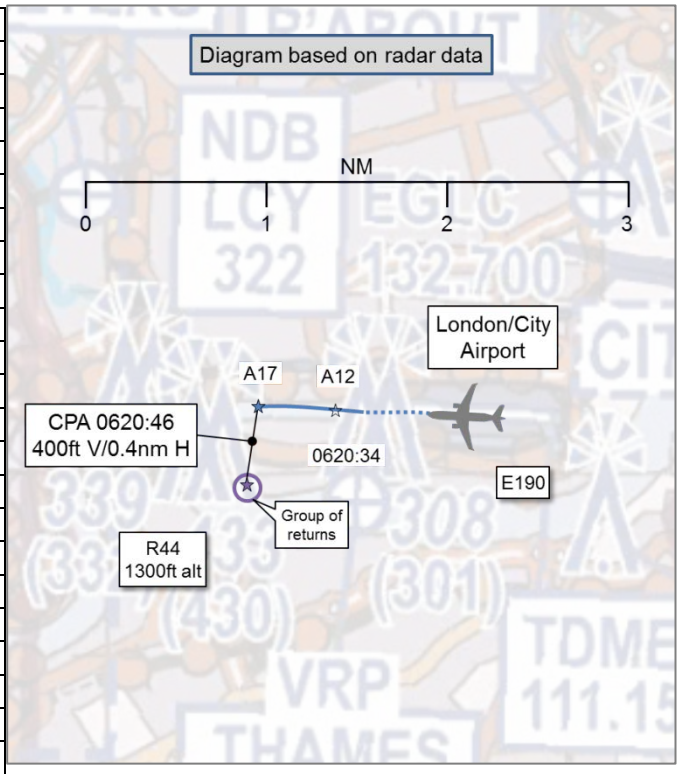
AIRPROX REPORT No 2017072

Date: 22 Apr 2017 Time: 0621Z Position: 5130N 00001E Location: 1nm W London City airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	E190	R44
Operator	CAT	Civ Comm
Airspace	CTR	CTR
Class	D	D
Rules	IFR	VFR
Service	Aerodrome	Aerodrome
Provider	London City	London City
Altitude/FL	1700ft	1300ft
Transponder	A,C,S	A,C,S
Reported		
Colours	Company	Mainly blue
Lighting	NK	NK
Conditions	VMC	VMC
Visibility	10km	10km
Altitude/FL	1300ft	1200ft
Altimeter	QNH	QNH
Heading	275°	360°
Speed	140kt	Nil kt
ACAS/TAS	TCAS II	Not fitted
Alert	TA	N/A
Separation		
Reported	0ft V/<1nm H	0ft V/1nm H
Recorded	400ft V/0.4nm H	



THE EMBRAER E190 PILOT reports that, prior to take off, ATC informed them of a news helicopter 3nm west and 1nm south of the RW27 climb-out. They were visual with the helicopter on line-up and throughout the take-off and it was showing at an altitude of 1300ft on TCAS. After take-off the helicopter appeared to be close to their left-hand side and he mentioned that it would generate a TA, which it did. Prior to changing to Thames Director he asked ATC what the separation was because he considered that the helicopter was "too close for comfort". They said that because it was VFR and they were IFR it was "see and be seen" as the controller had visual contact with both of them. Whilst this may be legal in accordance with MATS Part 1, getting a TCAS alert during the climb sequence, a high workload critical flight phase, is highly distracting and is, in his opinion, a safety issue. The helicopter was an R44 which was heading northwards the entire time they were visual with it. Separation he believed was less than 1nm.

He assessed the risk of collision as 'Low'.

THE ROBINSON R44 PILOT reports that they were conducting an aerial filming task, with hover and slow-flight manoeuvres, over the River Thames to the south of London City airport. They, and all the aircraft departing and arriving on RW27 at London City, were under a Radar Control service he recollected. They were informed of all departures and arrivals by City Tower, who were also informed about them. Many aircraft arrived and departed at London City whilst they were undertaking the task. One pilot, however, reported a TCAS contact on the climb-out. They had all the departing aircraft in sight from their taxying to line-up for their departure from the London City CTR. He considered that there was no risk of a conflict at any time.

He assessed the risk of collision as 'None'.

