

# VECTOR

Pointing to Safer Aviation

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## Do Helmets Really Save Lives?

The following article is taken straight from a recent issue of *Transport Canada's Vortex* (Issue 3/95). The focus is on helicopter pilots, but fixed wing pilots shouldn't dismiss the topic.



This helmet and visor protected the pilot of a Canadian Bell 206 when a large bird (Western Grebe) came through the windsreen.

You can bet your sweet (expletive) they do. They have in the past, and will continue to save lives and serious injury in accidents yet to happen. Give them whatever name you wish — electric hat, bone dome, brain bucket, hero hat or, that old standby, flying helmet — they work as advertised.

Throw your trusty helicopter at the ground or some other hard object (for whatever reason), and more often than not you're in for a very interesting ride before all the parts stop. Even with your body secured by a seatbelt (we hope) and shoulder harness, the head gets to move around on its own. This mobile part very often comes in contact with less-than-forgiving items like door posts and even parts of the ground like rocks and trees. The main rotor has been known to enter the cockpit area, contacting occupants. The question is, if you're going to be hit in the head by a main rotor, would

you like to be wearing a bone dome or a baseball cap? I know an individual (he's still with us) who was hit in the helmet by a blade as it came through the cockpit, but I don't know of any baseball cap users who have had the same experience and remained to talk about it.

The helmet will not save everyone, but the statistical evidence is there; they do help, not only in saving lives, but also in preventing serious brain injuries. It doesn't take much of an injury to reduce your brain power from smart (most helicopter pilots) to radish-equivalent. It's your choice.

Early in its development (during World War 1), the parachute was banned from a number of military cockpits. "Bad for morale, take away from our boys' aggressive attitude." Sounds wild, but it actually happened. Nowadays for "parachute", read "helmet".

From the community that feels a baseball cap will provide adequate protection, we get a variety of reasons why they don't, won't, wear a hard hat. A while back we asked you, the readers, a few basic questions on helmets, and the returns were generally very positive for the use of helmets. Eighty-five percent of the responses were in favour of helmets for crew members on most jobs (the notable exception was airline operations).

Here are the questions and a cross-section of the responses. We'll let you be the judge.

### Do you wear a helmet?

- No, they cost too much, are uncomfortable and look wimpy.
- Sometimes, it depends on the job and if I have passengers.
- Not yet, but I'm thinking about it.
- Not yet, but I will.
- Always.
- No, because I spend a lot of time flying vertical reference and my neck gets stiff.
- I have a helmet, but I don't wear it because of a previous injury.
- Only when I am at greater risk.
- Yes. Yes. Yes. Yes.
- I don't, because they're uncomfortable and not practical.
- Yes, you're crazy not to.
- I fly corporate so nobody wears one.
- I have for 20 years and I don't intend to stop.
- Yes, unless asked not to by the customer.
- No, but I did in the military.
- No, but I should.
- No, the front seats have shoulder harness.

### Why do/don't you wear a helmet?

- I don't, because of company policy.
- I do, as it is our company policy.
- It's a military requirement, but I still think it's a good idea.
- I feel that it could save my life. I know of a number of pilots who would be here today if they had only worn a helmet.
- I don't, because it's expensive and uncomfortable.
- I don't, because of the extra weight, reduced freedom, electrical problems and ridiculously high cost.

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## Next Issue

*Our publications are next scheduled to be in your letter-box late September 1997.*

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...continued from front page

- I used to, but I don't anymore because it's uncomfortable and I feel trapped.
- I do because I have a strong desire to retire as a pilot and not a vegetable.
- For crash survivability, I wear one.
- I don't because of the lack of available headroom.
- All pilots wear one, they're supplied by the company and, besides, it could save my life.
- The company supplies them, along with nomex suits and gloves.
- I do because of safety, statistics and hearing protection offered by a good fit.
- I don't because they're not required.
- I don't because there is no requirement in our ops manual.
- I find it hard to believe how senseless it is not to wear one at all times. All it takes is one accident/incident to put yourself down and out for the rest of your life, whether as vegetable or deceased.
- I do because I would like to know my own name when I stop flying, and I would like the end of my career to be my choice.
- I never thought about why I don't. I guess it's because nobody in our company does.
- You bet I do, mine saved me from serious injury, perhaps death.
- I don't like them, they're too hot.
- They might offer head protection but they do not offer hearing protection.
- No, cost and comfort.
- Yes, it's more comfortable than a headset when it's adjusted correctly. I love the sun visor, and it provides head protection.
- I do, for the same reason that I wear seatbelts and shoulder harness, to enhance safety.
- I wore one in training, and I believe in the accident statistics.
- I tested one to its full extent, and it works.
- I don't because all I fly are sightseeing trips.
- I don't because the helmet blocks out the sound of the engines as well as other sounds.
- It adds weight to the head in case of sudden deceleration.
- I can't afford it.
- It's cheap health insurance. I wear it on all flights.
- I don't because of cost, peer pressure, management pressure, but I would if permitted.
- The helmet increases the likelihood of staying conscious in a crash.
- Yes, I'd like to stack as many things in my favour as I can.
- Common sense.
- I don't because they cause neck and spinal pains — also they are too hot in the summer.

