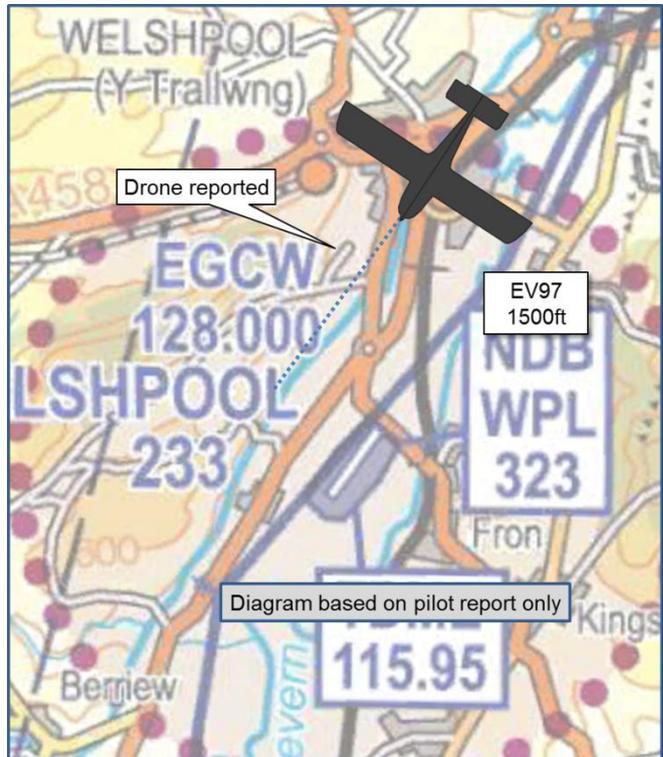


AIRPROX REPORT No 2015096

Date: 11 Jun 2015 Time: 1430Z Position: 5237N 00309W Location: Welshpool

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	EV97 Eurostar	Drone
Operator	Civ Pte	NK
Airspace	Welshpool	
Class	G	G
Rules	VFR	VFR
Service	A/G	NK
Provider	Welshpool	NK
Altitude/FL	1500ft	NK
Transponder	Not fitted	NK
Reported		
Colours	Grey	Dark
Lighting	NK	NK
Conditions	VMC	NK
Visibility	>20km	NK
Altitude/FL	1500ft	NK
Altimeter	QNH (1009hPa)	NK
Heading	220°	NK
Speed	69kt	NK
ACAS/TAS	Not fitted	NK
Separation		
Reported	25ft V/50ft H	NK
Recorded	NK	



THE EV97 PILOT reports flying a solo circuit at Welshpool, on turning downwind at 1500ft he checked the fuel pressure gauge and then noticed a Quadcopter, approximately 50ft from the aircraft, appear from behind the edge of the instrument panel. He applied full power and initiated a tight climbing right turn to gain separation. Once straight-and-level at 1800ft, he reported the incident before repositioning back into the circuit.

He assessed the risk of collision as 'Medium'.

THE EV97 PILOT'S INSTRUCTOR reports that this was a competent student that has flown gliders for some time. The incident happened over Powis Castle grounds and he contacted castle staff to see if they were aware of the drone. They had no knowledge of any drone activity and noted that drones are not allowed to fly from National Trust property. There is a park surrounding the castle, and the ground rises to 1000ft on the downwind leg of the RW04 circuit. Local pilots were made aware of the incident.

THE DRONE PILOT could not be traced.

Factual Background

The weather at Shawbury was reported as:

METAR EGOS 111350Z 09010KT 9999 FEW044 21/10 Q1018 BLU NOSIG

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).

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. 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.’

In addition, the CAA has published guidance regarding First Person View (FPV) drone operations which limit this activity to drones of less than 3.5kg take-off mass, and to not more than 1000ft⁴.

Summary

An Airprox was reported on 11 June at 1430 between an EV97 and a drone. The EV97 pilot was flying in the Welshpool circuit at 1500ft when he encountered the Drone downwind. The incident did not show on the NATS radars so the actual separation is not known. The Drone operator could not be traced.

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

⁴ ORSA No. 1108 Small Unmanned Aircraft – First Person View (FPV) Flying available at: <http://www.caa.co.uk/docs/33/1108.pdf>.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the EV97 pilot and his instructor, the incident could not be seen on the NATS radar recordings.

The Board noted that this was one of a number of drone Airprox reports this month where the drone operators were either conducting their operations illegally or without due regard for the safety of other aviators. Drones above 7kg are not to be operated within an air traffic zones during notified hours of watch, unless permission from the air traffic unit has been granted. Irrespective of the drone's mass, drone operators are required to stay well clear of airports and airfields, and are responsible for avoiding collisions with other people or objects - including aircraft. Ultimately, drone operators are required to not fly their unmanned aircraft in any way that could endanger people or property. On all counts, the Board considered that the drone operator should not have been operating where he was, in the Welshpool ATZ.

The Board were aware that many drones came with geo-fencing that was supposed to prohibit the use of the drone within sensitive airspace such as an ATZ; however, they had little information about whether this included all minor airfields. Ultimately, the Board noted that this type of Airprox was on the increase, and that a combination of technical solutions (such as geo-fencing), registration of drones, and education of drone operators was, in their opinion, key to reducing this type of Airprox.

The Board commended the look-out of the EV97 pilot, who managed to spot the drone and take avoiding action at a busy point in his flight profile, and one where he would not have expected to encounter a drone. This again highlighted the need for good lookout, even within the supposed protection of an ATZ, given that intruders (including aircraft) could unknowingly penetrate the airspace. Turning to the cause of the Airprox, the Board agreed that, because the drone should not have been in the ATZ, the drone had effectively been flown into conflict with the EV97. They assessed the risk as Category B; safety margins had been much reduced, but the EV97 pilot's avoiding action had been effective in preventing a collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The drone was flown into conflict with the EV97.

Degree of Risk: B.