THE LONDON CITY AERODROME/GROUND CONTROLLER reports that the E190 was lined up on RW27 awaiting take off clearance. He gave Traffic Information to the crew about a helicopter that was operating approximately 1nm south-west of the airport not above 1500ft. Traffic Information was also passed to the helicopter pilot about the departure. No standard separation existed or was required between the two flights because the helicopter pilot was operating under VFR and the E190 pilot was operating under IFR [in Class D airspace]. From a defensive controlling point of view, he was satisfied that the helicopter did not present a risk to his departures due to the fact that it was in the hover on a filming task and not moving towards the departure track of the E190. This was further mitigated by the fact that Traffic Information had been passed as per the rules for VFR/IFR integration inside Class D controlled airspace. One of the E190 crew queried just prior to frequency change what separation was being used between him and the helicopter? He replied "It's IFR/VFR, see and be seen and he was visual with both of you the whole time". He did not feel it appropriate at the time to explain separation rules/minima in Class D airspace, therefore he said nothing further.

He assessed the risk of collision as 'None'.

Factual Background

The weather at London City was recorded as follows:

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EGLC 220620Z AUTO 30007KT 280V340 9999 BKN017 OVC030 10/06 Q1029=
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Analysis and Investigation

CAA ATSI

ATSI had access to reports from the pilots of the E190 and R44, and the air traffic controller involved. The local unit investigation was also obtained. The local area radar and radio recordings were also reviewed. Screenshots produced in this report are provided using recordings of the Swanwick MRT Radar. Levels indicated are in altitude. All times UTC.

The E190 (SSR code 0340), was an IFR flight routeing from London City. The E190 pilot was in receipt of an Aerodrome Control Service from London City Tower. The R44 (SSR code 7051), was a VFR flight on a local photographic detail. The R44 pilot was also in receipt of an Aerodrome Control Service from London City Tower.

The R44 pilot had been carrying out a photographic detail near the O2 Arena. At 0613:15 the R44 pilot made a request to the London City Aerodrome controller to move their task site to a new location, east of the O2 Arena, remaining to the south of the London City RW27 centreline; this was approved by the Aerodrome controller. The pilot of an inbound E190 at 4nm final for RW27, was advised about the R44 and instructed to remain north of the centreline in the event of a missed approach. The R44 pilot was advised about the landing E190.

At 0614:58 the pilot of the departing Airprox E190 requested taxi clearance.

At 0617:52 the R44 pilot was provided with Traffic Information about the E190 that was about to depart RW27, with the additional information that the traffic would turn north abeam the 'dome'. The R44 was instructed to remain no further north than their present position.

At 0618:16 the E190 pilot reported ready for departure and was instructed to line up for departure. Traffic Information about the R44 was passed to the E190 pilot at 0619:15, stating that the R44 was operating approximately 1.5nm southwest of the airport. The E190 pilot acknowledged the Traffic Information, and was then cleared for take-off.

At 0620:25 the E190 first appeared on the radar (Figure1). CPA occurred at 0620:47 (Figure 2), when there was 0.4nm laterally and 400ft vertically between the two aircraft.

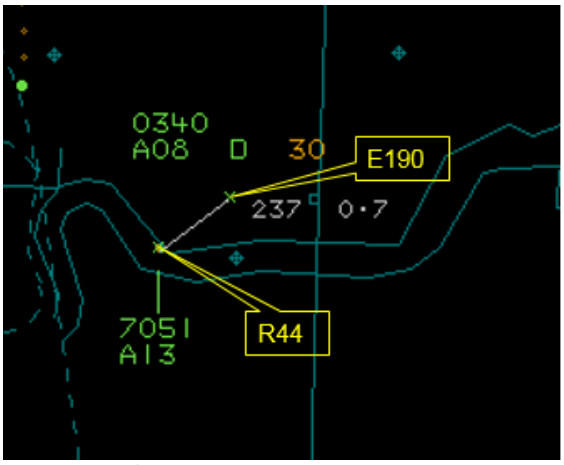


Figure 1 – 0620:25.