## Does your company have a policy on the wearing of helmets?

- They feel that helmets worn by the pilots will frighten the passengers.
- They suggest that pilots wear helmets, but it's not mandatory.
- No official policy, but unofficially their use is discouraged because they say their use frightens the passengers.
- Our company policy is that it's not mandatory, but it's encouraged. They will pay 50 percent of the cost of a helmet.
- No policy and no support — wear one if you wish.
- Our owner approved a purchase subsidy program and repayment of the balance over 12 months to encourage the use of helmets.
- Our company policy used to be, you can wear one when no-one is on board to see the damn thing. Thanks to pressure from outside and from within, we now have a policy of, "There are certain jobs we would wish you didn't wear one on".
- They will pay for it, but then you must wear it.
- Our company requires all pilots to wear a helmet.
- Of my last three companies, two made helmet use mandatory.
- Our company has no policy, but our base manager prefers no helmet.
- The policy is no helmets when carrying passengers. They feel the passengers will get the idea that flying in a helicopter is dangerous.
- There is no policy, but their use is frowned on.
- Our company strongly recommends the use of helmets. In all my years flying I have never had a passenger object to my flying with a helmet on, and yet this is one of the main reasons used by those who choose not to wear one. It should be noted that 95 percent of my passengers are corporate leaders in suits and ties and, again, no complaints.

- Unofficial policy — they intimidate the passengers.
- All front seat occupants must wear a helmet.

## Do you feel that customers should wear helmets?

- It would be nice, but who would pay for them?
- Yes, either all or none.
- For some types of operations like photo, SAR, construction, mountain.
- Yes, if they do a lot of flying.
- They should be available, at least for frequent flyers.
- Yes, the laws of physics do not differentiate between pilots and passengers.
- We have spare helmets in the hangar. If they want one they can have one — their choice.
- I have seen ground accidents where people lost their life and might have been only injured if they had been wearing helmets.
- It's a good idea for frequent flyers. Most of the companies we fly for provide helmets for their people — I think it's an insurance requirement.
- I spend a lot of time in the back of a helicopter and was very pleased when our company started supplying helmets.
- No, not practical.
- The problem is fit. A poorly fitting helmet is of no value.

## Do you think that the wearing of helmets should be mandatory by law?

- Probably not by law, but prohibiting their use as a company policy should be punishable by death.
- Definitely not. The government has no right to regulate everything — it's a free country.
- Instead of making them mandatory, how about the insurance companies giving the companies who write helmet requirements into their Operations Manuals a premium reduction. Make it incentive, not penalty.
- No, but perhaps a Workman's Compensation Board directive or something from the insurance community.
- Helmets definitely have their place in the helicopter world, but to legislate their use would be a step backwards in educating the public.

- Not a chance. We're over-regulated now. Let the industry decide.
- If it becomes mandatory, the cost should be picked up by the government, perhaps as a tax deduction.
- A law should address the subject with common sense. You are required to wear a helmet on a motorcycle, but do you wear one in your car? High risk jobs, mandatory — airline operations, never.

Before we go any further, thanks to all those who took the time to send in their comments on the helmet issue. In favour or against, your input is valued.

Here is the *Vortex* response to a few of the more popular negative comments:

### Helmets are uncomfortable

Very true, if it doesn't fit properly (poor adjustment or wrong size). Anything you wear that doesn't fit properly will be uncomfortable (shoes, helmets, undershorts, and even baseball caps). The secret is having the helmet adjusted properly and making sure that you have the correct size in the first place. Unfortunately, these adjustments should be made by somebody who has been trained by the helmet manufacturer. Just tightening the straps is not the way to go. Quite often helmets are passed from pilot to pilot and this too causes problems. You may get a deal at a reduced price, but you may also end up with the wrong size or a helmet that's been damaged.

