

Commercial Drone Use

While hobbyists have been using unmanned aerial vehicles, better known as drones, for some time, companies are just starting to adapt the technology for their own uses. Small unmanned aircraft systems (SUAS), also known as remotely piloted aircraft systems (RPAS), have rapidly become more common in companies' commercial efforts. However, while drones may present your company with new business opportunities, the technology introduces new risks. And, in response, legislators and insurers are working to keep up with the burgeoning technology and its associated risks.

Despite the fact that drones are readily available, employing them for commercial use is not as simple as just buying one off the shelf. In order to receive the full benefits of utilising drones and to protect your company's investment, it is critical to understand the risks associated with commercial drone operations.

Complying with Regulations

Before your company can begin using a drone for commercial use, you must first receive permission from the Civil Aviation Authority (CAA). To receive permission, your company's drone pilot(s) must possess at least a basic understanding of the applicable aircraft pilot regulations, which should include the Air Navigation Order (ANO) and the Rules of the Air Regulations.

Under Article 166 of the ANO, when operating a drone, a pilot should adhere to the following rules:

- The operation of the aircraft must not endanger anyone or anything.
- The 'remote pilot' has the responsibility to ensure that the flight can be conducted safely.

Over the next decade, companies around the globe are expected to spend nearly an estimated £1 billion on drones.

- A drone must never be flown beyond the normal, unaided 'line of sight' of the person operating it. Generally, this is measured as 500 metres horizontally or 122 metres vertically.
- Drones weighing more than 7 kilograms, excluding fuel, are subject to additional regulations governing:
 - Where they can fly (not in Class A, C, D or E airspace)
 - When they can fly (cannot fly within an aerodrome traffic zone during the notified hours of watch of the air traffic unit)
 - How high they can fly (cannot fly more than 121 metres high)

If your company's drone is equipped with a camera, it must also adhere to Article 167 of the

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ANO, which includes additional rules. These rules state that a drone must not be flown:

- Over or within 150 metres of any congested area
- Over or within 150 metres of an organised open-air assembly of more than 1,000 people
- Within 50 metres of any vessel, vehicle or structure that is not under the control of the person in charge of the aircraft
- Within 50 metres of any person except during take-off or landing whereby the aircraft must not be flown within 30 metres of any person except for the person in charge of the aircraft

However, there are two exceptions to piloting a drone beyond the normal, unaided line of sight:

- Flying a drone from a 'pilot's eye' perspective through the use of an on-board camera, which is known as first-person view (FBV), does not fall under Article 167 of the ANO, if the camera is solely being used to safely control the aircraft. However, if video or photographs are captured in some way and used for other purposes, the CAA considers the flight to have been for data acquisition and Article 167 of the ANO **does** apply.
- If your drone weighs less than 3.5 kilograms and is compliant with Articles 166 and 167, the drone pilot using FBV would not need to maintain direct, unaided visual contact with the aircraft as long as the pilot has a 'competent observer' who maintains direct, unaided visual contact.

Physical Loss: Beyond the Aircraft

With drones, it is often the loss of the payload—not the aircraft itself—that can be the most costly. For that reason, your company will want to

consider the potential associated physical losses carefully.

One of the most widespread applications of drones to date has been in unmanned aerial photography. Companies associated with property, agriculture and insurance all have interests in surveying and photographing land. Generally, the cameras used to conduct these aerial surveys are expensive. In addition, filmmakers, who have also been pioneers in commercial drone use, often employ even more expensive cameras to capture that perfect shot.

Because of the increasing affordability of drones, the payload often has a higher intrinsic value than the aircraft itself. Additionally, cameras and other payloads are usually attached below the aircraft, which could leave it vulnerable to damage in the event of a hard or emergency landing.

Planning for Obsolescence

The specific technology used to construct a drone could prove to be especially costly in the event that a drone were to ever be lost or damaged. There are a number of manufacturers in the market, however, many have not diversified, and should some technological advancement prove to be too costly for certain companies—especially smaller, more independent ones—to adopt, they could potentially go out of business.

This situation is not particularly troubling if the drone is relatively new. However, the situation becomes more serious if the drone is 5 or 10 years old when your company needs to purchase a replacement part from its now bankrupt or defunct manufacturer. And, it would be unlikely that the desired part from another manufacturer would be compatible. Therefore, your company would be forced to purchase a completely new drone.

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Lessening Liability and Casualty

As with conventional aircraft, a drone crash could mean a hefty casualty claim. While the crash rate is actually relatively low for conventional aircraft, drones are not subject to the same rigorous maintenance inspections or stringent operator regulations that make conventional commercial aircraft crashes so rare.

Unfortunately, it is an inevitability that mechanical failures and operator errors will result in crashes. Companies, especially those that operate drones in populated areas, should make sure that they are adequately covered in the event of property damage or injury to a third party.

Under CAA's rules, all commercial drone operators must comply with Regulation (EC) 785/2004, which requires them to carry at least £700,000 of third-party liability insurance. When evaluating your company's insurance needs, you should be aware that public and product liability policies may exclude the operation of aircraft. Accordingly, drone operators must ensure that they have comprehensive cover tailored to their specific drone usage.

Protecting Against Theft and Fraud

Several benefits of using drones—their portability and advanced technology—could also prove to be great liabilities. The industry has not developed many internal safeguards for stolen drones, which can be easy and attractive targets for thieves. Unlike the traditional aircraft industry, which has a tracking system and serial numbers for aircraft parts, the drone industry has not yet adopted either a tagging or tracking system. This inability to properly catalogue and track drones has made it nearly impossible to recover one if it is lost or stolen.

Reconciling Broad Use

Another benefit that could become a potential liability is the flexibility of the technology, which allows for a drone to be potentially used as a broad-use aircraft. For example, the same drone that was used to photograph several acres of land one day could be used to survey a hazardous chemical spill the next day.

This kind of flexibility offers a broad number of business opportunities, but each new opportunity brings with it potential exposures that can compound upon one another. Your company will have to consider how you plan on utilising your drone(s) in order to make sure that its CAA authorisation and your insurance covers each arena of commercial use.

Securing Your Cyber Liabilities

Perhaps the greatest potential liability comes from the cyber risks posed by drones. While a hacker could hijack a drone and fly it into a commercial airliner or another populated location, which would result in massive property damage and potential loss of life, it is not the most likely avenue of loss. Your company's digital information—such as images, videos, data maps, etc.—is a far more enticing target for hackers equipped with a drone.

Putting it All Together

There will always be risks associated with new technology. Protecting your company means understanding those risks and minimising your liabilities. To evaluate your business' specific needs and to receive guidance on how to cover any potential drone risks, contact **Crendon Insurance Brokers Ltd** today.