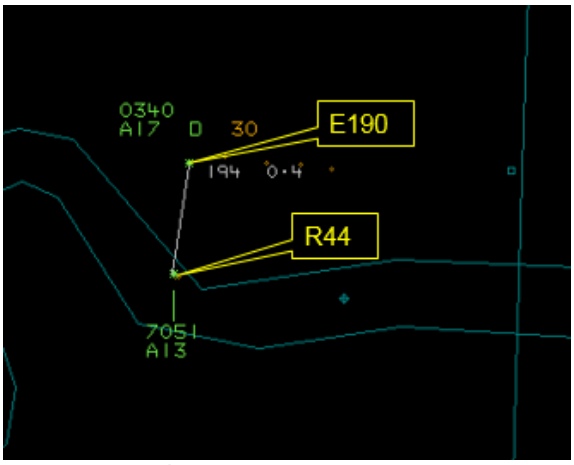


Figure 2 – 0620:47.

The pilot of the E190 reported that he considered the R44 "too close for comfort" on departure, but after querying the controller on the separation requirement stated "that'll do". The pilot of the E190 later filed the Airprox report.

The London City Aerodrome controller was providing an Aerodrome Control Service in Class D airspace. There is no requirement to separate VFR and IFR aircraft but Traffic Information shall be passed both generically, to enable aircraft to position with other aircraft, and specifically, appropriate to their stage of flight and the risk of collision. The Aerodrome controller was visual with both aircraft throughout and took controlling action to restrict the positioning of the R44 with regard to the climb-out from RW27. Mutual Traffic Information was passed as required.

Radar analysis of the R44 track during the occurrence revealed that the aircraft had a negligible ground speed, suggesting the R44 was hovering at the location at 1300ft, as indeed it had been in the minutes leading up to the occurrence report.

The R44 pilot reported being visual with London City Airport and the departing E190 throughout the occurrence.

Figure 3 depicts London City Airport and the O2 arena (or 'Dome') and the approximate position of the R44 when the E190 departed.

Figure 3.

UKAB Secretariat

The E190 and R44 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]. An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation[2]. On this occasion both pilots had the other aircraft in sight throughout.

The UK AIP[3] states the Air Traffic Control responsibilities for separation in Class D Controlled Airspace. For IFR flights: *'Separation [is] provided between all IFR flights by ATC. Traffic information [is] provided on VFR flights and traffic avoidance advice on request.'* For VFR flights: *'ATC separation [is] not provided. Traffic information [is] provided on IFR flights and other VFR flights; traffic avoidance advice on request'.*

These requirements are also stated in the Manual of Air Traffic Services Part 1[4], which additionally states: *'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'*.

Summary

An Airprox was reported when an E190 and an R44 flew into proximity in Class D airspace at 0621 on Saturday 22nd April 2017. The E190 pilot was operating under IFR in VMC, the R44 pilot was operating under VFR in VMC. Both pilots were in receipt of an Aerodrome Control Service from London City. They had been issued with Traffic Information about their respective flights and had been visual with each other throughout. The Aerodrome controller had also been visual with the two aircraft. The minimum separation was recorded as 400ft vertically and 0.4nm horizontally.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, the controller concerned, area radar and RTF recordings and reports from the appropriate ATC and operating authorities.

The Board noted that both the R44 and E190 pilots were in receipt of an Aerodrome Control Service within Class D airspace of the London City CTR. The R44 pilot was carrying out a filming task within the London City CTR under VFR. The E190 was departing on an IFR clearance from RW27. At the time of the Airprox the R44 pilot was operating southwest of the airfield, east of the O2 at 1300ft. He was informed about the imminent departure of the E190 that would be routing to turn north abeam the O2 Dome and was instructed not to proceed any further north than his present position. The R44 confirmed that he had been visual with the E190 throughout its departure.

After the E190 pilot had been cleared to line up on RW27 he had been issued with Traffic Information about the R44 operating about 1.5nm southwest of the airport. This call was acknowledged by the E190 pilot. The Board noted that E190 pilot stated in his report that he had been visual with the R44 and had seen it on TCAS indicating 1300ft. He had maintained visual contact with the R44 throughout his departure and climb-out.