If you own an old Canadian military-type helmet (method of acquisition not important), you should note that the manufacturer is no longer making parts for them (the Canadian military has purchased a new helmet for their helicopter crews).

Take it from someone who's worn a helmet for a long time — a proper fit is very comfortable, a bad fit is absolute hell.

If you're concerned about the weight, perhaps neck-strengthening exercises would help. If you've tried an old helmet, remember that the new, state-of-the-art helmets, are made from composite materials. They provide a much greater degree of protection from a substantial reduction in weight.

Those who complained about comfort also complained about not being able to hear properly. If the earphones aren't over the ears they're not going to work very well, are they? A little-known fact is that a number of people have one ear higher or lower, forward or back, from the other.

### Helmets are expensive

Can't argue with cost, but what value do you place on life? A good helmet will probably cost a bit more than double the cost of a good headset and a baseball cap. If you don't think your life is worth the added cost, stay with the baseball cap.

A good helmet can be purchased for about the price of four new tires and a brake job on your performance car. Would you permit your wife/girlfriend to drive your car with bald tires and poor brakes?

### The helmet won't work in our helicopter

Sorry, we don't agree at all. All it takes is a minor fix by an avionics technician in less than an hour. This is a poor excuse.

### Peer pressure

If you don't wear a helmet because none of the other drivers do, and you're afraid they will call you a wimp, well, maybe you are a wimp. Just remember, self-preservation is very much "macho".

### It's against our company policy to wear a helmet

This is hard to believe, but very true. Some operators have gone so far as to say, "Wear one and you're fired". If the passengers are intimidated by pilots wearing helmets, they must really become anxious when briefed about ELTs, life rafts, emergency exits, crash axes, fire extinguishers, first-aid kits, how to prepare for a crash, and duties after a crash. For those operators who insist on prohibiting the use of helmets, please see first remark under "**Do you think that the wearing of helmets should be mandatory by law?**"

On the positive side, hats off to those companies who are taking an active role in assisting pilots in the purchase of helmets and other types of personal flight equipment. The *Vortex* congratulates them for their pro-active approach toward flight safety.

On the passenger side, an ever-increasing number of companies who are frequent users of helicopters are providing their employees with helmets for personal safety.

**The choice should be yours.**

*"To wear or not to wear, that is the question."*

## Sold a Pup

The following is taken from an incident report filed by a New Zealand pilot. It is humorous, but it has its serious side too.

“I was to fly a friend to Great Barrier to pick up a pup. My understanding was that we were to meet the owner of the pup at the airfield, and all there was to do was pay the owner and return to Ardmore. I filed a flight plan to Great Barrier, allowing 30 minutes on the ground there.

“On arriving at Great Barrier we met the owner of the dog, but he did not have the dog with him. I was then told it would take only 10 minutes to go and get it. I agreed to go with them. It turned out there were four puppies to choose from, and I then realised that it may take much longer than 10 minutes. I was not worried at that stage, as we had a cellphone on which I could call and amend my flight plan.

“Once 30 minutes had elapsed and it was obvious that we were not going to get back to the aircraft, I thought I would phone [the aircraft operator] for the phone number of Christchurch Information as I had left my VFG back in the aircraft. I then found that the cellphone was outside its coverage area. As there was no phone at the house, it was suggested that I climb to the top of the hill behind the house, as they said the cellphone would work there. I did this but had no success. I went back to the house, getting desperate at this point, and the woman drove me to a neighbour’s to use their phone. I then had trouble getting through to [the aircraft operator] as their phone was engaged.

I finally got through and got the number I requested and phoned Christchurch Information to tell them of my predicament.”



### Comment

Even the conscientious can be thwarted, and this pilot is to be congratulated on remaining aware of pilot-in-command responsibilities and on taking steps to carry them out.

A reminder of the Rules may not be amiss for readers. Under Rule 91.307, if the pilot-in-command of a VFR flight requires an alerting service, then a VFR flight plan must be filed. With that come the responsibilities.

