

# OUTLANDING

The Taupo Gliding Club's Newsletter



## October 2024

Welcome all to this edition of Outlanding. It's ON! The contest season is here and the Central Plateau competition is about to begin. We are still in need of helpers for running the grid. **YOUR club needs you!** So, if you can assist please contact myself, Hugh or Tom.

There will be a social evening each night during the competition, and these nights are not just for the pilots. All club members, partners and friends are welcome and encouraged to attend.

In this edition you will find some interesting and relevant articles for your perusal. If you have any feedback regarding the newsletter, layout, articles you would like to see etc. please let me know.

We have experienced some great flying weather over the last month and there have been some really good flights from Taupo. This is promising for the new season.

As the next newsletter will be at the end of November, anyone who has an article or notification to be included into that edition, please have it to Trace by 20 November 2024.

Fly well and have fun! Cheers, Trace

## Inside this Issue....

CFI News

New Tow Pilot

Airspace

SA & Lookout

ZK-TPO

Manager's Note

Joining Thermals

taskPilot

Achievements

Upcoming Events

Humour



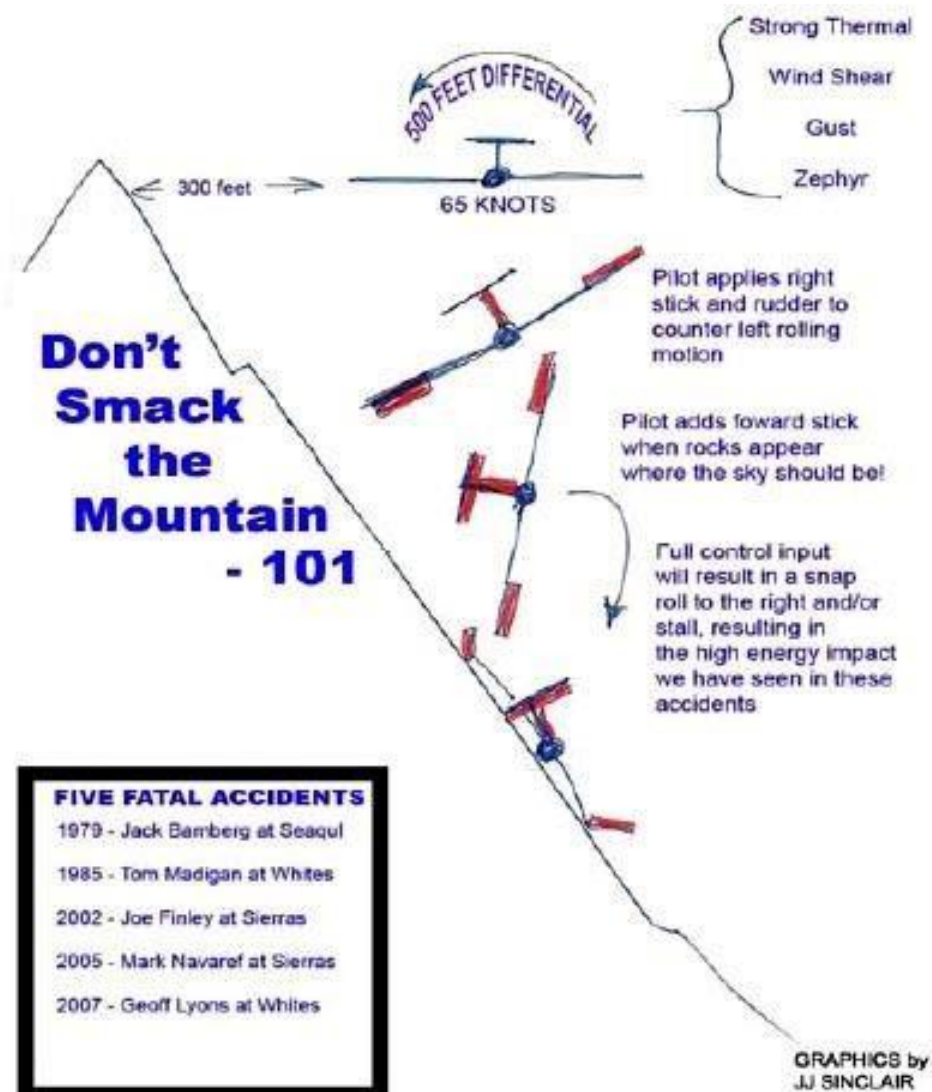
At the season safety briefing I suggested to everyone that they should download and have a read of the article "Don't Smack the Mountain". To make reading this article easily accessible, I decided to have it added to the newsletter. Please take the time and peruse.

