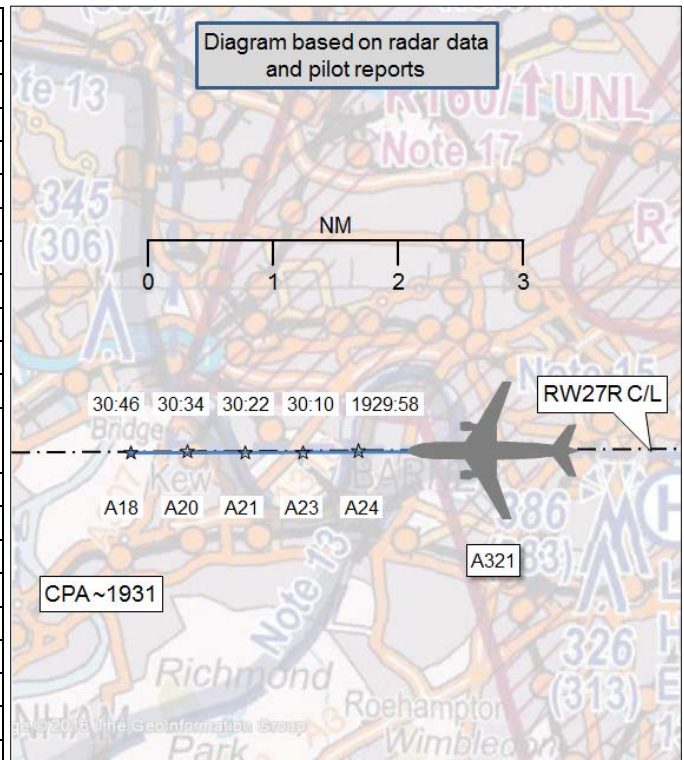


AIRPROX REPORT No 2016049

Date: 28 Mar 2016 Time: 1925Z Position: 5129N 00018W Location: 6nm E Heathrow

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A321	Drone
Operator	CAT	Unknown
Airspace	Heathrow CTR	Heathrow CTR
Class	D	D
Rules	IFR	
Service	Aerodrome	
Provider	Heathrow	
Altitude/FL	~1800ft	
Transponder	A, C, S	
Reported		
Colours	Blue, white	
Lighting	Strobes, nav, landing	
Conditions	IMC	
Visibility	20km	
Altitude/FL	~1800ft	
Altimeter	QNH (996hPa)	
Heading	275°	
Speed	160kt	
ACAS/TAS	TCAS II	
Alert	None	
Separation		
Reported	50-100ft V/0m H	
Recorded		NK



THE A321 PILOT reports on final approach to London Heathrow RW27R at night, in and out of broken cloud and rain, when the landing lights illuminated a drone as it passed under the left wing. Both pilots saw the drone, assessed as being about 75cm square, and neither had time to take avoiding action. The sighting was reported to ATC and a statement given to police on arrival at the aircraft stand.

He assessed the risk of collision as 'High'.

THE DRONE OPERATOR could not be traced.

THE HEATHROW AERODROME CONTROLLER reports the A321 pilot reported a drone encounter when at 6nm on approach, with the drone passing 100ft below. The Group Supervisor was informed, a message put on ATIS and the Heathrow Approach controller informed subsequent inbound aircraft for the next 30min.

Factual Background

The weather at Heathrow was recorded as follows:

METAR COR EGLL 281920Z AUTO 24011KT 9999 //TCU 07/04 Q0995 TEMPO SHRA=

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.’

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 site² 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 Notice³ 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 A321 and a drone flew into proximity at about 1925 on Monday 28th March 2016. The A321 pilot was operating under IFR in IMC in receipt of an Aerodrome Control Service from Heathrow Tower. The drone operator could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the A321 pilot, radar photographs/video recordings and a report from the air traffic controllers involved.

Members agreed that the drone was being flown contrary to regulations, and that the operator had therefore flown it into conflict with the A321, which was within the London Heathrow CTR and on final approach to land. Recognising the difficulty in estimating range in dynamic situations without references, the Board noted that both pilots had seen the drone illuminated in the glare of their aircraft’s landing lights. Accepting that such lights had a fairly narrow beamwidth, they therefore agreed that this indicated that the drone had been in very close proximity and that there had been an actual risk of collision.

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>.

² www.caa.co.uk/uas.

³ CAP 1202.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The drone was flown into conflict with the A321.

Degree of Risk: A.