If there is any delay exceeding 30 minutes in beginning the flight, or in departing from any intermediate aerodrome of intended landing, then the pilot must advise an ATS unit “as soon as possible”. That last phrase, quoted directly from the Rule, means what it says. At the 30-minute delay point, the flight plan is not going to turn into a pumpkin, but it will if the first

opportunity to pass the advice is not taken up. SAR action begins 30 minutes after the planned arrival time at the **destination** aerodrome. The purpose of advising any delay at an intermediate aerodrome is to update the progress of the flight so that SAR action is not begun prematurely.

The final responsibility for the pilot is to terminate the flight plan. Under Rule 91.307, this must be done by advising an appropriate ATS unit of the completion of the flight “as soon as practicable after landing”. Airways Corporation advise that any of their ATS units would be “appropriate” for advising termination of a VFR flight plan. They caution, however, that because the unit contacted may not have been on the distribution of the flight plan, it is important that the pilot states that they are on a flight plan, preferably with the information “from A to B”, and that they are terminating the flight plan. In the past some phone calls have consisted of “QYZ on the ground at...” and this is a little hard for a unit without the flight plan to decipher.

Another option, particularly at aerodromes where telephone facilities are not readily available, is to call an ATS unit on RTF when joining the circuit, requesting the flight plan be terminated at that time. (Be aware that in this case an accident on landing will not raise an alarm with the alerting service.) Termination of a flight plan by RTF **must** receive ATS acknowledgment, otherwise you are still obliged to contact them “as soon as practicable after landing”. ■

## Dangerous Minimum Confusion

The international campaign to reduce the number of controlled-flight-into-terrain accidents has pointed the finger at those non-precision approaches designed as a series of descents and levelling out, commonly called step-down approaches. It recommends they be redesigned to reduce the number of steps to a minimum, so that the final approach can be flown, above the steps, as one continuous descent. *Advisory altitudes* are produced for this purpose.

This could make the non-precision final approach look similar to a precision approach (ie, ILS), however, and in some countries this has apparently led to

confusion as to how to carry out a missed approach.

We don’t believe New Zealand pilots who regularly practise instrument approaches of each or both types would be confused, but there could be danger if you’re used to ILS only and were occasionally faced with a non-precision approach.

First, let’s examine the relevant differences between the two types of approach:

- A non-precision approach has a *minimum descent altitude* (MDA) below which the aircraft should not descend. This altitude provides obstacle clearance protection, taking into

account the navigation guidance provided by the approach aid.

- A precision (ILS) approach has a *decision altitude* (DA), which is the lowest altitude at which a missed approach must be initiated. This altitude provides obstacle clearance protection, taking into account the guidance, both navigation and glideslope, provided by the approach aid.

The important difference is that the precision approach DA has a built-in *height loss allowance* to account for the fact that the missed approach is **initiated** at DA.

If the pilot on a non-precision approach

# More on Taupo UNICOM

Taupo UNICOM is now in operation. In the lead-up to the service beginning, the owners fielded many questions, and they asked us if we would help by publishing these, together with the answers.

## Communications

**Question:** What information will there be on the ATIS?

**Answer:** The same information as you would expect to hear on any other ATIS, including the runway in use.

**Question:** When should I make my first call?

**Answer:** Listen to the ATIS at 10 nm Taupo — make your decision on joining or your overfly route — broadcast your intentions on 118.4, for example:

“Taupo Traffic, Cessna 172 Quebec Xray Xray, 10 nautical miles east of Taupo 3500 feet, will join right base Runway 18 via Acacia Bay.”

Report again entering the MBZ and then make normal unattended aerodrome RTF reports.

**Question:** Can I talk to UNICOM?

**Answer:** Yes, UNICOM monitors 118.4 during its published hours. However you should call them only if you require information not available on the ATIS, or if you can not receive the ATIS. For example:

“Taupo Unicom, Cessna 172 Quebec Xray Xray, request landing information, we are not receiving the ATIS.”

The purpose of UNICOM is to provide information so **if in doubt call them**. Otherwise, address your transmissions to “Taupo Traffic”.

## Taupo Procedures

**Question:** Taupo area can be busy, should the landing lights be on when operating in the MBZ?

**Answer:** Yes, that is very important — and **mandatory** for those aircraft so fitted. 300 movements a day in the MBZ is common during holiday periods — **landing lights on and eyes watching**.