## Don't Smack the Mountain

An article of J.J. Sinclair, published in the Newsletter of the Cape Gliding Club, Worcester South Africa. JJ Sinclair retired from the Air Force in 1974 after 22 years of service. After retiring, JJ established an FAA Certified Glider Repair Station in Placerville, California, and operated that facility for over 20 years. He has flown 1000K zig-zag in his LS-7 as well a 1000K triangle in his Nimbus-3, but takes more pride in having flown Silver, Gold and Diamond Badge Flights in the wooden Duster that he constructed in 1973.

Good morning, class. Today we will be discussing an alarming statistic. In the past 30 years our soaring area has witnessed five fatal accidents in the mountains and three of these accidents have occurred within the last five years! Would one of you work up a trend analysis on those statistics?

Thank you Mr. Kelly.



All these accidents involved experienced pilots flying modern sailplanes and most of them impacted with high energy, indicating a stall situation. Why would an experienced aviator inadvertently stall his aircraft, especially near the rocks? Everybody now look at the graphic, the top sailplane represents us flying into the page as we approach a mountain on our initial pass. We stay 300 feet away from the rocks and keep our speed up (minimum 120 kph = 65 kts). Is that safe enough? Maybe not!

Let's just suppose there's trouble lurking out there in the form of a gigantic gust, a really strong thermal, a violent wind shear. For the purposes of our discussion we'll just call it a "zephyr" and it's going to apply a *differential rolling moment* to our theoretical sailplane.

What's a *differential rolling moment*?

Good question, Mr. Green! It happens when our right wing flies into lift that is much stronger than what our left wing is experiencing. We are constantly looking for this, aren't we? We call it "light wing" and turn into the wing that's coming up as soon as possible, because there's probably a thermal on the light wing side. Ever try to turn into the light wing and have the machine refuse to turn?

Sure, happens all the time and we say something like, "Turn, you big beast, turn!" What's happening? Why won't the ship turn into the rising wing? Because, the thermal is stronger than the authority available in our ailerons. Another way to state this is: The thermal is trying to roll us left and we are trying to make the ship roll right. The result is a Mexican stand off and we fly straight with full right stick and rudder applied.

Now class, look at the second sailplane in the graphic. That's us, still flying into the page, but the zephyr's got us and it's rolling us left into the mountain. We have applied full right stick and rudder, but the zephyr's stronger than the controls and we're still rolling left and there's rocks over there! Why is this happening? It is estimated that our ailerons can only counteract a differential moment of 5 kts. Let's say there's 12 kts under our right wing and only 3 kts under our left wing. Reasonable figures? Sure, we see 12 kts all the time on the Whites and in the Sierras, only near this damned mountain it's mostly under our right wing!

Now, look at the third ship. We're in real trouble, aren't we? There are rocks and trees up there on our canopy where the sky is supposed to be! We're experienced aviators and we don't panic, we continue to hold full right stick and rudder and apply forward stick to make the rocks stay away from our canopy.

### STOP ACTION.

Class, remember what we learned in before? We can stall a ship in any attitude and at almost any airspeed, can't we? I believe it was in chapter 6 that we learned how to do a snap roll. All you had to do was slam in full rudder and full back stick and the airplane would do a snap roll in the direction of applied rudder. Can we stall a ship while inverted?

