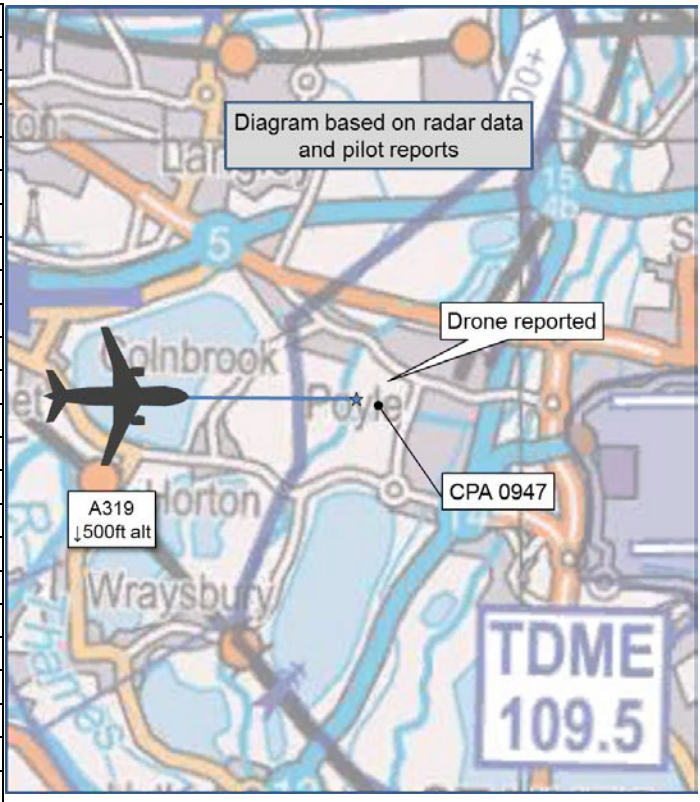


AIRPROX REPORT No 2015172

Date: 30 Sep 2015 Time: 0947Z Position: 5128N 00031W Location: 2nm W Heathrow

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A319	Drone
Operator	CAT	Unknown
Airspace	Heathrow CTR	Heathrow CTR
Class	D	D
Rules	IFR	
Service	Aerodrome	
Provider	Heathrow Tower	
Altitude/FL	500ft	
Transponder	A,C,S	
Reported		Not Reported
Colours	White	
Lighting	NK	
Conditions	VMC	
Visibility	10km	
Altitude/FL	500ft	
Altimeter	QNH (1033hPa)	
Heading	091°	
Speed	140kt	
ACAS/TAS	TCAS II	
Alert	None	
Separation		
Reported	20ft V/25m H	
Recorded		NK



THE A319 PILOT reports they were on final approach to Heathrow and passing 500ft when they saw a small 'drone helicopter' hovering very close to the centre-line. It passed about 25-30yd left of the cockpit and 20-30ft above, it was not possible to take avoiding action. Details were passed to ATC and to the police, who attended the aircraft.

He perceived the severity of the incident as 'Medium'.

The drone operator could not be traced.

Factual Background

The weather at Heathrow was recorded as follows:

METAR EGLL 300820Z 06007KT CAVOK 13/10 Q1033 NOSIG
METAR EGLL 300850Z 06009KT 9999 FEW022 14/10 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.

Summary

An Airprox was reported when an A319 and a drone came into proximity at 0947 on Wednesday 30th September 2015. The A319 was operating under IFR in VMC and receiving an Aerodrome Control Service from Heathrow Tower. The incident did not show on the NATS radars and the drone operator could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of only a report from the pilot of the A319.

Members considered the circumstances of the incident and noted that, for flights within Line-of-Sight, CAA guidance² is that the drone operator is required to employ the See-and-Avoid principle through continued observation of the drone, and the airspace around it, with respect to other aircraft and objects. Within the UK, Visual Line-of-Sight operations are normally accepted as being out to a maximum distance of 500m horizontally, and 400ft vertically from the drone operator.

In this incident, reported at 500ft, members opined that the drone operator may well have been flying on First Person View (FPV), for which regulation mandates that an additional person must be used as a competent observer who must maintain direct unaided visual contact with the drone in order to monitor its flight path in relation to other aircraft. Irrespective, the drone was within the Heathrow CTR Class D airspace above 400ft and without permission; as a result of his non-compliance with CAA regulations, the Board considered that the drone was flown into conflict with the A319. As is often the case with drone Airprox, the incident did not show on the NATS radars; the A319 pilot estimated that the drone was 20-30m above and within 30yd of the A319, about a wingspan away. Using this estimate as a guide, the Board determined that the risk was Category A, separation had been reduced to the bare minimum and, notwithstanding the fact that the A319 pilot had seen the drone, he had not been able to manoeuvre so chance had played a major part in events.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The drone flown into conflict with the A319.

Degree of Risk: A.

² <http://www.caa.co.uk/Commercial-Industry/Aircraft/Unmanned-aircraft/Unmanned-Aircraft>