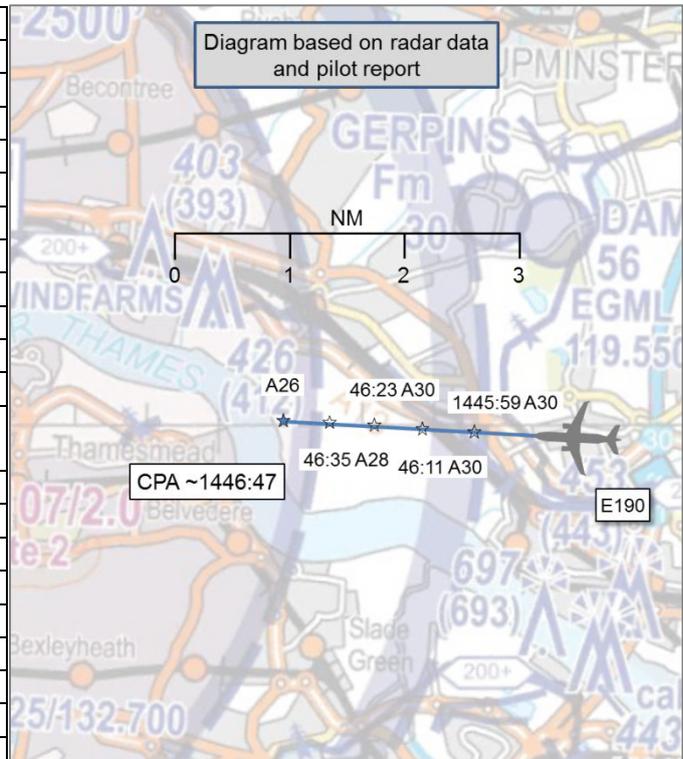


**AIRPROX REPORT No 2015168**

Date: 23 Sep 2015 Time: 1447Z Position: 5130N 00011E Location: 4.5nm E London/City Airport

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	E190	Drone
Operator	CAT	Unknown
Airspace	London TMA	London TMA
Class	A	A
Rules	IFR	
Service	Radar Control	
Provider	Thames Radar	
Altitude/FL	2600ft	
Transponder	A, C, S	
<b>Reported</b>		Not reported
Colours	White/blue	
Lighting	HISL, nav, beacon, land/taxi	
Conditions	VMC	
Visibility	10km	
Altitude/FL	2600ft	
Altimeter	QNH (1012hPa)	
Heading	274°	
Speed	127kt	
ACAS/TAS	TCAS II	
Alert	None	
<b>Separation</b>		
Reported	50ft V/15m H	
Recorded		NK



**THE E190 PILOT** reports on final approach to London/City RW27 when the First Officer (PF) saw what he identified as a yellow RC helicopter 300m ahead. He called it to the Captain's attention; both pilots simultaneously assessed that the object would not collide with them so the aircraft was allowed to continue its glidepath descent on autopilot. The pilot stated that it appeared that the drone was in level flight and that it was fortuitous their descending flight path took them clear. He notified the London/City Tower controller by radio and spoke with the police in person after landing.

He assessed the risk of collision as 'Medium'.

**THE DRONE OPERATOR:** The drone operator could not be traced.

**Factual Background**

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

METAR EGLC 231450Z 25013KT 9999 FEW030 17/08 Q1012=

**Analysis and Investigation**

**UKAB Secretariat**

The Air Navigation Order 2009 (as amended), Article 138<sup>1</sup> states:

<sup>1</sup> Article 253 of the ANO details which Articles apply to small unmanned aircraft. Article 255 defines 'small unmanned aircraft'. The ANO is available to view at <http://www.legislation.gov.uk>.

'A person must not recklessly or negligently cause or permit an aircraft to endanger any person or property.'

Article 166, paragraphs 2, 3 and 4 state:

(2) The person in charge of a small unmanned aircraft may only fly the aircraft if reasonably satisfied that the flight can safely be made.

(3) The person in charge of a small unmanned aircraft must maintain direct, unaided visual contact with the aircraft sufficient to monitor its flight path in relation to other aircraft, persons, vehicles, vessels and structures for the purpose of avoiding collisions.'

(4) The person in charge of a small unmanned aircraft which has a mass of more than 7kg excluding its fuel but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight must not fly the aircraft

(a) in Class A, C, D or E airspace unless the permission of the appropriate air traffic control unit has been obtained;

(b) within an aerodrome traffic zone ...; or

(c) at a height of more than 400 feet above the surface unless it is flying in airspace described in sub-paragraph (a) or (b) and in accordance with the requirements for that airspace.'

A CAA web site<sup>2</sup> provides information and guidance associated with the operation of Unmanned Aircraft Systems (UASs) and Unmanned Aerial Vehicles (UAVs).

Additionally, the CAA has published a UAV Safety Notice<sup>3</sup> which states the responsibilities for flying unmanned aircraft. This includes:

'You are responsible for avoiding collisions with other people or objects - including aircraft.

Do not fly your unmanned aircraft in any way that could endanger people or property.

It is illegal to fly your unmanned aircraft over a congested area (streets, towns and cities).

..., stay well clear of airports and airfields'.

## Summary

An Airprox was reported when an Embraer 190 and a drone flew into proximity at 1447 on Wednesday 23<sup>rd</sup> September 2015. The Embraer 190 pilot was operating under IFR in VMC, in the process of transferring from a Radar Control Service with Thames Radar to an Aerodrome Control Service with London/City Tower.

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

Information available consisted of a report from the E190 pilot and radar video recordings.

The Board noted that the drone had passed close enough to the E190 for the First Officer to identify it as a 'yellow helicopter' and that the drone should not have been operated at the reported altitude in that vicinity. Because it should not have been flown in that airspace, it was agreed that the cause of the Airprox was that the drone had been flown into conflict with the E190. Unfortunately, tracing action on the drone operator was unsuccessful. The Board noted that the drone had reportedly passed close to the E190 (circa 50ft). They also noted that neither pilot had felt it necessary to take avoiding action to prevent an actual collision because their aircraft was already descending just below the drone. The Board agreed that safety margins had been much reduced and that there had been little opportunity for the crew to react; however, the fact that they had been able to make a conscious decision that there was enough separation prompted the Board to classify this as a Category B risk.

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<sup>2</sup> [www.caa.co.uk/uas](http://www.caa.co.uk/uas)

<sup>3</sup> CAP 1202

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

Cause: The drone was flown into conflict with the E190.

Degree of Risk: B.