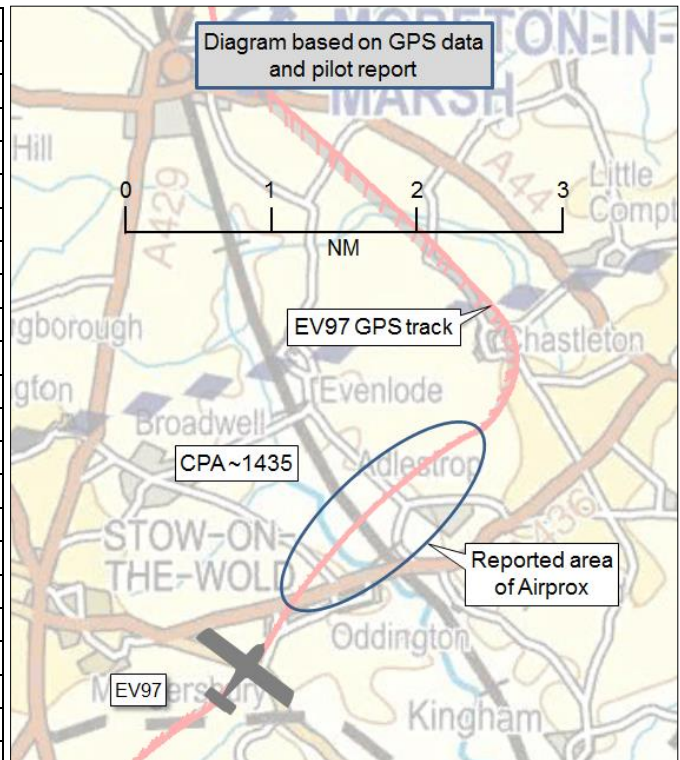


**AIRPROX REPORT No 2016264**

Date: 4 Dec 2016 Time: 1435Z Position: 5156N 00140W Location: ivo Moreton-in-Marsh

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	EV-97	Drone
Operator	Civ Pte	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	
Service	Basic	
Provider	Brize Norton	
Altitude/FL	NK	
Transponder	Not fitted	
<b>Reported</b>		Not reported
Colours	Silver	
Lighting	NK	
Conditions	VMC	
Visibility	NK	
Altitude/FL	3000ft	
Altimeter	QNH (1022hPa)	
Heading	Westerly	
Speed	NK	
ACAS/TAS	Not fitted	
<b>Separation</b>		
Reported	0ft V/250m H	
Recorded	NK	



**THE EV-97 PILOT** reports being on a flight to Wellesbourne when he flew past an unmanned aerial vehicle operating at almost exactly the same height, possibly heading on an approximately southerly course. The EV-97 pilot was in contact with Brize radar, in receipt of a Basic Service, but his aircraft was not fitted with a transponder. He believed the incident occurred about 3-5nm south of Moreton-in-the-Marsh. The drone was also witnessed by his passenger. At first sight he thought it was an aircraft in the distance before they rapidly approached it and saw it had four black arms with a dome on top, not underneath (as he would have expected were it taking pictures with a protected camera). He reported the incident to Brize Radar at the time.

The EV-97 pilot did not make an assessment of the degree of risk.

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

**THE BRIZE CONTROLLER** reports that although the event occurred a month ago he had a vague recollection of the details. He recalled working a Basic Service for a non-transponding aircraft, which he believed he had not formerly identified. The pilot told him on frequency that he had just had a drone fly in close proximity at 3000 feet. The controller questioned the altitude and asked the pilot whether he was going to report it, to which the pilot replied he did not know how to identify the drone but that he would report the incident.

**Factual Background**

The weather at Brize Norton was recorded as follows:

METAR EGVN 041450Z 07013KT CAVOK 05/01 Q1022 BLU NOSIG=

## 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 [1640ft] horizontally and 400ft [122m] vertically from the Remote Pilot.

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<sup>1</sup> 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 EV-97 and a drone flew into proximity at about 1435 on Sunday 4<sup>th</sup> December 2016. The EV-97 pilot was operating under VFR in VMC in receipt of a Basic Service from Brize Norton. The drone operator could not be traced.

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

Information available consisted of a report from the EV-97 pilot and radar photographs/video recordings (which did not show the EV-97 or drone).

The Board agreed that the reported altitude was such that it was unlikely the drone was being operated within VLOS and hence that it had been flown into conflict with the EV-97. Turning to the risk, although the incident did not show on the NATS radars, the Board noted that the pilot had estimated the separation to be 250m horizontally. 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 although safety had been degraded, a collision was unlikely; they therefore determined the risk to be Category C.

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

Cause: The drone was flown into conflict with the EV-97

Degree of Risk: C.

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<sup>1</sup> dronesafe.uk