



In Focus

Civilian Drones

The civilian use of drones—known as Remotely Piloted Aircraft Systems (RPAS)—has increased significantly in [recent years](#). In September 2015, the *Economist* [reported](#) that the “scale and scope of the revolution in the use of small, civilian drones has caught many by surprise”, and observed that some analysts thought over a million drones would be made and sold worldwide in 2015. Similarly, a Remote Control Project [report](#) observed that it is estimated that around 200,000 civilian drones are sold worldwide each month. Civilian drones are being used for a [variety of purposes](#), both recreationally and commercially. These include aerial surveys; deliveries; film-making and photography; infrastructure maintenance; farming; and rescue operations. In addition, there have been reports that drones are also being used for illegal purposes, such as [drug trafficking](#).

Concerns over Drone Use

The emergence and availability of civilian drones has raised a number of concerns. The *Financial Times* [reported](#) that an air safety [report](#) published in December 2015 found there had been four serious near-misses between drones and aircraft in 2015. The report noted that on one of these occasions, a drone almost collided with a Boeing 737 aircraft taking off from Stansted Airport. These incidents have led to [calls](#) from the British Airline Pilots Association (BALPA) for the authorities to “enforce current regulations and make new ones, such as compulsory insurance and registration”. Further, the *Economist* [reports](#) that the proliferation of civilian drones poses questions over their impact on privacy, suggesting that the increasing capabilities of drones means that they could be used to engage in “persistent surveillance”. Indeed, other commentators have [observed](#) that drones equipped with sophisticated cameras could fly over closed gardens or follow individuals. In addition, a [report](#) by the Remote Control Project called [The Hostile Use of Drones by Non-State Actors against British Targets](#), considered how drones could be used by hostile non-state actors against British targets. It noted that there are concerns that they could be used to deliver an improvised explosive device (IED) and the report recommended employing a series of countermeasures to tackle the potential threat. It suggested that regulatory countermeasures could be used to restrict the capabilities of commercially available drones, while passive countermeasures could involve the use of early warning systems and signal jamming. Finally, the report recommended using active countermeasures against drones still posing a threat, although noted that those “countermeasures currently available for use in non-military settings are limited”.

Regulatory Response

In early 2014, Wired [reported](#) that the rules governing the use of drones were “confused and complex”, and suggested that the debate about drones had “barely got started in the UK”. Similarly, a Parliamentary Office of Science and Technology (POST) [briefing](#) in 2014 observed that “concern...exists around uncontrolled growth and lack of regulation” for drones, “leading to potential overcrowding of

airspace and safety issues”. Currently, drones are regulated at the national, EU and international level. A recent European Parliamentary Research [report](#) noted that the “current regulatory system is based on fragmented rules”, with member states implementing different regulations for drones weighing less than 150kg. In the UK, drones weighing below 150kg are [regulated](#) by the Civil Aviation Authority (CAA). Those weighing 20kg or less are known by the CAA as ‘[small unmanned aircraft](#)’, and are governed by Articles 166 and 167 of the [Air Navigation Order 2009](#) (ANO). These require a drone user to keep their aircraft within their line of sight; only fly to a maximum height of 400ft; and to avoid aircraft and airports. In addition, drones fitted with cameras must not be flown within 50m of people, vehicles, buildings or structures, or over congested areas or large gatherings, and CAA permission is needed for aerial work. In July 2015, the CAA launched a ‘[Dronecode](#)’ which provides a “list of tips that will ensure recreational users can enjoy their drone without posing any risk to aircraft and other airspace users”.

Drones weighing between 20 and 150kg are [subject to all the articles of the ANO](#). Such a drone would require a Certificate of Airworthiness, although an [exemption may be granted](#) if the drone is to be flown within a 500m radius and below 400ft. However, drones weighing more than 150kg are also subject to [European Regulation \(EC\) No 216/2008](#) and [European Aviation Safety Agency](#) (EASA) airworthiness standards. At the international level, drones are regulated by the 1944 [Convention on Civil Aviation](#) (known as the Chicago Convention) which is administered by a United Nations specialised agency called the International Civil Aviation Organisation (ICAO). Article 8 of the Convention prohibits an aircraft with no pilot being flown over another state’s territory without permission.

On 1 December 2014, in evidence to the House of Lords EU Select Committee, UK Transport Minister, Robert Goodwill, [confirmed](#) that the Government intended to conduct a series of public dialogues on drone use. The [Drones Public Dialogue](#) is taking place from December 2015 to February 2016, in order to find out about “public attitudes to the use of drones both now and in the future”. Further, in his response to a House of Commons [written question](#) on drone safety in September 2015, Goodwill [announced](#) that the Government is in discussion with industry partners about the “development of an online application to track and manage small drones”, although the “development of this technology is still at an embryonic stage”. Likewise, he [explained](#) that the UK Government is in “early discussions with international partners about a drone traffic management system”, and announced that there will be a public consultation on drones in 2016. The work of the [Drones Public Dialogue](#) is intended to feed into this consultation.

At the EU level, the European Commission adopted the Communication, [A New Era for Aviation](#) in April 2014. Focusing on RPAS, this Communication outlined the Commission’s strategy for the “safe and secure integration of RPAS into the European aviation system”. To this end, the Commission proposed creating a common safety regulatory framework and developing the necessary enabling technologies, such as sense and avoid. In addition, the strategy called for measures to ensure the protection of citizens; and measures to support market development of European industries. In March 2015, the House of Lords EU Select Committee report, [Civilian Use of Drones in the EU](#), supported the Commission’s “aims to create an internal market in the EU for the commercial use of RPAS”. That same month, the aviation community, at a conference in Riga, agreed on a [number of principles](#) to “guide the regulatory framework in Europe”. Finally, on 7 December 2015, the Commission adopted a new [Aviation Strategy for Europe](#), which tasked the EASA with developing detailed rules governing drone operations. The EASA published a [Technical Opinion](#) on 18 December 2015, containing “27 concrete proposals for a regulatory framework for operating all unmanned aircraft irrespective of their mass”.

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