**Question:** Is it necessary to join overhead?

**Answer:** No. Moreover, it is recommended that you don't, because of the very busy parachute activity. If you do, however, comply with the recommendations contained in the VFG/Supplement.

**Question:** NORDO operations are not permitted in the MBZ — so what happens if I have a radio comms failure?

**Answer:** Follow the procedures in the VFG.

## Taupo Facilities

**Question:** Where does UNICOM operate from?

**Answer:** From Air NZ Link in the Airport Terminal Building. Staff will be happy to assist in any way possible.

**Question:** Can I lodge a flight plan, obtain briefings, and cancel flight plans with UNICOM?

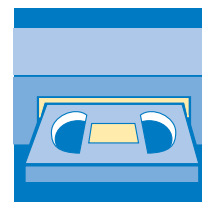
**Answer:** No, but UNICOM staff will provide fax/phone facilities to assist pilots with these tasks.

**Question:** What MET facilities will UNICOM provide?

**Answer:** Taupo UNICOM will distribute METARs and SPECIs nationally during hours of service. Pilots

will be able to access Taupo METARs through the National Briefing Office or the appropriate area Flight Information Service.

Taupo contacts are:  
telephone: 7-378 1784 or 7-378 7771,  
facsimile: 7-378 5428,  
e-mail: Unicom@reap.org.nz.



## New Video

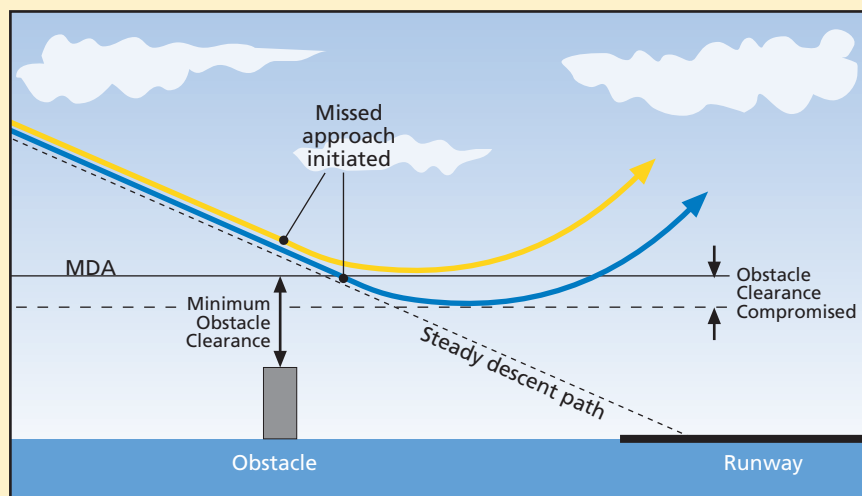
Our latest video, recently released, is entitled “It’s Alright if You Know What You Are Doing — Mountain Flying.” This programme will replace the earlier “Mountain Flying” video made in 1988.

The new 32-minute programme views the topic through the eyes and comments of several pilots with a wealth of experience in the particular skills and knowledge required for flying in areas of mountainous terrain. Both fixed-wing aircraft and helicopters are catered for.

The comments cover weather, planning, illusions, awareness, techniques, and more — with the key message being to stay within both your limits and those of the aircraft. The comments are recorded against a background of some magnificent footage of a variety of aircraft operating in the high country of southern New Zealand.

in a steady descent to MDA were to initiate a missed approach at MDA, then clearly the aircraft would initially descend into the unprotected area and obstacle clearance would be endangered.

For such an approach, a rule of thumb might be to begin the missed approach, depending on the aircraft type, 50 to 100 feet before MDA. Some aircraft, some crews, on some days, may need to anticipate by an even greater margin. Bear in mind that the ultimate aim is simply: **do not descend below a non-precision MDA**.



## Metro Wake

Following our article “Wake Turbulence Separation in New Zealand” (1997, Issue 3, page 8) we had a call from a Metroliner pilot drawing attention to the Metroliner being listed in the light category. Depending on which model of Metroliner, its modification status, and its operating weight on the day, it can sometimes fall into the medium category of over 7000 kg MCTOW. We don’t know the status of individual aircraft, but with appropriate modification, all of the current fleet could be operating as high as 7258 kg, and two of the Airpost aircraft (ZK-POE and ZK-POF) could be cleared to 7484 kg. This would appear to make little difference to procedural separations, but all pilots should be aware that Metroliner wake turbulence can have a bigger bite than you might suspect from having the type listed in the light category.