Yes we can! OK, resume action.

We're flying at 65 kts, holding full right rudder and the stick is now in the right forward corner. What's the ship likely to do? It might try to snap roll to the right, but the zephyr probably won't allow that, so I'm betting it will just stall and fail and we have another mysterious high energy impact on the side of a mountain, don't we?

Does it have to be this way? Are those of us who choose to fly close to the mountains, destined to become a high-energy impact, some day? NO!

I see Mr. Seamons has his hand up. OK, Sir what's our question? How do we prevent smacking the mountain? Good question, I was just getting to that.

First of all, there are days where I won't get within 1,000 feet of the rocks. If I'm approaching a mountain and the turbulence is so bad that things are flying around the cockpit then I don't get within 1,000 feet of the rocks. Let's say I'm approaching the Whites, I'm holding 65 knots and things

seem fairly smooth. My computer tells me the westerly wind should make the canyon up ahead, work. But, what if there's a zephyr in the canyon? What if it tries to roll me into the mountain?

As I get within 300 feet of the rocks, I roll the ship into a 30 degree right bank and hold it there with a bit of top rudder. Why? Because, I'm already banked away from the mountain, so if a zephyr tries to get me, I'm ready to apply all three control inputs to fight it with right stick, right rudder and back stick to make it turn away from the rocks.

I also follow all the normal rules: never turn directly into the mountain, always S-turn an area for a beat or two before attempting to circle. If I fly by an area that shows 3 kts lift for 20 seconds, I turn away from the mountain and come back through the lift area to verify it really is workable lift. If it is, I turn 90 degrees away from the rocks, roll wings level for a count of 3 (you know 1000-one, 1000-two, 1000-three) then I turn back into the mountain. My 3-second burst flying away from the rocks gives me plenty of room to finish a turn into the mountain, but I'm still not committed.

As I face the rocks again, I ask myself: Am I one hundred percent certain that I can finish this turn? Only if the answer is an unequivocal YES, do I continue. If I'm not completely sure, I roll the other way and continue S-turning the area. If I do continue the turn, I may shallow out the turn as I come parallel to the rocks and let the ship drift in close, if that's where the best lift is. I do this while holding a 30 degree bank angle AWAY from the rocks.

OK, that's enough for today, class dismissed!

Oh, one more thing, always keep an escape route open! You may see some of this material on the quarterly exam. Mr. Kelly, you may give your accident trend analysis, first thing Monday morning, please hold it down to two minutes maximum.

### **Newest Tow Pilot** by *Cameron Durno*

Hello club members, my name is Cam and I am the newest tow pilot at the Taupo Gliding Club. I was born here in Taupo and work as a self-employed Painter/Decorator. I also have had an endurance sport coaching business which I have run since 2000 until stepping away earlier this year.

I have been flying for four years now after initially having a trial flight with Chris Blyth and enjoyed it so much I officially 'got the bug'. It has been a really rewarding challenge and I am now working towards my CPL hoping to fly the Taupo Float Plane commercially at some stage in the future. I have enjoyed seeing more of the country and flying different aircraft, my favourite so far being the Piper Super Cub. I love the vintage aspect to flying and hope to fly Tigers, Stearmans, Harvards, and the C185 at some stage in the future.

I am looking forward to meeting new people and furthering my flying skills at the Gliding Club.



