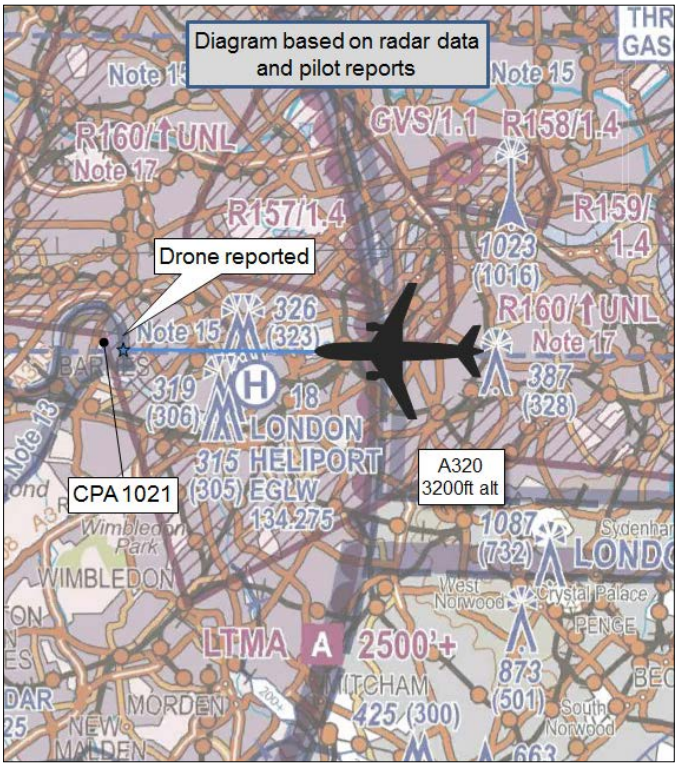
AIRPROX REPORT No 2016176

Date: 23 Aug 2016 Time: 0714Z Position: 5128N 00013W Location: 7.4nm east Heathrow

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A320	Unknown Object
Operator	CAT	
Airspace	LTMA	
Class	A	
Rules	IFR	
Service	Aerodrome	
Provider	Heathrow	
Altitude/FL	3200ft	
Transponder	A, C, S	
Reported		
Colours	Company	Silver
Lighting	Strobes, Nav Beacon	
Conditions	VMC	
Visibility	20km	
Altitude/FL	2500ft	
Altimeter	QNH (1022hPa)	
Heading	270°	
Speed	160kt	
ACAS/TAS	TCAS I	
Alert	None	
Separation		
Reported	50ft V/30m H	NK
Recorded	NK	



THE A320 PILOT reports that the First Officer spotted a glint from a 'drone' ahead, slightly right and at the same altitude. The Captain looked and both crew members saw it pass above by approx 50ft and to the right by approx 30m from the aircraft. It was a small silver oblong, about 30cm tall and 15-20 cm in diameter. No evasive action was taken because there wasn't enough time between sighting and passing the drone to manoeuvre. A report was made on the Heathrow frequency and the police were notified.

He assessed the risk of collision as 'High'.

The unknown object could not be traced.

THE VCR SUPERVISOR reports that at 0714 the Air North Arrivals controllers informed him that the pilot of the A320 had reported a drone close to the aircraft. This had happened 7.5nm from touchdown to RW27R. The arrivals controller warned subsequent inbound aircraft and relayed the message to the FIN controller. The police were also informed.

Factual Background

The weather at Heathrow was recorded as follows:

METAR COR EGLL 230650Z AUTO 15005KT 100V180 9999 NCD 17/15 Q1025 NOSIG=

Analysis and Investigation

UKAB Secretariat

If the object was a drone, then there are no specific ANO regulations limiting the maximum height for the operation of drones that weigh 7kg or less other than if flown using FPV (with a maximum weight of 3.5kg) when 1000ft is the maximum height. Drones weighing between 7kg and 20kg are limited to 400ft unless in accordance with airspace requirements. Notwithstanding, there remains a requirement to 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. CAP 722 gives guidance that, within the UK, visual line of sight (VLOS) operations are normally accepted to mean a maximum distance of 500m [1640ft] horizontally and 400ft [122m] vertically from the Remote Pilot.

Neither are there any specific ANO regulations limiting the operation of drones in controlled airspace if they weigh 7kg or less other than if flown using FPV (with a maximum weight of 3.5kg) when they must not be flown in Class A, C, D or E, or in an ATZ during notified hours, without ATC permission. Drones weighing between 7kg and 20kg must not be flown in Class A, C, D or E, or in an ATZ during notified hours, without ATC permission. CAP722 gives guidance that operators of drones of any weight must avoid and give way to manned aircraft at all times in controlled Airspace or ATZ. CAP722 gives further guidance that, in practical terms, drones of any mass could present a particular hazard when operating near an aerodrome or other landing site due to the presence of manned aircraft taking off and landing. Therefore, it strongly recommends that contact with the relevant ATS unit is made prior to conducting such a flight.

Notwithstanding the above, all drone operators are also required to observe ANO 2016 Article 94(2) which requires that the person in charge of a small unmanned aircraft may only fly the aircraft if reasonably satisfied that the flight can safely be made, and the ANO 2016 Article 241 requirement not to recklessly or negligently cause or permit an aircraft to endanger any person or property. Allowing that the term 'endanger' might be open to interpretation, drones of any size that are operated in close proximity to airfield approach, pattern of traffic or departure lanes, or above 1000ft agl (i.e. beyond VLOS (visual line of sight) and FPV (first-person-view) heights), can be considered to have endangered any aircraft that come into proximity. In such circumstances, or if other specific regulations have not been complied with as appropriate above, the drone operator will be judged to have caused the Airprox by having flown their drone into conflict with the aircraft.

At the time of the incident the CAA had published Drone Aware[1] 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'.

However, a new joint CAA/NATS web site[2] now provides information and guidance associated with the operation of Unmanned Aircraft Systems (UASs) and Unmanned Aerial Vehicles (UAVs) and CAP722 (UAS Operations in UK Airspace) provides comprehensive guidance.

Summary

An Airprox was reported when an A320 and an unknown object flew into proximity at 0714 on Tuesday 23rd August 2016. The A320 pilot was operating under IFR in VMC and was in receipt of an Aerodrome Service from Heathrow. The unknown object could not be traced.

[1] CAP 1202
[2] dronesafe.uk

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

Despite the pilot reporting the object as a drone, Board members were not unequivocally convinced that it was given the description was simply of a cylindrical object with no description of any rotors or other drone features. Lacking anything else on which to base an assessment, the Board decided that the incident was best described simply as the A320 pilot being concerned by the proximity of an unknown object. Acknowledging the difficulties in judging separation visually without external references, the Board considered that the pilot's estimate of separation, allied to his overall account of the incident, portrayed a situation where a collision had only been narrowly avoided and chance had played a major part; they therefore determined the risk to be Category A.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The A320 pilot was concerned by the proximity of the unknown object.

Degree of Risk: A.