

Managing Wire Hazards

Working alongside wire hazards requires careful planning and communication between the parties involved. When the 'get here ASAP' jobs arise, don't cut corners – the consequences can be disastrous.

Beware of complacency. If you take shortcuts, you are accepting unnecessary risk.

This 11 Kv powerline, one of three wires, was severed by a Eurocopter EC 120 B. A safety investigation cited complacency as a contributing factor.

A recent Health and Safety investigation into a wirestrike incident identified a lack of communication between the pilot and the client as a contributing factor.

During the investigation, a number of wires were discovered that the pilot was not advised about. Fortunately in this instance, the pilot was unharmed and the aircraft sustained only minor damage.

Shared Responsibility

Time constraints, weather limitations, and client demands – there's always pressure to get the job done. Pressure increases the temptation to take shortcuts when planning a job and assessing the risks.

Complacency can be a shortcut to catastrophe. If you take shortcuts, you are accepting avoidable risk and compromising your situational awareness. You need to view every job with a fresh set of eyes. If it's a repeat job, don't rely on old information.

Also realise that you are only one component in the safety equation. A large amount of responsibility rests on the client's shoulders.

Clearly communicate the nature of the job, the risks you face, and let the client know they bear some of the responsibility.

Alan Beck, President of the New Zealand Agricultural Aviation Association, comments on the risks faced by pilots working in the agricultural industry.

"For reasons of expediency, farmers have traditionally pulled the wire from one side of a gully to the other and then stretched it tight. These 16 gauge wires are hard to see, and there isn't always a pole to alert the pilot that a wire is present.

"Because of the tensile strength, the wire doesn't break easily. It tends to wrap itself around drive shafts and rotor masts until control rods break, or the helicopter is 'winched' to the ground. This happened to me in my only accident in over 20,000 hours. It resulted in a fractured spine, and damage to the helicopter.

"Many pilots have spent decades trying to get farmers to understand the risks. To their credit, a lot of farmers have taken wires down, or strung them on top of the fence line. However, the vast majority just left them where they are, with the excuse that the pilot has been told about them, or 'he knows they are there'.

"Unfortunately, it is usually a momentary distraction that causes a pilot to forget about the hazard, such as a blocked nozzle, or the phone ringing in his ear, or the loader driver calling during a spray run to verify something," says Alan.

Health and Safety in Employment Act

The client is required by the Health and Safety in Employment Act 1992 to take all practicable steps to ensure the safety of contractors and their employees while they work. In other words, if a wire left by the client causes injury to a pilot, this is an offence under the Act and the client can be prosecuted.

Ed Randell, CAA Manager Health and Safety, discusses hazard management.

"If you have a concern about the location or visibility of a particular wire, then raise it with the client. In most cases, they can reposition a wire along a pre-existing fence. If this can't be done, we recommend that the wire is removed during the job," says Ed.

Mapping the Hazards

To help safeguard yourself and your company against a potential wirestrike, you should formalise the communication process. Make sure that any exchange of information is well documented.

To assist you with the process, there's a Contract Relationship Management guide on the CAA web site, www.caa.govt.nz, "Health and Safety".

The client needs to provide a detailed map showing wires, high fences, and other hazards. Be positive in how you ask about wires or hazards. Use phrases like, "where are the wires around here?" and, "How do these structures get their power?" Make sure clients survey their property before an operation, rather than giving you a sketchy hazard rundown from memory.

Stress that hazards in the surrounding areas must also be identified. In an emergency, you may need to fly outside the intended operating area.

Your hazard map needs to be comprehensive. For further insight, you can talk to neighbouring landowners, or other operators who have experience working in the area.

Aerial Reconnaissance

Don't rely solely on the information the client provides. Complete a full 360-degree reconnaissance of the area you are about to operate in from the air and from the ground.

When conducting reconnaissance:

- » Take note of any structures that use power. Power is often supplied by an underground cable – but not always. Be especially careful of single wires strung across farm buildings. They are particularly hard to see, and can also be attached to hidden structures.
- » Look for poles. If there is a pole, it's highly likely there is a wire, even if you can't see it. Also be mindful of earth wires which run between the tops of pylons. They are thinner and much harder to see than the actual conductors.
- » Assume that all rivers and streams have wires strung somewhere.
- » To aid your situational awareness, try to get an idea of how the wires look from different angles.

For further information see the *Vector* article: "Avoiding Wirestrikes", January/February 2009.

To contact the CAA Health and Safety Unit, email: hsu@caa.govt.nz. ■

Wirestrike Avoidance Course

The "CRM in the Wire and Obstruction Environment" course will be held in New Zealand again this year by Bob Feerst, an internationally renowned safety expert specialising in wirestrike avoidance.

The course aims to give pilots the specialised skills needed to fly in the wire environment and the knowledge to help them forecast the presence of wires before they can actually be seen.

The dates, times and venues were not available at the time *Vector* went to print, but details will be available from: www.totalaviationquality.co.nz.