## Opening Airspace *by Rob Lyon*

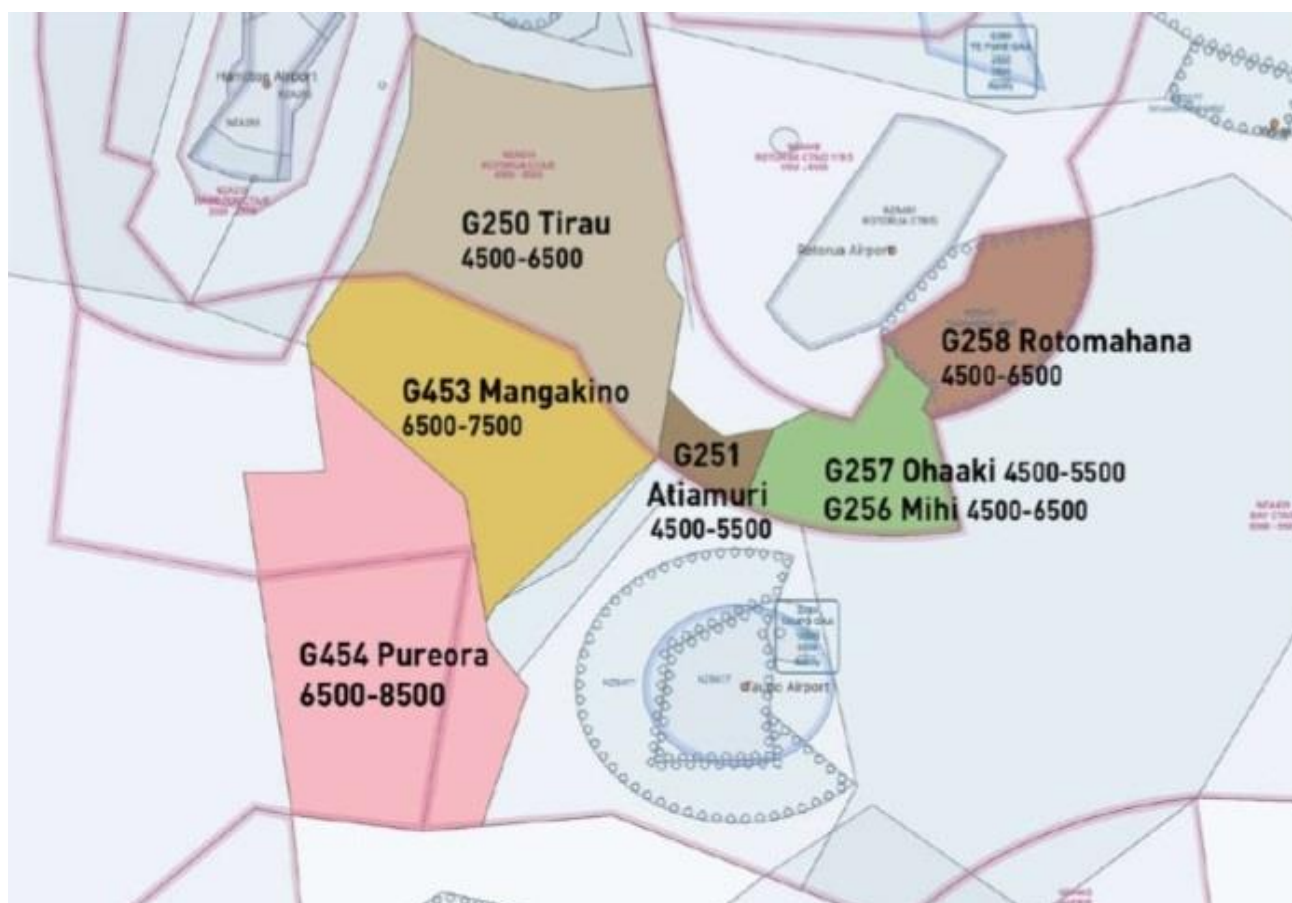
To open Airspace, call **(03) 358 1694** and ask to speak to the **Duty Manager**

To Fly anywhere to the **NORTH** of the Club, Ohaaki Chimney, Waiotapu, Kaiangaroa Village etc. Request the following Airspace from (Open Time) to (Close Time)

- G251 Atiamuri
- G256 Mihi
  - *If G256 Mihi is not available, request G257 Ohaaki Instead*
- G258 Rotomahana

To fly to the **WEST** of Lake Taupo, request the following airspace From (Open Time) to (Close Time)....