M.J. Richardson



## Safety Seminars

This year’s series of Safety Seminars is in full swing. Feedback so far has been very positive.

The theme is “Pressures on Pilots”, but similar pressures are, of course, experienced by others in the aviation industry, and you don’t have to be a pilot to attend. In addition, while each of the fixed-wing and rotary-wing seminars will have a slant towards those particular types of operations, they are open to all. And, not just pilots — you may be an engineer, non-flying manager or connected in some other way to the aviation industry. These seminars will be of benefit to **all** in the aviation industry — **we urge you to attend whichever type of seminar is close to or most convenient for you.**

The presenters are all experienced and respected pilots from the New Zealand aviation industry who, with the support of CAA, are giving their time, expertise and wisdom to help make a difference to aviation safety. They will be able to give simple and practical advice derived from their many years of experience.

The schedule for September and October is printed below. In addition, watch for posters at your local aviation organisation for a seminar near you.

**Sat. 13 September 9.30 am – 12.30 pm**

Aero-Kiwi Seminar. Presented by Mark Woodhouse. **Pine Park** Aerodrome, at Pine Park Aviation Ltd. Lunch will be available (\$10) following the Seminar.

Participants are most welcome to enjoy the Pine Park Aviation facilities. Pine Park (FP) is in the VFG. Note the ATZ (on OH VTC), frequency 119.1. Flight planning facilities and fuel available.

**Sun. 21 September 9.30 am – 12.30 pm**

Aero-Kiwi Seminar. Presented by Peter Kidd. **New Plymouth** Aerodrome, at New Plymouth Aero Club. Lunch will be available.

**Tues. 23 September 7.00 pm – 10.00 pm**

Aero-Kiwi Seminar. Presented by Peter Kidd. **Gisborne** Aerodrome, at Gisborne Pilots’ Association.

**Sun. 5 October 9.30 am – 12.30 pm**

Aero-Kiwi Seminar. Presented by Mark Woodhouse. **Ashburton** Aerodrome, at Mid-Canterbury Aero Club. In the afternoon there will be a fly-in to Mount Hutt Station where Devonshire tea will be available (\$6).

**Wed. 15 October 7.00 pm – 10.00 pm**

Aero-Kiwi Seminar. Presented by Peter Kidd. **Wellington** Airport, at Wellington Aero Club.

**Sat. 18 October 9.30 am – 12.30 pm**

Aero-Kiwi Seminar. Presented by Mark Woodhouse. **Blenheim**, Omaka Aerodrome, at Marlborough Aero Club. BBQ lunch available followed by a fly-in to Cape Campbell.

**Sun. 19 October 9.30 am – 12.30 pm**

Aero-Kiwi Seminar. Presented by Gordon Vette. **North Shore** Aerodrome, at North

Shore Aero Club. Lunch will be available. Competition between local clubs for the “Nescafe Cup” will be held in the afternoon.

**Tues. 28 October 7.00 pm – 10.00 pm**

Aero-Kiwi Seminar. Presented by Gordon Vette. **Hamilton** Airport, at Waikato Aero Club.

**Wed. 29 October 7.00 pm – 10.00 pm**

Aero-Kiwi Seminar. Presented by Gordon Vette. **Rotorua**, at Manary Lakeside Resort, 77 Robinson Ave (2km south of Airport off main highway).

The Director of Civil Aviation, Kevin Ward, recently received a letter from John Funnell, Taupo, who wrote:

“I have recently attended the Taupo Safety Seminar — Pressure on Pilots, run by Bernie Lewis and Dave Walley.

“I wish to congratulate you and your team on the initiative of running these seminars. These highlight the areas that all pilots should be aware of. By drawing attention to these it gives a timely reminder to everyone, including pilots who have considerable experience.

“I am willing to admit I came away from that seminar pleased I attended it and would recommend it to any pilot as a must, particularly if he or she is interested in providing a safe operation.”

*Aero-Kiwi and Heli-Kiwi — making common sense common practice.*



# Letters to the Editor

## Aerodrome Group-Rating

Reference your edition of *Vector*, 1997, Issue 2, page 5, centre column, heading “Group-Rating System”.

