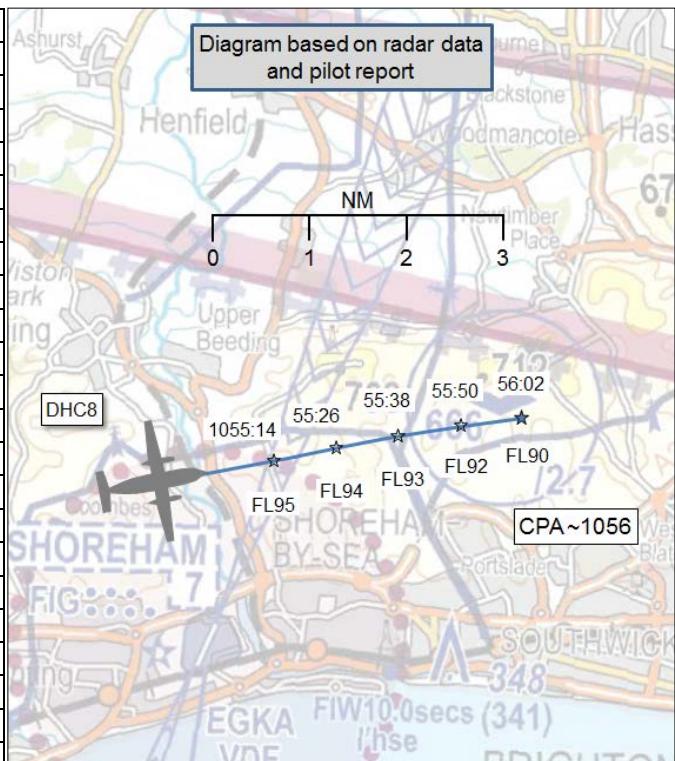


## AIRPROX REPORT No 2016037

Date: 20 Mar 2016 Time: 1056Z Position: 5052N 00013W Location: ivo Shoreham

### PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DHC8	Drone
Operator	CAT	Unknown
Airspace	London TMA	London TMA
Class	A	A
Rules	IFR	
Service	Radar Control	
Provider	Gatwick	
Altitude/FL	FL90	
Transponder	A, C, S	
<b>Reported</b>		
Colours	White, blue	
Lighting	All on	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	FL90	
Heading	~090°	
Speed	230kt	
ACAS/TAS	TCAS II	
Alert	None	
<b>Separation</b>		
Reported	100ft V/10m H	
Recorded	NK	



**THE DHC8 PILOT** reports in the descent to his destination when he saw a drone pass down the starboard side, under the wing. At first glance he thought it was a bird but then noticed it was a large grey 'professional looking' drone, rectangular in shape with a red steady light on top. There was insufficient time to take avoiding action and he reported the incident to ATC.

He assessed the risk of collision as 'Medium'.

**THE DRONE OPERATOR** could not be traced.

### **Factual Background**

The weather at Shoreham was recorded as follows:

METAR EGKA 201050Z 04010KT 9999 FEW016 BKN022 07/03 Q1024=

### **Analysis and Investigation**

#### **UKAB Secretariat**

The Air Navigation Order 2009 (as amended), Article 138<sup>1</sup> 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:

<sup>1</sup> 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) 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 site<sup>2</sup> 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 Notice<sup>3</sup> 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 a DHC8 and a drone flew into proximity at 1056 on Sunday 20<sup>th</sup> March 2016. The DHC8 pilot was operating under IFR in VMC in receipt of a Radar Control Service from Gatwick Director. The drone operator could not be traced.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of a report from the DHC8 pilot and radar photographs/video recordings.

Members agreed that the drone had been operated in the Class A airspace of the London TMA and that, at FL90, it could not possibly have been flown in direct sight of the operator. Therefore, the drone was either operating autonomously or remotely using First Person View (FPV). Under FPV operations, for drones of less than 3.5kg, the drone is not permitted to operate above 1000ft agl without CAA approval being gained and a NOTAM being issued. Notwithstanding, even if an observer was being used, the Board thought that they would not have been able to see the drone at that level. In any event, members agreed that the drone had been operated in contravention of applicable regulations and that the operator had therefore flown it into conflict with the DHC8. Recognising the difficulty in estimating range in dynamic situations without references, the Board noted that the DHC8 pilot had reported that the drone had flown 50-100ft below his aircraft; therefore, the Board determined that the risk was Category B, safety had been much reduced below normal.

## **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: The drone was flown into conflict with the DHC8.

Degree of Risk: B.

---

<sup>2</sup> [www.caa.co.uk/uas](http://www.caa.co.uk/uas)

<sup>3</sup> CAP 1202