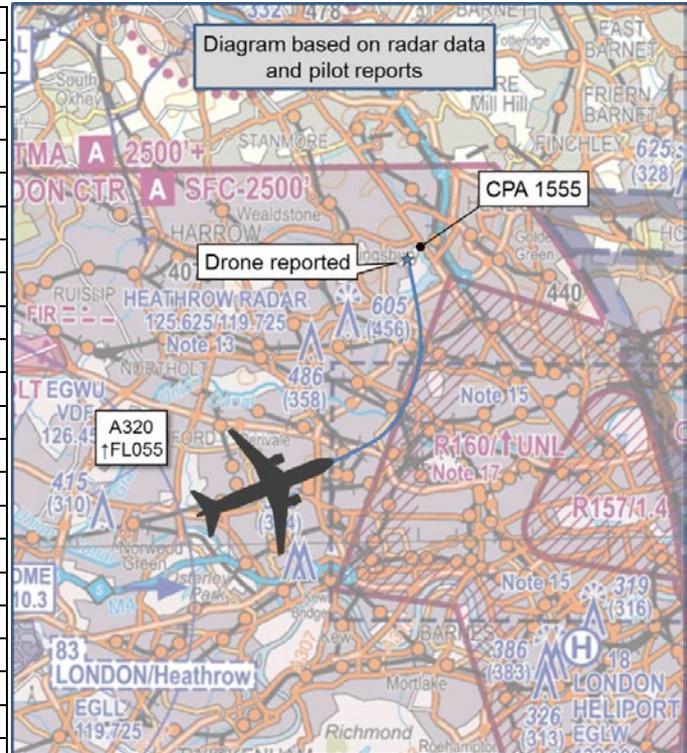


AIRPROX REPORT No 2016031

Date: 13 Mar 2016 Time: 1555Z Position: 5135N 00015W Location: 10nm NE Heathrow

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A320	Drone
Operator	CAT	Unknown
Airspace	London TMA	London TMA
Class	A	A
Rules	IFR	
Service	Radar Control	
Provider	Swanwick	
Altitude/FL	5500ft	
Transponder	A, C, S	
Reported		
Colours	White, Red, Blue	Green, Black
Lighting	Strobes, Nav	
Conditions	VMC	
Visibility		
Altitude/FL	5500ft	
Altimeter	QNH (1034hPa)	
Heading	360°	
Speed	250kt	
ACAS/TAS	TCAS II	
Alert	None	
Separation		
Reported	500ft V/100m H	
Recorded		NK



THE A320 PILOT reports that he was on climb-out from Heathrow on the BUZ4J SID, on a radar heading of 360°, when the first officer saw a green drone with 4 black rotors. It was in the 1 o'clock position and approximately 500ft below. He reported the incident to ATC.

He assessed the risk of collision as 'Low'.

THE DRONE OPERATOR COULD NOT BE TRACED.

THE LONDON TCC CONTROLLER reports that the A320 departed from Heathrow on the BUZ4J SID. At 1555 the pilot reported flying over a green drone, 500ft below him, estimated to be at 5000ft.

Factual Background

The weather at Heathrow was recorded as follows:

METAR COR EGLL 131550Z AUTO 06011KT 030V090 9999 NCD 10/01 Q1033 NOSIG=

Analysis and Investigation

UKAB Secretariat

The Air Navigation Order 2009 (as amended), Article 138¹ states:

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

¹ 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>.

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.

In addition, the CAA has published guidance regarding First Person View (FPV) drone operations which limit this activity to drones of less than 3.5kg take-off mass, and to not more than 1000ft².

Summary

An Airprox was reported when an A320 and a drone flew into proximity at 1555 on Sunday 13th March 2016. The A320 pilot was operating under IFR in VMC, and in receipt of a Radar Control Service from London TCC. The drone operator could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the A320 pilot, radar photographs/video recordings and a report from the air traffic controller involved.

The crew of the A320 reported seeing the drone beneath them at about 5000ft, whilst within the London TMA. The Board first noted that, as for other aviators, drone operators are fundamentally required to avoid collisions with all other aircraft. More specifically, drone flight above 400ft is prohibited in Class A airspace without the permission of the appropriate air traffic control unit and, therefore, the drone operator was not entitled to operate in this location. At 5000ft, the drone operator would almost certainly be operating on first-person-view (FPV); under FPV operations, for drones of less than 3.5kg, the drone is not permitted to operate above 1000ft agl without CAA approval being gained and a NOTAM being issued.

At 5000ft, the drone operator was flying within the London TMA Class A airspace without permission and, in his non-compliance, the Board considered that the drone operator was posing a flight safety risk. Operating as he was in airspace within which he was not permitted meant that the Board considered that the cause of the Airprox was that the drone had been flown into conflict with the A320. Unsurprisingly, the incident did not show on the NATS radars and therefore the exact separation between the two air-systems was not known. However, the Board noted that the A320 pilot estimated the separation to be 500ft vertically and 100m horizontally. The Board therefore determined that the risk was Category C; there had been no risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The drone was flown into conflict with the A320.

Degree of Risk: C.

² ORSA No. 1108 Small Unmanned Aircraft – First Person View (FPV) Flying available at: [ORSA No 1108](#).