

Too Low, No Go

What do blasting, drones, and rockets have in common? If you fly below minimum height, you might just find out.

The sky isn't the only limit when flying. Every VFR flight is bound by basic minimum height rules.

A minimum height of 500 feet above the surface must be observed, with some exceptions – the most obvious ones being takeoff and landing, or emergency situations.

Picture a circle on the ground directly below the aircraft, extending out 150 metres in all directions. The aircraft must be 500 feet above any obstacle, person, vehicle, vessel, or structure within that circle.

About to fly over a 100 feet tall hill or crane? Make sure you're going to be 500 feet above it.

Extend the circle out to 600 metres in all directions and the aircraft must be 1000 feet above any congested areas like a city, town, or settlement that falls within it.

CAA Aeronautical Services Officer, Paula Moore, says the definition of a settlement could surprise.

"A prison could contain more than 1000 people, and should itself be considered a settlement," she says.

Aircraft are also required to fly at an altitude that would allow an emergency landing without hazard to persons or property.

Having said all that, there are of course exceptions to the rules.

Legitimate activities like aerial photography or topdressing may require an aircraft to fly below the minimum.

This can be done when there is no hazard to persons or property, and when there are only people essential to the operation on board.

Low Flying Zones

Low flying zones (LFZs) are areas designated for pilot training in manoeuvres below 500 feet.

Use of an LFZ is restricted to those who have been authorized by the holder of a flight instructor rating, and have been briefed by the 'using agency' on operating procedures for the LFZ.

Aircraft should maintain at least 500 feet AGL until they cross the LFZ boundary. Likewise, when vacating, aircraft should be at least 500 feet AGL before crossing the boundary.

The Dangers

A lot of dangerous activity takes place below 400 feet. If it's happening more than four kilometres from an aerodrome, there's every chance that pilots won't know about it.

"Projectiles from debris blasting could go up to 400 feet without notification. Weapons or pyrotechnics, too, can go up to 400 feet," says Paula.

Balloons and kites can also go higher than you might think. Kite fishing in coastal areas, for example, can see Kontiki rigs climbing to surprising heights.

The massive increase in the use of RPAS – or drones – at low level is also something that every pilot needs to be aware of and avoid.

Minimum height rules are more than just the letter of the law. They're an essential safety tool, ensuring separation from a wide and ever-increasing range of hazards.

More Information

The minimum acceptable heights are prescribed in Civil Aviation Rule 91.311 *Minimum heights for VFR flight*, while low flying zones are detailed in Civil Aviation Rule 91.131.

For a list of LFZs and using agency contact details, refer to *AIP New Zealand* ENR 5.3 Other Hazardous Airspace. ■

