

Places **Not to Drone**

Late last year in California, a massive wildfire swept across Interstate 15 destroying 20 vehicles. Firefighters may have been able to contain the blaze if drone users hadn't prevented emergency aircraft from operating.

The Remotely Piloted Aircraft Systems (RPAS, generally known as drones) rules, that came into force 1 August 2015, provided drone users with more certainty about their privileges.

But with airspace privilege comes airspace responsibility.

To keep our skies safe, it's essential that all drone users have a sound understanding of the rules and knowledge of airspace.

In the Californian event, before firefighting operations were suspended, the drones actually chased some of the manned aircraft to capture the most dramatic footage possible.

What those users didn't understand, is that their drones are in fact 'aircraft', not just toys or a handy photography platform. When flown in an unsafe way, they have the potential to cause serious harm.

Avoid Wildfires

Flying drones near wildfires without permission creates a hazard for manned aircraft that are attempting to fight the fire.

Wildfires can spread as fast as 10 km/h hour in forests, and 22 km/h in grasslands. Aerial firefighting is an important tool in the firefighters' arsenal, and is usually employed in conjunction with ground-based teams. There have been instances overseas where aircraft have extinguished fires long before ground crews were able to reach them.

Without aerial firefighting, the Rural Fire Authority's ability to put out wildfires is seriously hindered, says Ian Millman, Manager Rural Fire Resource and Development.

"Unfortunately, there have already been some drone occurrences involving wildfires reported in New Zealand.

IF YOU'RE FLYING, WE CAN'T.

Flying drones near wildfires, without permission, creates a hazard for manned aircraft that are fighting the fire.

Fire Managers must suspend aerial firefighting until unauthorised drones leave the area.

Without aerial firefighting our ability to put out wildfires is seriously limited, which may put lives at risk.

For further information on operating drones go to: www.caa.govt.nz/rpas

CAA
CIVIL AVIATION AUTHORITY
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The Safety of our Skies is our Business

For more information contact your local Rural Fire Authority

Photo courtesy of Transpower.

"We need everyone who flies drones to understand the importance of keeping away from vegetation fires and other emergency situations at all times.

"During a fire, drones are difficult to see from the air, as they blend with the ground view and smoke conditions. Unauthorized drones flying near a vegetation fire will lead to aircraft being grounded by the fire manager. Unauthorized drone use in emergency circumstances could result in a catastrophic accident, such as a mid-air collision.

"The only time that drone users may fly under these circumstances is if they have the appropriate approvals from emergency services," says Ian.

Avoid Powerlines

Take particular care when operating near overhead transmission and distribution lines. If your drone accidentally contacts an overhead line, alert your local electricity distributor immediately, and if it's stuck, never try to retrieve it yourself.

Northpower, an electricity distribution company, recommends maintaining a distance of at least 20 metres at all times.

Transpower is the owner and operator of the national grid. Its General Manager of Grid Performance, Jim Tocher, implores drone users to maintain a safe distance.

"We would advise UAV operators to use their aircraft well away from high-voltage transmission lines and substations," says Jim.

"They have the potential to put the public, our staff, and contractors at risk, and disrupt power supply."

Two incidents occurred in September 2015 where drones were operated close to power lines. One drone struck a Transpower high-voltage transmission line in South Canterbury, and the other contacted an overhead line on Northpower's distribution network in Northland.

In the Transpower incident, the drone operator took responsibility and phoned their local distributor immediately.

Apparently, the drone lost communication and automatically returned to its programmed base. On the pre-programmed return flight, it struck the 220 kV Roxburgh-Islington transmission line.

It's a good example of why, before flying, you need to check the drone's settings to ensure the automatic return to home function will be conducted at a height that will keep it clear of overhead lines and other obstacles.

"That drone had to be removed by experienced live-line crews, so that we could avoid potential power outages," says Jim.

Northpower was not so lucky. The Northland overhead line incident caused a flashover (an electrical short-circuit through the air). It destroyed the drone and triggered a 20-minute power outage, during which 200 local businesses were forced to stop work.

Fortunately, no one was injured and the line didn't come down, but the risk could have been avoided had the operator been aware of the lines and maintained minimum safety distances.

More Info

All the information you need to pilot your drone safely is available on the CAA web site, www.caa.govt.nz/rpas. Pay close attention to Part 101 and Part 102, and Advisory Circulars AC101-1 and AC102-1.

A number of organisations are now providing training specifically for RPAS operation. Formal training is recommended for all RPAS operators. See the CAA web site for a list of approved trainers.

Information about flying safely around electricity networks can be found at www.transpower.co.nz – search "drones". ■

