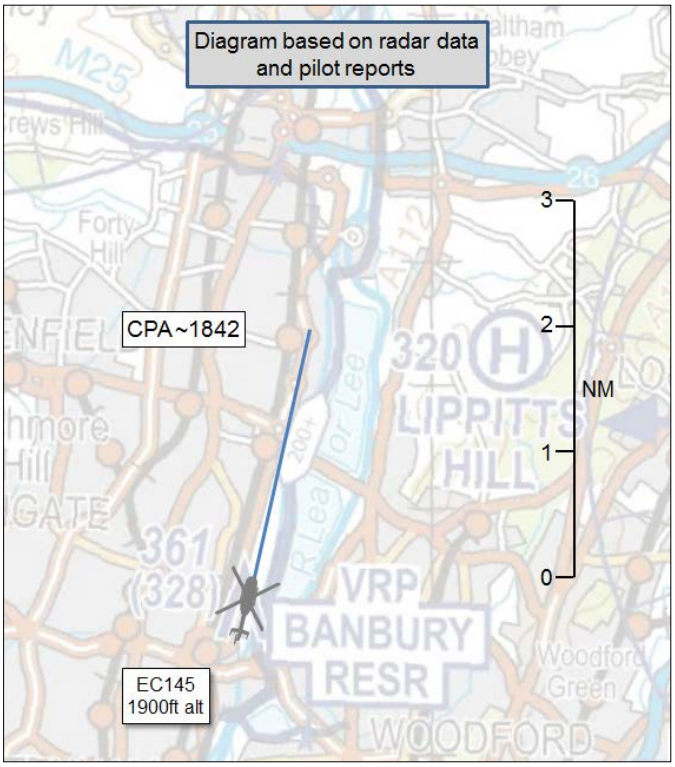
AIRPROX REPORT No 2016185

Date: 26 Aug 2016 Time: 1842Z Position: 5139N 00001W Location: 2nm W Lippitts Hill

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	EC145	Drone
Operator	HEMS	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	
Service	Basic	
Provider	Essex Radar	
Altitude/FL	1900ft	
Transponder	A, C, S	
Reported		Not reported
Colours	Yellow	
Lighting	HISL, nav	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	1900ft	
Altimeter	RPS (1017hPa)	
Heading	360°	
Speed	120kt	
ACAS/TAS	TCAS II	
Alert	None	
	Separation	
Reported	5ft V/30m H	
Recorded	NK	



THE EC145 PILOT reports returning to base when the rear crew medical passengers reported a 4-bladed quadcopter drone passing very close to the aircraft, they reported it passed less than 30m away down the right side. The drone was close enough for them to identify it was 4-bladed, dark in colour, in a turn away from the aircraft, and had 2 red lights. On receiving the warning from the crew members, the pilot informed Essex Radar. He also informed the ambulance control room, asking them to inform Lippitts Hill police.

He assessed the risk of collision as 'High'.

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

THE ESSEX CONTROLLER did not file a report to UKAB.

Factual Background

The weather at London/City and Stansted was recorded as follows:

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METAR EGLC 261950Z 34007KT CAVOK 24/10 Q1019=
METAR EGSS 261950Z AUTO 33004KT 9999 NCD 19/10 Q1019=
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Analysis and Investigation

UKAB Secretariat

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 horizontally and 400ft 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.

A CAA web site[1] 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 a EC145 and a drone flew into proximity at 1945 on Friday 26th August 2016. The EC145 pilot was operating under VFR in VMC in receipt of a Basic Service from Essex Radar. The drone operator could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the EC145 pilot and radar photographs/video recordings.

Members agreed that the drone was apparently being operated over a built-up area without CAA permission, was above the altitude where it could be considered in direct unaided line of sight and, if using FPV, was above the 1000ft allowed by regulation. They therefore agreed that this could be considered as endangering the EC145 and its crew in that the drone had been flown into conflict. Notwithstanding the difficulty of visual assessment of range without visual cues, when allied to the pilot's overall account of the incident the Board considered that the reported range was such that this was 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.

[1] dronesafe.uk

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The drone was flown into conflict with the EC145.

Degree of Risk: A.