



# Airstrips

Operations at an airstrip involve many factors that are different from a long sealed runway. But with the right mentoring and flight instruction, you can develop and grow your experience for on-going safe operations in all facets of your flying, including airstrip operations.

**D**isturbingly, there are examples of unsupervised (mostly private) low-time pilots coming to grief at airstrips by not applying or knowing about safe operating practices. This article looks at two recent accidents at non-published private airstrips, and gives some tips and insights for safe airstrip operations.

## Some Accidents

In one case, a pilot lost control of his Cessna 172 at low level during a go-around, when he allowed the airspeed to get too low.

The pilot was familiar with the 500-metre airstrip, having landed there a number of times before. The pilot did a run along the length of the airstrip at low level to clear some stock, and then flew a reverse turn to position for a landing in the opposite direction.

The airstrip was situated in the lee of some nearby hills, and with a crosswind of about 15 knots there was turbulence and probably wind shear over the airstrip. The aeroplane was operating near its maximum all-up weight, and its maximum demonstrated crosswind was 15 knots.

The aeroplane touched down with reduced flap about halfway down the mostly level airstrip, at what appeared to be a high groundspeed. A slight tailwind may have been present for the landing. A short time after touchdown the pilot applied power for a go-around and retracted the flap. The aeroplane stalled soon afterwards, and the pilot was unable to regain control

before it struck the ground in a nose-down attitude, killing the pilot and seriously injuring the two passengers.

In another case, a Cessna 172 with three adults on board landed long and ended up in a ditch at the end of the 570-metre private airstrip. The occupants all received serious injuries, and the aeroplane was substantially damaged.

The pilot had not landed at the airstrip before but did get a prior briefing from the owner. The airstrip was level and equipped with a windsock. Several other aeroplanes were in the circuit when the pilot arrived, which he said distracted him. He did an overhead join, but didn't position the aircraft correctly to observe the whole airstrip or notice the ditch at the end of the airstrip, even though the owner had told him about it.

The pilot said he thought the airstrip looked longer than it was. He used full flap for the landing, and believed the wind may have shifted during the final approach and that he could have encountered a tail wind component, which increased his groundspeed.

## Reminders

These examples serve as reminders to pilots that they need to get it right when operating into airstrips, to have a good understanding of all the requirements for safe operations and the necessary hands-on skills. In both examples, the airstrips were not unduly short and were within the landing capabilities of each aeroplane.



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Carlton Campbell, an A-category flight instructor and flight examiner and CAA Standards Development and Training Officer, says that safe airstrip operations require prudent planning, the right skills and the use of the right aircraft.

"Pilots, especially private aircraft owners, who meet the basic licence requirements and aren't supervised, can operate into private airstrips having never operated on anything other than a long hard runway before. This can be a recipe for disaster. Their licence training may not have provided them with the specific instruction needed for airstrip operations, or exposed them to the many factors they need to consider for these operations," Carlton says.

The following are some examples of the understanding and abilities that pilots need to operate safely at any airstrip.

- » Airstrip conditions – slope, width, variable and seasonal surface conditions, obstacles, landing and takeoff distance, whether it's one-way.
- » Aircraft performance – the ability to land and take off safely at the intended operating weight, at the density altitude. Understanding that aircraft condition (age, prop condition, etc) can reduce its performance.
- » Sloping airstrips – optical illusions, flying the right approach, escape options.
- » Approach and go-around paths – clear and obstacle-free, or do 'dog legs' have to be flown?
- » Landing decision point – choosing one, doing final wind checks, at the right speed on profile for the landing aiming point, the discipline to go-around if you're not correctly set up, and to continue once the committal point is passed.
- » Aircraft configuration, power, speed control – powered approaches at 1.3 times the stalling speed in the landing configuration are usually best, depending on the wind. Don't aggregate speed increments for each contingency. Understand flap use and what settings are best, use correct

takeoff rotate speeds, during climb out or go-around whether to use the best rate or best angle of climb speed.

- » Takeoff decision point – know that point, know why and when to reject a takeoff and what action to take.
- » Environmental conditions – the prevailing wind, how to manage the difficulties the surrounding topography can pose, such as wind shear (have a margin), turbulence, sun and shadow effect, or optical illusions.

## Preparation

"Before operating at any airstrip, pilots should have specialised flight instruction, or refresher training, in short field operations at actual airstrips. In doing so, pilots will develop the skills, experience and confidence they need to operate safely and to avoid becoming another statistic. Remember though, that training on one day will not necessarily prepare pilots for the potential conditions of another day, or a different season," Carlton advises.

## Protocols

Before using an airstrip you need the permission of the owner, and must comply with any conditions or limitations of use. Open communication should be maintained so that any safety issues or operating restrictions can be discussed in advance.

## The Rules

Rule 91.127 (a) *Use of aerodromes*, says no person may use any place as an aerodrome unless that place is suitable for the purpose of taking off or landing of the aircraft concerned.

## Further Reading

*Takeoff and Landing Performance* GAP booklet – email [info@caa.govt.nz](mailto:info@caa.govt.nz) for a free copy, or go to [www.caa.govt.nz](http://www.caa.govt.nz), "Publications". ■