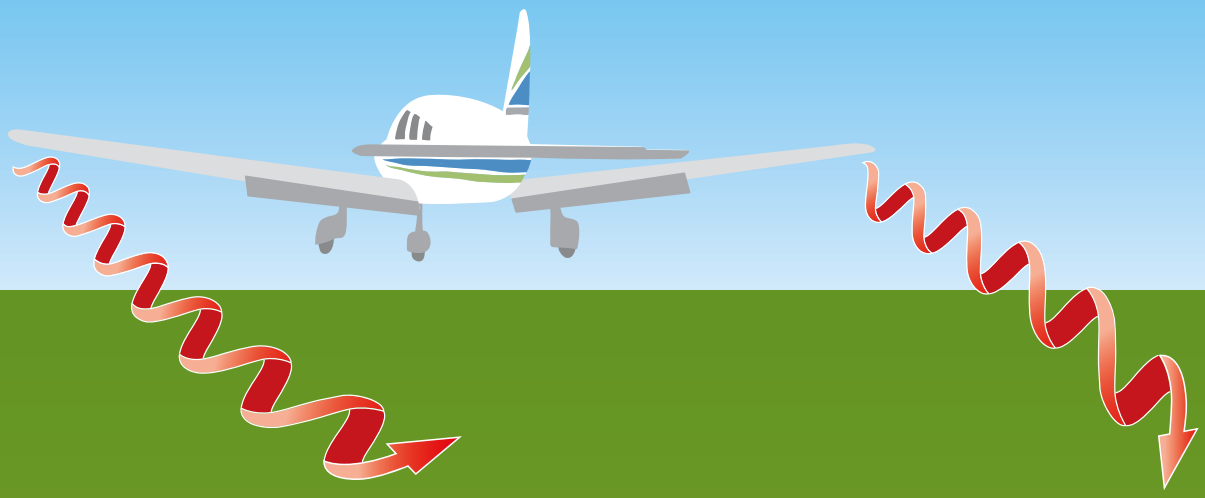
Wake Turbulence – The Invisible Threat

All aircraft create wake turbulence, and usually the size of the aircraft is a good measure of how much wake it creates. There are some exceptions, however, and we cover this in the newly updated *Wake Turbulence* Good Aviation Practice (GAP) booklet.



You can't see wake turbulence – just its effects sometimes – and that's what makes it so dangerous. Heavy aircraft aren't the only cause. Sure, you know you don't want to be flying a Cessna in the wake path of an A380, but even light aircraft create wake turbulence.

Separation

The key to avoid airborne wake turbulence is sufficient spacing and time between aircraft. In controlled airspace and at controlled aerodromes, Air Traffic Control provides wake turbulence separations and advisory information based on aircraft weight. However, some aircraft require more separation than their weight would indicate, such as the NH90 helicopter used by the Royal New Zealand Air Force.

Wake turbulence incidents can happen with a variety of aircraft, including flying behind aircraft of the same type or weight category.

In general, the risk of unexpected wake turbulence is greatest during an approach in visual conditions at an uncontrolled aerodrome where aircraft are maintaining their own wake turbulence separation.

Factors to take into account include the aircraft weight, weather conditions, and phase of flight.

Helicopters

Wake from helicopters acts a little different from fixed-wing aircraft and is a little harder to predict.

The Air Force's NH90 creates a larger wake than expected for its weight category and should be treated as a large aircraft for separation purposes. The NH90 flies throughout New Zealand but is based at Ohakea, Manawatu.

Neil Jepsen, CFI of the Feilding Flying Club, says despite their proximity to Ohakea, they rarely see the NH90s, but are very much aware of their potential wake turbulence.

"We encourage all our members to be aware of the NH90s and the Air New Zealand and Jetstar turbo props using Palmerston North aerodrome," says Neil.

"We suggest a separation of at least five kilometres, but we generally avoid flying anywhere near the turboprops or the Air Force.

"In saying that, in 50 years of flying, I've never flown into wake turbulence, nor experienced it during takeoff or landing.

"But we still take extreme care to ensure we have plenty of time between aircraft movements during takeoff and landing, especially when there's no wind to dissipate the wake."

GAP Booklet Updated

We've refreshed the *Wake Turbulence* GAP booklet, so now's a good time to refresh your knowledge of this potentially deadly hazard. Order a free copy by emailing info@caa.govt.nz. ■