Please check the statement “... If you are using the Group-Rating system, and the runway is wet or contaminated, or the grass is long, then it would be a good idea to ensure that the group number of the runway is at least one number higher than the Group-Rating number specified in the Flight Manual.”

I feel that this may lead to some confusion for those not already conversant with the Group-Rating system. (They may add one number to the Group-Rating number of the aerodrome.)

As an ancient “B” Cat, I have always suggested my pupils **subtract** one from the aerodrome rating as shown on the VFG chart — this seems a little more logical, in that under the conditions outlined it is clear that the **aerodrome** should be de-rated.

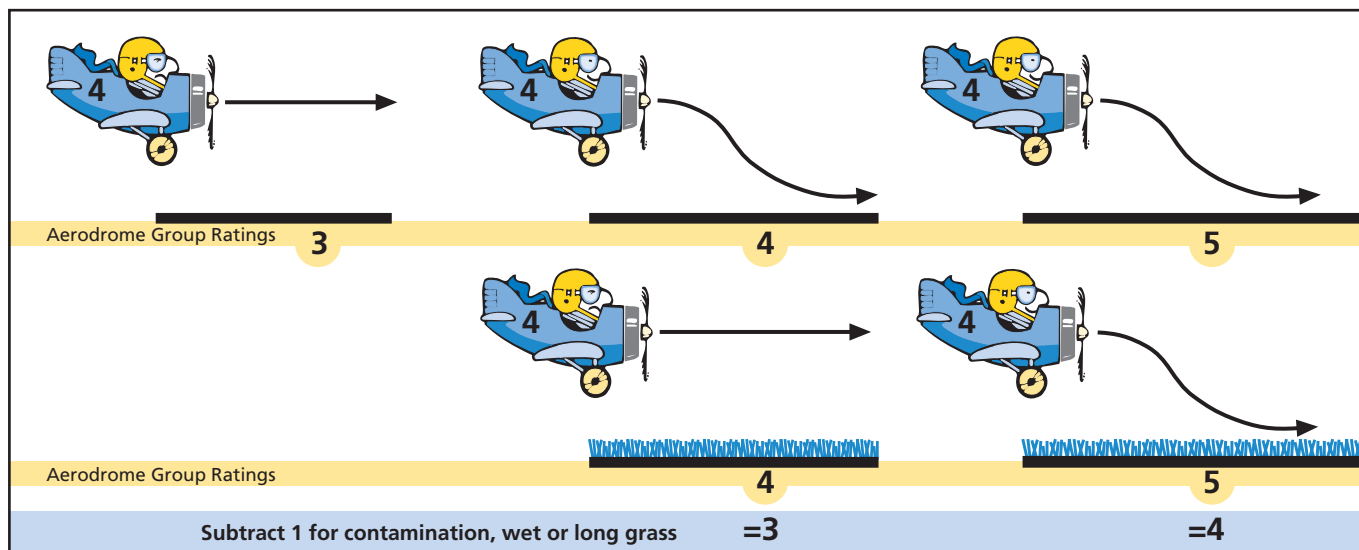
Or am I just being precious? Anyway for what it is worth.

Keep up the marvellous work — I have every copy of *Flight Safety* and its successors since the first copy, and they are so valuable that I intend making up an index one day (when I get the time!)

*Doug Cholmondeley  
Auckland, May 97*

We were correct, and so are you, but it is quite easy to be confused. Perhaps the following is worth five thousand words?

## The wanderings of a Group 4 aeroplane



## ‘Your Arse and the Grass’

While I endorse Mark Woodhouse’s focusing of our attention on “Planning for and practising the approach to a predetermined aim point” as per R.D.Campbell and Trevor Thom, I cannot agree with his closing comment that “Spot landings per se are only appropriate for aero club type competitions.”

Come on Cliff and Pam, where are the additional editorial comments which cover Mark’s glaring oversight?

Kevin Wilkey got it right in *Vector*, 1997, Issue 1, when he said “plan for and practise landing on a spot”. Why is this? Isn’t safe flying all about discipline? This discipline should include the ability not only to plan and aim for a landing point, but also to succeed in landing on that spot!

Why is this?

- Consistency of this ability to land on a spot permits pilots increased awareness of all the variables affecting a landing,

ie, wind, speed, height, power, weight, etc, and thus the ability to make consistently safe landings.

