

AIRPROX REPORT No 2010142

Date/Time: 21 Sep 2010 (Tuesday) 1530Z

Position: 5106N 00038E (3nm
S Headcorn)

Airspace: London FIR (Class: G)

Reporting Ac Reported Ac

Type: MD902 Untraced small

Unmanned ac

NO DIAGRAM POSSIBLE

Operator: Civ Comm NK

Alt/FL: 1200ft NK
(QNH 1019mb) (NK)

Weather: VMC CAVOK NK

Visibility: unltd NK

Reported Separation:

0ft V/ 35m H NK

Recorded Separation:

NK

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE MD902 PILOT reports flying an a blue and white helicopter on a VFR non-emergency flight with all lights switched on squawking 0014 with Mode C and listening out with Headcorn Radio. He was in level flight over Biddenden [5km S of Headcorn airfield], heading 280° at 120kt and at 1200ft QNH [about 1000ft agl] when the pilot saw what he believed to be a sports glider in his 12 o'clock at some distance. Some 2 to 3sec later the 'glider' passed down the starboard side at the same level about 100ft away. It was not a full sized ac and he estimated its wingspan as being 10-12ft. He decided to follow the ac to investigate; initially it flew at the same height and then descended 200-300ft, before climbing away up to 1300ft. It was pure white in colour with turned-up wing tips at 45°, had a high tail and no other visible markings. Although, obviously powered, he could not see an engine and no operator was seen on the ground in the vicinity. He was later informed it could not be seen from the ground. They reported the incident at the time to Headcorn Radio and then returned to base.

He was initially shocked and due to the short timescale involved was unable to take any avoiding action so he assessed the risk as being high.

He provided a detailed diagram of the aircraft.

THE SMALL UNMANNED AC OPERATOR could not be traced. The MD902 pilot suggested that the ac had been a new type of sensor-equipped small Unmanned Aircraft System (UAS) designed to view and monitor agricultural crops. The owner of the land over which the incident took place was contacted and was most helpful but she does not use such ac nor does she permit models to fly over her land. The manufacturer of the type of UAS is based overseas and declined to provide any details of UK based users.

UKAB Note (1): The drawing and description provided were very detailed and were similar in all respects to the type of UAS manufactured by the company contacted above. The machine is controlled from a laptop computer, is hand launched, is 4ft long with a wingspan of 8ft and is electrically powered by a small propeller in the nose. It operates between 400 and 2200ft but its alt can be adjusted to comply with national regulations. It is manufactured in Canada and, although

there is British TV news coverage showing its use in Sussex, there are no UK dealerships listed on the company's web site.

UKAB Note (2): CAP 722 covers civil UAV/S operation in the UK. Civil ac of under 20kg are classified as 'Small Unmanned Aircraft' and are covered by UK National regulation. The National Regulation is at CAP 722 Para 2.2. In essence this states that such ac must comply with the ANO (specifically Articles 166 and 167) or request exemptions from the CAA. Relevant sections of the ANO Articles are as follows:

'166(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.'

'166(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 purposes of avoiding collisions.'

'166(5) The person in charge of a small unmanned aircraft must not fly the aircraft for the purposes of aerial work except in accordance with a permission granted by the CAA'.

Article 167 confirms that small unmanned ac used for surveillance purposes are considered to be performing aerial work. It follows therefore that operators require permission to be granted by the CAA.

CAA Flight Operations Inspectorate (GA) has no record of any exemption for this type of ac.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included a report from the MD902 pilot and radar recordings.

While the Board normally discourages strongly pilots from following conflicting ac to determine their identity, in this case without the detailed description provided by the MD902 pilot, it is most unlikely that the UKAB would have been able to identify the type of UAS involved with any degree of certainty. Based on the detailed drawings the pilot provided, that match closely the photographs and description on the UAS manufacturer's website and a video of a TV news article, the Board was satisfied that the UAS involved was almost certainly of the type identified by the UKAB. It therefore followed that the UAS was hand launched, its flight programmed from a Laptop Computer, and was capable of flying 'beyond visual range' and therefore out of sight of the operator. Further, based on website information, it would seem that the type of control from the Laptop is indirect and limited in its effect.

The Board was therefore most concerned that this was a conflict with a hitherto unseen type of commercially available UAS, apparently being flown in contravention of the provisions of Articles 166 and 167 of the ANO. Members agreed that flying at such altitudes, apparently out of line of sight of the operator and with very limited manoeuvrability, poses a significant risk to other legitimate lower airspace users. That being the case, the Director of the UKAB decided to take the unusual step of informing the CAA of his concern over this type of aviation activity.

Members understood the concern of the Helicopter pilot when the perceived distant 'glider' approached so quickly and that he was unable to manoeuvre until after it had passed. Since he then followed the UAS, determining accurately its actual rather than perceived size, Members agreed that, although it could not be verified by any other information, his estimate of the 35m miss-distance was most likely correct. They also agreed that in the case of the MD902, due to the short time between the pilot's first visual detection to the object to the ac passing and since apparently the (unseen) operator had no direct control of the UAS, neither ac had taken any action to resolve the conflict. That being the case, Members agreed unanimously that there had been a degradation of normally accepted aviation safety standards.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Conflict with an untraced UAS.

Degree of Risk: B.