

Unmanned Aerial Vehicles and Unmanned Aerial Systems

Overview

The European Commission has suggested that UAV's could be used for crisis management, law enforcement, border control and fire fighting. Hundreds of potential civil applications have been identified and many more are expected to emerge once the technology has been widely disseminated.¹

The regulation of drones appears dangerously lax, relying on the existing provisions based upon weight and ensuring air-worthiness. While we need clear rules that establish what type of drones can be used and why, focusing on the central issue of how regulate the 'payload' of the UAV – from cameras to projectiles.

Active Authorisations for Use of UAV's

It has been estimated that there will be 35,000 Remotely Piloted Aircraft Systems (RPAS) produced worldwide in the next 10 years.²

There are currently **89 active UAV authorisations** of which **only 4 are for the public sector**: 2 Fire and Rescue Services, 1 Police Force, and the Scottish Environment Protection Agency.

In 2006 to 2013, there have been **128 UAV authorisations** for 124 companies. There have been UAV authorisations awarded to **136 companies in total**.

A recent report by the UK's Aerospace, Aviation and Defence Knowledge Transfer Network found that applications for unmanned aircraft are said to be worth **approximately £260bn**.³

Speaking at the launch of the National Police Air Service (NPAS) the Home Office Minister, Damien Green MP, warned that unmanned drones must only be used by police as part of air support plans that are both 'appropriate and proportionate'.

However, we have yet to see any proposals from Government on how this can be enshrined in the operational legal framework.

¹ UAS Panel Proccerss – Workshop 1 – Discussion Paper, UAVSI, Annex 5 and EC/EDA high level conference, June 1st 2010

² NextGen UAS Research, Development and Demonstration Roadmap, Version 1.0, 15 March 2012

³ Aerospace, Aviation and Defence Knowledge Transfer Network, *Autonomous Systems: Opportunities and Challenges for the UK*, available at:

https://connect.innovateuk.org/c/document_library/get_file?folderId=278657&name=DLFE-91023.pdf

Current Legal Framework

1) Civil Aviation Authority

The CAA is responsible for ensuring the safety of Britain's airspace, and as such is responsible for licensing any air vehicles. In January 2010, the CAA introduced new regulations that require operators of small unmanned aircraft used for aerial work purposes and those equipped for data acquisition and/or surveillance to obtain permission from the CAA before commencing a flight within a congested area or in proximity to people or property.⁴

The CAA policy states: (in relation to Air Navigation Orders)

"There is no lower weight limit below which the ANO does not apply; however, the extent to which the regulations apply depends on the mass of the aircraft. ANO 2009 Articles 166 and 167 define constraints that are unique to small unmanned aircraft and small unmanned surveillance aircraft; some of these constraints are dependent upon whether the aircraft exceeds 7 kg or if it is used for the purpose of Aerial Work or surveillance. However, ANO 2009 Article 138 applies to all weight categories and stipulates that any person operating an aircraft shall not recklessly or negligently cause or permit an aircraft to endanger any person or property (which includes other aircraft and their occupants). If the CAA believes that danger may be caused, then the CAA may direct that the aircraft shall not be flown (ANO 2009 Article 232).

Furthermore, if the aircraft mass is below 20kg, it does not require an airworthiness approval, require registration and only requires an operating permission if it is used for aerial work purposes or if flown within a congested area of close to people or property.

2) Regulation of Investigatory Powers Act 2000 (RIPA)

Any surveillance that is directed at an individual, or covert, falls under the RIPA. Clearly, the nature of UAV and UAS is such that most surveillance will be covert, however it is far from clear that the existing guidelines on RIPA actually make address this challenge, with the legal framework to temporary CCTV appearing to be the prevailing attitude.

⁴ <http://www.caa.co.uk/default.aspx?CATID=1995>

3) Data Protection Act 1998 (DPA)

The CAA makes it clear that aircraft operators and pilots should be aware that the collection of images of identifiable individuals (even inadvertently) when using surveillance cameras mounted on a Small Unmanned Surveillance Aircraft may be subject to the Data Protection Act. As the Act contains requirements concerning the collection, storage and use of such images, UAV and UAS operators should ensure that they are complying with any such applicable requirements or exceptions.⁵

Existing CCTV systems fall under the DPA, which states that most CCTV is directed at viewing and/or recording the activities of individuals. This means that most uses of CCTV by organisations will be covered by the DPA.⁶ The basic legal requirement is to comply with the DPA itself.

4) Human Rights Act 1998

The European Commission notes that all actions related to the use and development of RPAS must respect the rights and principles in the Charter for Fundamental Rights of the EU; in particular the right to a private life and family life (Article 7) and the protection of personal data (Article 8).⁷

These issues were also addressed Parliament in a written answer [155035] on 17 May 2013.

Damian Green: *Use of unmanned aerial vehicles would need to comply with existing Civil Aviation Authority regulations. Covert use by a public authority likely to obtain private information, including by any law enforcement agency, would be subject to authorisation under the Regulation of Investigatory Powers Act 2000.*

That Act requires that covert investigatory techniques are used only if they are necessary and proportionate for purposes such as preventing or detecting crime or in the interests of national security. It makes deployment subject to independent oversight, inspection and right to redress in case of individual complaint. Any overt use of a surveillance camera system in a public place in England or Wales will be subject to a new code of practice prepared under the Protection of Freedoms Act 2012, on which the Home Office is currently considering its response to statutory consultation.

⁵ <http://www.caa.co.uk/default.aspx?CATID=1995>

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http://www.ico.org.uk/~media/documents/library/Data_Protection/Detailed_specialist_guides/ICO_CCTVFIN_AL_2301.pdf

⁷ The Council of the European Union, September 2012, Commission Staff Working Document: Towards a European Strategy for the Development of Civil Applications of Remotely Piloted Aircraft Systems (RPAS), SWD(2012) 259 final

Ethical and legal issues – Surveillance by Consent

In a world where UAV's – along with a whole host of surveillance equipment – are becoming more accessible to the state, corporations and individuals, with dramatic increases in their capabilities, how do we ensure that civil liberties are respected and proper regulation keeps in check the curious, the misguided and the downright intrusive uses of new technology?

While the existing legal framework may – under some strain – suit the current surveillance landscape, drawing a line between intrusive and covert surveillance and so called 'public space' surveillance, UAV and UAS use clearly challenges the premise that underpins this distinction.

Maintaining public confidence in surveillance is a key concern and the proliferation of UAV and UAS' with surveillance payloads risks severely undermining this trust.

Going Forward

It is impossible to say, even if just carrying a CCTV camera, a UAV – nano or otherwise – is the same capability offered by installing a CCTV camera on the side of a building or above a bank cashier's window. However, that is easier said than legislated for in an age where DIY UAV's are already being built and children's toys are not that far removed from the commercial offerings that defence contractors are now mass producing around the world.

The regulation of UAV's appears to be dangerously lax where they do not weigh enough to be covered by the main air rules, something which appears many are keen to exploit. We need clear rules that establish what drones can be used and why. The long-term potential of using UAV devices in situations where human life would be endangered is clearly a benefit, from fire control to search and rescue missions. Equally, the dangers of hyper-intrusive surveillance technology becoming increasingly accessible cannot be understated.

Therefore the impetus is on lawmakers now to ensure a framework is in place where the benefits of new technology can be realised, without the risks to liberty and privacy that left unchecked could undermine public trust in the entire law enforcement system.