- When landing on a large runway, why shouldn’t we discipline ourselves to place the aircraft on a spot which minimises our landing roll and so expedite moving off at the next available taxiway?
- Contrary to some opinions, landing on short remote strips is not the exclusive activity of the topdressing industry. Many others, including a number of private owners, are regularly operating on and off strips which require discipline in landing on a predetermined spot.
- Some of our fields around the country have reduced operational length due to factors such as surface water, mud areas, etc, thus requiring disciplined precision-landing techniques to make a safe arrival.

- Precautionary and forced landings are not necessarily made with an ideal landing space available, and thus any increase in one’s currency and experience with the discipline of landing on a spot can only improve the safe outcome of an unplanned landing.

I don’t presume this to be an exhaustive list justifying the need for experience and currency at precision landings. I do, however, hope this provides sufficient justification for pilots to strive towards a current, accurate level of discipline in planning their approach towards an aim point, followed by a successful landing on that point as a simple means of improving their own safety standards.

Here’s to landing **on the centre line** as well as the pre-determined lateral point from the threshold.

*Carlton Campbell  
Wakatipu, May 1997*

*Editor’s reply over...*

One of our objectives is to promote discussion, and this certainly seems to have happened on this topic. You take two Editors to task, perhaps not knowing that there were dissenting views even within those close ranks!

You certainly give ample examples of why pilots should strive to be accurate and disciplined in their landings. And, as already intimated, some of the differences of opinion are related to semantics and the correct (or at least consistent) use of terminology.

For the moment, we do not wish to get into further discussion on the differences and similarities of aiming points and spot landings, as we feel the topic needs more careful treatment than a to and fro discussion in the letters column. We do not intend to drop the matter, however,

and we will look at preparing an appropriate article.

We would like to go back to terminology, however, as it can mask arguments. For example, above you use the words “to plan and aim for a landing point” (and to land on it). We have no difficulty with that, but you use the word “aim” as an objective or intention to achieve a “landing point” — this “aim” is not the same as in an “aiming point”. Let’s explore the latter a little more.

In the context of an approach and landing, we would like to define the aiming point as the point at which the extended path of a steady (stabilised) approach would touch the ground. If you continued the stabilised approach to ground level — no

round-out, no flare, no power or attitude change — then the aiming point and (heavy?) landing point would be the same. Normally, however, at about the point at which you cross the threshold (ie, prior to the aiming point) you will be taking steps to execute a good landing. The effects these steps have, the aircraft characteristics, the approach technique you used, the wind, and other variables, will determine how different the landing point will be from the aiming point.

We plan to leave it there for now, but readers will no doubt be thinking about and discussing the topic. That’s good. We hope that eventually we can provide an article that will satisfy everybody on what a successful approach and landing is all about.

## Carbon Monoxide Testing

While I don’t wish to diminish the awareness of pilots and engineers to the dangers of carbon monoxide, I do wish to point out the insidious danger of not taking note of history.

The requirement for a flight test using a CO testing device was discarded by MOT/CAD about 25 years ago as unnecessary and not always conclusive. Instead, the routine requirement for a thorough visual inspection of the exhaust/heated (fresh) air interface, and subsequent pressure testing if necessary, was reinforced. The latter procedure has proven to be particularly effective ever since. I am unaware of any documented evidence, in this country, to the contrary.

Why then, does the CAA pursue a course which ignores history and experience and adds unnecessary expense to the cost of aircraft ownership?

*Vic Alborn  
Reefton, May 1997*

We put your point of view to the Rule-writing team. They showed us the proposed amendment to Appendix C to Rule Part 43. There is no change to the lead paragraph under “Inspections”, which covers the entire inspection, and which in part reads:

“All items are to be inspected for general condition which includes ... security and cleanliness ... vents free from obstruction ... freedom from

excessive — leakage ... corrosion ... cracks” and so on.

Then, using these “general inspection criteria”, it goes on to enumerate groups, in particular “the components of the cabin and cockpit group including” — and here’s the amendment — “cabin heating systems for sources of carbon monoxide contamination”. That’s it.

How the inspecting engineer checks for CO contamination is up to that person. A flight test is an option, but it is not mandatory. The circumstances in which a flight test would be needed would be a matter for judgement by the engineer, or maybe the wish of the operator.

**Cold** enough for frost on the wings?

**Hard** to make the effort to clear it off?

**Fact** – the aircraft probably won’t get airborne!

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