

BAC Safety Spotlight



January 2022

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Helicopter Wake Turbulence

As emergency helicopters often utilise Bathurst airport, light aircraft pilots need to be aware of the hazards associated with their wake turbulence. In a slow hover taxi or stationary hover a helicopter generates down wash from its main rotors due to the high pressure air on the lower surface of the rotor blades flowing around the tips to the lower pressure region above the rotor blades. The air is then forced down and out and then back up again as it hits the ground. In forward flight, departing or landing helicopters produce a pair of strong, high speed trailing vortices similar to wingtip turbulence of larger fixed wing aircraft.

Pilots of small aircraft should avoid operating within three rotor diameters of any hovering helicopter and be aware that it may lift off with significant increase in downwash. Caution should be exercised when operating near or crossing behind landing and departing helicopters.

The next time you see a helicopter in motion give it plenty of space and always remember to secure your aircraft when it is unattended. These videos assist in explaining helicopter wake turbulence:

[Helicopter Wake Turbulence Demonstration](#)

[Helicopter Wake Turbulence Explained](#)



Although not common, a number of incidents and accidents have been related to helicopter wake turbulence:

- [Diamond DA20 crashes on take off following UH-60 helicopter](#)
- [Piper Turbo Arrow crashed while landing after a large HH-3 Coast Guard helicopter](#)
- [Blackhawk downwash may have contributed to Cirrus crash](#)
- [Possible rotor wash incidents at Bankstown and Jandacot airports](#)

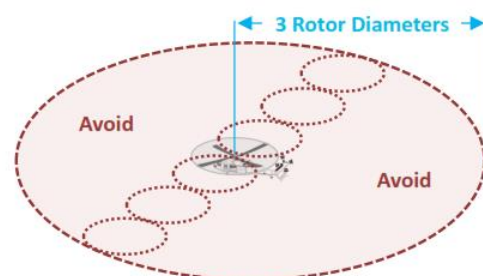


Figure 2: Downwash during slow hover taxi and stationary hover. (Source: FAA AC 90-23G.)

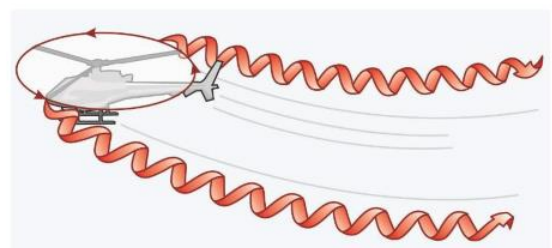


Figure 3: Helicopter wake turbulence during forward flight. (Source: FAA AC 90-23G.)

Diagrams from [Casa Advisory circular AC 91-16 v1.0](#) December 2020 File ref: [D20/500837](#)

Avoiding Complacency – 2022 Goals

With the start of a new year many people set resolutions and goals. Now is the perfect opportunity to review your flying and decide what you would like to improve or achieve going forward. There is a risk that without being challenged, complacency can start to set in which could then result in a close call, incident or accident.

Some areas to consider would be:

- Plan and fly a nav to somewhere new
- Brush up your skills to fly in controlled airspace
- Practice a Go-Around
- Refresh your emergency procedures
- Attend a BAC Seminar or Proficiency Day
- Read a flight safety magazine or accident report recommendations
- Take a flight with an instructor, this could even be in a new aircraft type
- Review your general health including diet and exercise.

RAAus have published an article about complacency and tips to avoid it which can be found here:

www.raa.asn.au/our-organisation/safety/nationalsafetymonth/week-1/are-you-becoming-complacent/

A good support network can also be beneficial. Consider joining in at a BAC event or even introducing someone new to aviation this year.



www.raa.asn.au

Bathurst Aero Club – 2022 Events

Each year Bathurst Aero Club offers numerous events to support pilot proficiency and flight safety. Below are a few you might like to add to your calendar:

Pilot Proficiency Days:

- 13 February
- 10 April
- 24 July
- 30 October

Seminars:

- 20 February
- 29 May
- 28 August
- 6 November

Night Flying:

- 11 June
- 20 August

For a full list of 2022 events refer to the BAC website:

<https://bathurstaeroclub.com.au/>



AvSafety Seminars

CASA has published their calendar of 2022 AvSafety Seminars. This includes a mix of online and face-to-face events. For all the details visit:

www.casa.gov.au/search-centre/events

