Gatwick Airport ‘drone chaos’—the impact on commercial drone industry and regulation

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TMT analysis: Simon Phippard, Of Counsel at Bird & Bird, considers the impact that the Christmas 2018 ‘drone chaos’ at Gatwick Airport is likely to have on the commercial drone industry and regulation.

What were the key challenges highlighted by the drones incident at Gatwick?

It appears accepted that the drone incident at Gatwick Airport was a sustained and malicious operation designed to disrupt the functioning of the airport. Whether there was a more malign intent to cause an aircraft accident remains unclear but if there is one good piece of news, it is that the drone was identified before an accident occurred and the suspension of flights prevented a more serious incident. However, the disruption was considerable.

The point to keep in mind is that the activity was unlawful. Indeed, despite the government’s reference in the aftermath to the summer 2018 changes to the Air Navigation Order 2016, SI 2016/765, implemented by the Air Navigation (Amendment) Order 2018, SI 2018/623 (ANO 2018), it would have been unlawful under the previous regime as well.

We do not yet know the size of the platform, at what height it was operating or whether it was being operated within the line of sight of an operator. As it is well known, the current UK regime permits limited low level, line of sight operations by platforms below 20 kg without a licence. However, the person in charge must be satisfied that the flight can be made safely, and if the vehicle weighs more than 7 kg, must have permission to fly in certain classes of controlled airspace or an aerodrome traffic zone. Since July 2018, there is an absolute height restriction of 400 ft above the surface for a small unmanned aircraft of any weight and additional restrictions have come into force within 1 km of the boundary of a protected aerodrome. Drone flight at any height within this area is prohibited during air traffic controllers’ hours of watch.

Most of the foregoing provisions carry a penalty of up to five years’ imprisonment if contravened. More significantly, section 1 of the Aviation and Maritime Security Act 1990 has provided for life imprisonment for the use of:

> ‘any device…unlawfully and intentionally…o disrupt the services of such an aerodrome, in such a way as to…be likely to endanger the safe operation of the aerodrome’.

It is hard to see how these provisions were not infringed. The same is probably also true if the disruption at Heathrow on 8 January 2019 was intentional.

The problem, in each case, is enforcement. This has been a general theme for civil aviation and other law enforcement agencies when dealing with emergence of drone operations. The small size of the platform makes identification, let alone determining location and height, difficult without special training or sophisticated equipment. Furthermore, the separation of the platform from the operator makes control over the operator considerably more difficult.

In light of the Gatwick incident, do the new registration requirements (due in force in 2019) do enough to increase the level of accountability and traceability of commercial drone operators?

It was a theme of the public dialogue in 2016 that the general public wanted drone operators registered. ANO 2018 introduced an obligation to register operators of drones over 250 g. The Civil Aviation Authority (CAA) must have a system in place by October 2019 for implementation by the end of November 2019.

The full effect of the registration scheme can only be judged when it is published. What we expect is for it to be easier to identify most drones and their operators—operators who now fly anonymously will be required to register and we

anticipate that most law-abiding citizens will do so. Some form of electronic identification system must be included to enable a drone to be matched to an operator when in flight. This should reduce the number of unidentified platforms and enable the authorities to concentrate on the drones which are not registered.

The obvious limitation is that those who are determined to break the rules will simply ignore it. However much there may be pressure on the commercial drone suppliers to encourage or even compel registration at the point of sale, there will remain a home-built market. Individuals or organisations determined to avoid identification will simply find means of not registering equipment or registering under a false identity.

At present, commercial drone operators in the UK are required to hold permission from the CAA and this helps identification. Ironically, the proposed EU regulations, to be adopted pursuant to the Basic Regulation, Regulation (EU) 2018/1139, will permit a level of commercial activity to take place in the 'open' category without the same level of technical regulatory oversight, but will still require registration of any operation of a platform above 250 g.

Is there anything more that can be done, through regulation, policing or technical advancement, which can prevent this type of incident from recurring in the future?

While there are many providers offering equipment and services to minimise the hazard posed by rogue drones, such equipment is not yet mature and raises a number of other issues such as the risk of collateral damage or contravention of other laws.

The requirement is both to detect and, if necessary, remove an unauthorised drone from the sky. It seems clear from the Gatwick experience that merely identifying a drone—and the location of its operator—with certainty is a challenge. Destroying the vehicle plainly runs the risk of collateral damage on the ground. We understand that technologies are in development which can take over control, perhaps even when the platform is not subject to direct wireless control from the ground. Technology of this nature will however drive demands for certainty that such interception can be carried out safely and will not inadvertently disrupt legitimate operations.

Moreover, numerous pieces of UK legislation may be inadvertently infringed if technology of this nature were to be deployed. Interception of a drone's control systems may require a warrant under the Investigatory Powers Act 2016. Such activities may fall foul of computer hacking offences. At some point it may be necessary for legislation to provide that such measures, undertaken as part of a counter drone strategy, do not fall foul of other legislation. The US has adopted just such a measure in the latter half of 2018 (Federal Aviation Administration Reauthorization Act 2018).

Furthermore, there is much effort to develop airspace management systems and regulatory infrastructure to permit drones to operate safely in conjunction with each other and with conventional aviation. The European Commissioner for Transport (ECT) has described this concept as the U-Space. Quite how far and how quickly such systems will develop remains to be seen but it will almost certainly require drones to carry electronic conspicuity equipment (which is a part of the forthcoming European regulations). This environment should increase the understanding of the known—and therefore presumed legitimate—operators, but there will still need to be a means to identify and deal with the uncooperative platforms.

What, if any, impact is this likely to have on the commercial drone industry—both in the UK and internationally?

The commercial drone sector generally favours the swift development of systems and infrastructure that enable the exploitation of the technology. The need for identification capability and a traffic management system is recognised. Recent developments are likely to accelerate the demand for such systems to be developed but the complexity is considerable.

The ECT has been championing the U-Space concept and it is not necessarily limited to low level operations. That may enable more drone operations at higher levels, and greater integration with conventional aviation, but that is plainly a long-term task. The UK aviation strategy has set a goal of 2050 for all aircraft to carry some form of electronic conspicuity. That timescale does not meet the immediate demand to improve protection of airports and other critical infrastructure from rogue drone operations.

There may well be pressure to accelerate the introduction of a UK drone registration system but, given that operators already require permission for commercial operations and will continue to do so (albeit to a more limited extent when the EU drone regulation system comes into force—which is not likely before Brexit)—the immediate impact of an earlier registration system in the UK is likely to be limited.

Interviewed by Alex Heshmaty.

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