Noting that the E190 pilot had commented about being too close to the R44 during his departure, and had queried what separation was being applied by ATC, some members wondered whether the E190 pilot was fully aware of the ATC procedures for controlling VFR and IFR flights in Class D airspace, although he had stated in his report that he was aware of MATS Part 1 ATC procedures. In this incident, following Traffic Information from ATC, the E190 pilot had been aware of the position and intentions of the R44 prior to taking off. The Board opined had he considered that there had been a safety consideration he could have requested either that the controller instruct the R44 pilot to hold further away from the departure path, or he could have delayed his departure until the R44 pilot had finished his task and had vacated the area. In short, it was within the E190 pilot's gift not to depart

[1] SERA.3205 Proximity.
[2] SERA.3225 Operation on and in the Vicinity of an Aerodrome.

into conflict if he considered that the R44 was too close to the departure track. That he did depart and then received a TCAS TA was predictable, as he himself commented prior to departure. Although the generation of warnings at critical phases of flight was undesirable, the Board considered that a TCAS TA in Class D airspace was not an unusual event in the circumstances, and one that the E190 pilot should have been ready for.

The Board quickly decided that normal safety standards and procedures had pertained during the encounter, and classified the incident as a sighting report by the E190 pilot with a risk Category E.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A sighting report.

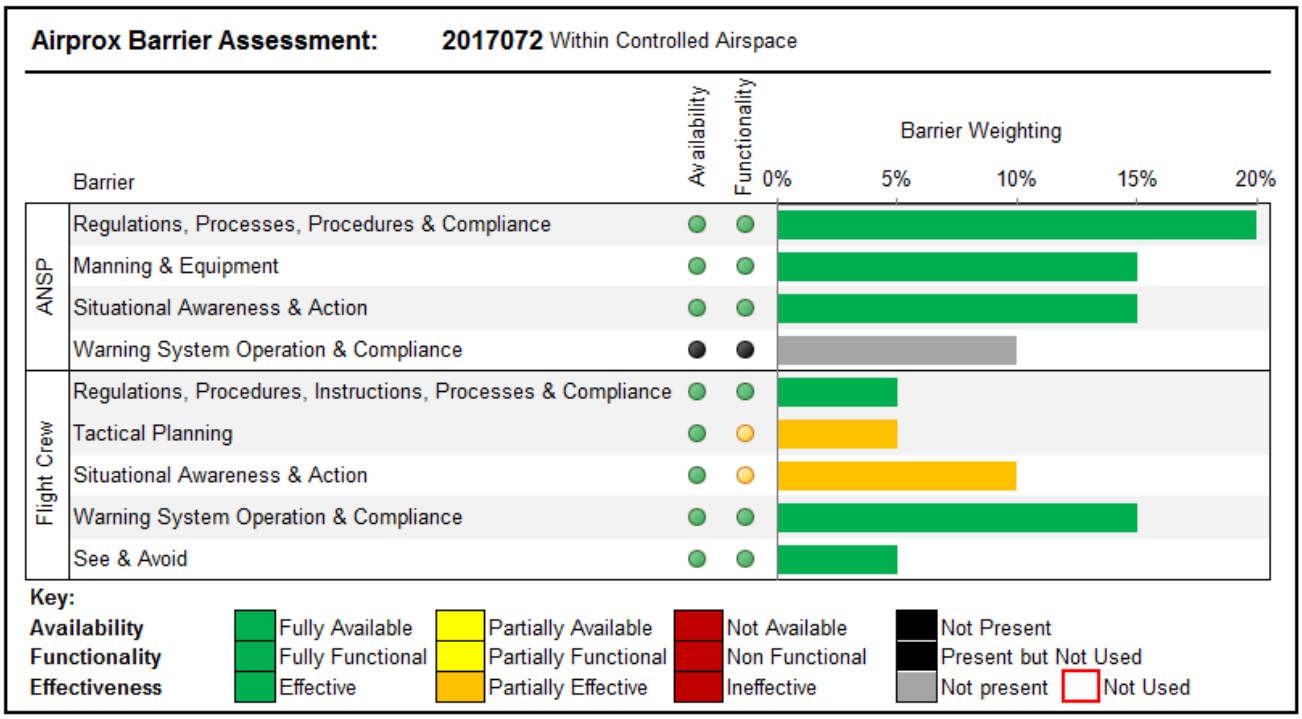
Degree of Risk: E.

Safety Barrier Assessment[5]

The Board decided that the following key safety barriers were contributory in this Airprox:

Flight Crew Tactical Planning was assessed as only **partially effective** because the E190 crew were aware of the position and altitude of the R44 before departure but did not fully integrate this information into their plan.

Flight Crew Situational Awareness and Action was only **partially effective** because although the E190 crew had received Traffic Information on the R44 from ATC, and had obtained visual sighting of it, they did not act on this situational awareness to address their concern about the R44's proximity.



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