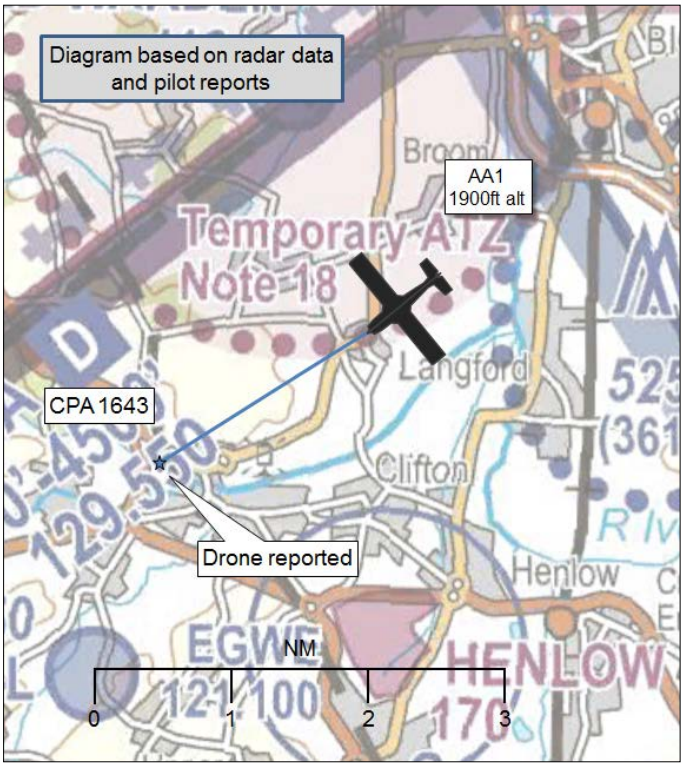
AIRPROX REPORT No 2016261

Date: 03 Apr 2016 Time: 1643Z Position: 5202N 00021W Location: Chicksands

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Grumman AA1	Drone
Operator	Civ Club	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	
Service	None	
Altitude/FL	1800ft	
Transponder	A, C	
Reported		
Colours	NR	
Lighting	NR	
Conditions	VMC	
Visibility	12km	
Altitude/FL	1900ft	
Altimeter	QNH (1004hPa)	
Heading	235°	
Speed	115kt	
ACAS/TAS	FLARM	
Alert	None	
Separation		
Reported	30ft V/0m H	
Recorded	NK	



THE AA1 PILOT reports that after a 45 minute transit in good weather, an object was seen to pass beneath the left wing of the aircraft. It was spotted too late to manoeuvre and came within 30ft of the aircraft. It was identified as a non-fixed-wing drone (the number of rotors unknown) approximately 3m in diameter and white or grey.

He assessed the risk of collision as 'High'.

THE DRONE OPERATOR COULD NOT BE TRACED.

Factual Background

The weather at Luton was recorded as follows:

```
METAR EGGW 031620Z AUTO 11006KT 9999 FEW038 14/08 Q1004
```

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.

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, 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[1] 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[2], 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 an AA1 and a drone flew into proximity at 1643 on Sunday 3rd April 2016. The AA1 pilot was operating under VFR in VMC, not in receipt of an ATS. The drone operator could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the AA1 pilot and radar photographs/video recordings.

Members noted that the drone was operating at 1900ft (approx 1700ft agl) and therefore beyond practical VLOS conditions. Therefore, in assessing the cause, the Board agreed that the drone had been flown into conflict with the AA1. 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 30ft vertically and that it flew under the wing of the aircraft. 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 a collision had only been narrowly avoided and chance had played a major part. They therefore determined the risk to be Category A.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The drone was flown into conflict with the AA1.

Degree of Risk: A.

[1] www.caa.co.uk/uas
[2] CAP 1202