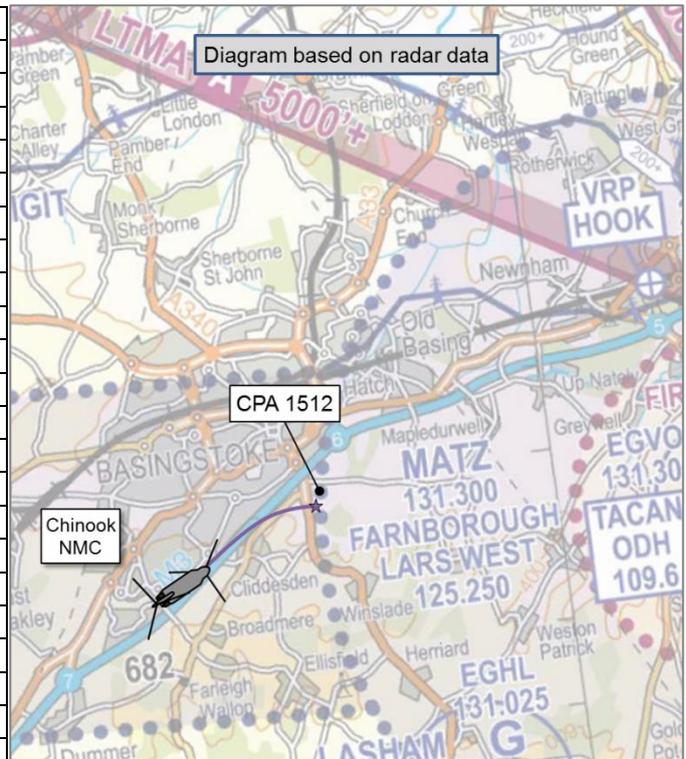


AIRPROX REPORT No 2015129

Date: 11 Aug 2015 Time: 1512Z Position: 5114N 00105W Location: 5nm W Odiham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Chinook	Drone
Operator	HQ JHC	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	
Service	Basic	
Provider	Odiham APR	
Altitude/FL	NMC	
Transponder	A, S	
Reported		Not reported
Colours	Green	
Lighting	Nav, Strobes	
Conditions	VMC	
Visibility	10km	
Altitude/FL	1000ft	
Altimeter	QFE (1006hPa)	
Heading	090°	
Speed	120kt	
ACAS/TAS	Not fitted	
Separation		
Reported	0ft V/75ft H	
Recorded		NK



THE CHINOOK PILOT reports recovering to Odiham. At a range of 5 to 6nm, during a simulated engine malfunction, the No2 crewman spotted what looked like a white and red quadcopter type UAV, with attached camera, pass down the right hand side, outside the rotor disc. A call was made to Odiham approach informing them of the incident.

He assessed the risk of collision as 'Medium'.

THE DRONE OPERATOR could not be traced.

THE ODIHAM AERODROME CONTROLLER reports that the Chinook was prenoted as joining from the west by the Radar Approach Controller. On the initial call the Chinook pilot was given joining instructions. The pilot informed him of a UAV, 5nm to the West of Odiham at 1000ft QFE that had an underslung camera.

THE ODIHAM SUPERVISOR reports that he was in the Visual Control Room. He was informed of the incident via the Radar Approach Controller. Upon receiving the information he 'swung' the Precision Approach Radar to RW09 and observed a contact at 5-5.5nm from touchdown at about 1000-1500ft QFE. He subsequently received a call from the crew advising that they had seen a white and red quadcopter style UAS (approximately 1 ft) with some kind of underslung load, possibly a camera, and that they were going to declare an Airprox.

Factual Background

The weather at Odiham was recorded as follows:

METAR EGVO 111450Z 02005KT 9999 -RA SCT034 BKN080 19/12 Q1020 BLU NOSIG

Analysis and Investigation

Military ATM

The tape transcript shows that at 1614:53 the crew reported, “{Chinook c/s} just as we approached the MATZ boundary there about one thousand feet suspected sighting of an unmanned aerial vehicle with a camera near beneath it.” The Aerodrome Controller requested the location and the crew responded with, “five miles due west of the field.”

The Chinook reported being under a Basic Service; however, the Airprox was reported on the Tower frequency, which may have meant that the aircraft was technically under an Aerodrome Service. As the RAC could not detect the quad-copter on radar replays, the CPA was estimated. The crew were on a visual recovery and responsible for their own collision avoidance. It is highly unlikely that the quad-copter was detected on Primary Surveillance Radar but Precision Approach Radar detected it at 5.5nm from the airfield.

The key barrier for an Airprox with a quad-copter would be see-and-avoid. It is unlikely that ATC would detect the drone, unless using Precision Approach Radar for IFR approaches and an Airborne Collision Avoidance System (ACAS) will not detect a non-transponding aerial vehicle like a quad-copter. A quad-copter would be difficult to acquire visually because of the small target characteristics and that is evident because the crewman visually acquired the quad-copter at the Closest Point of Approach (CPA).

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.

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

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).

Also, stay well clear of airports and airfields'.

Comments

JHC

The increased number of Airprox with drones occurring continues to be of concern to JHC. Particularly as they have a tendency to operate in the same lower airspace as JHC platforms and there is relatively little available to mitigate this risk. The risk is regularly publicised in flight safety publications, but otherwise, see and avoid remains the only credible barrier.

Summary

An Airprox was reported when a Chinook and a Drone flew into proximity at 1520Z on Tuesday 11th August 2015. The Chinook pilot was operating under VFR in VMC in receipt of a Basic Service from Odiham Approach; the Drone operator could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilot of the Chinook and the air traffic controllers involved.

The Chinook crewman reported seeing the drone pass down the right hand side at a similar height whilst inbound to Odiham. The Board noted that the drone was operating legally within Class G airspace in accordance with the regulations in ANO Article 166 and that, due to the location of the Airprox, the drone pilot may have been unaware of the proximity to the flying operations associated with Odiham. In aAs applies to other aviators, drone operators are fundamentally required to avoid collisions with all aircraft.

The Board determined that both aircraft were operating legally and they considered that the Airprox was a conflict in Class G. The drone did not appear on either NATS or Odiham's radars and therefore the exact separation between the two air-systems was not known; however, the Chinook crewman estimated the separation to be zero feet vertically and 75ft horizontally and therefore the Board based their assessment of risk on this estimate. It was determined therefore that separation had been reduced to the minimum and that luck had played a major part in events.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Conflict in Class G.

Degree of Risk: A.