- G250 Tirau
- G453 Mangakino
- G454 Pureora



You can always request Everything, but you may not get Everything.

Post the Response from the Duty Manager into the “Soar Taupo” Facebook messenger group. **This is especially important if the airspace is refused.**

## Situational Awareness and Lookout *by Trace*

It is time to re-emphasise the importance of good situational awareness and lookout. A failure to pay attention to either one of these extremely important aspects of flying can, and will, lead to grief.

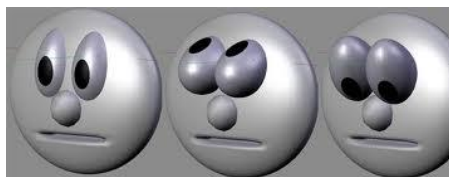
Remember that Situational Awareness is the big picture, through listening and observing you will have an understanding of what is happening around you. Lookout will identify threats and put your observations into perspective.

### Recommendations

1. Be conscious of your Lookout responsibility 100% of the time,
2. Set up your cockpit to maximise your time outside the cockpit. Use the Audible vario, know your equipment, and
3. Use a scan technique appropriate for what you are doing.

There are three types of scans commonly used. These are:

1. **Cruising Scan** - Forward conical scan 60° left/right. Up and down. Used during Straight Glides
2. **Full Scan** - Complete visible sky scan. Each side, above and below, behind each side round to as far back as possible. Vital for situation awareness.
3. **Targeted Scan**- Used in specific circumstances. Scan concentrates on that part of the sky, or ground, where the hazard is expected.



So please, keep your eyes outside the cockpit and your ears peeled back.

### ZK-TPO

As most of you would be aware our tow plane, along with all the other PA-25 and PA-35 Pawnees worldwide, was affected by an Airworthiness Directive (AD) raised by the Argentinian Authorities. This meant that the wing spars had to be inspected for the defects noted in the AD. The inspection involved removing the wings and cutting inspection ports into the wings. Fortunately, our Pawnee passed the inspection. Apparently about 40% of the Pawnees inspected have failed leaving these aircraft grounded. At the same time TPO underwent her 100 hour inspection and a paint job as well and she is now ready for another year. A huge thanks to Craig for all his work.



### From the Club Manager – Tom Anderson

Recently we have had a spate of things going missing from the club, either borrowed or taken. If you wish to borrow anything from the club, i.e. tools, trailer, furniture etc. would you please ask first so we know where things have gone too. Thank you.

## Joining Thermals

There are four important matters to consider when joining a thermal already occupied by one or more gliders, and every single one must receive your full attention.

1. **You must have in sight all of the gliders that are in the thermal**
2. **All the gliders in the thermal must be able to see you**
3. **You must plan your method of arrival and entry to the thermal**
4. **All the gliders in the thermal must understand your plan**

1. Sighting gliders circling is not easy, and a variety of backgrounds and conditions can conspire to make it even more difficult. After you decide that you have them all sighted, then start searching for the one(s) you haven't seen - don't get a fixation on the ones already in view. Keep your scan going over the entire width and depth of the thermal, as one aircraft in a particular stage of the turn may be impossible to see at first glance.

You must also keep in mind that there could be gliders close to you heading for the same thermal. Aim to keep your search going all around, especially above as you will usually be slowing down and gaining altitude as you approach the lift area. **THIS IS NOT A TIME TO BE LOOKING AT YOUR VARIO – ALL EYES OUTSIDE!**

2. A glider approaching a gaggle at high speed in a straight line will be next to invisible. The frontal area is very small, and we need to increase this and ensure some horizontal movement so that those gliders already established have some chance of seeing us coming. If we are making our own decisions we will want to sample the air as we approach the lift anyway, as it will be best to have an image of the thermal in our own mind. This will lead to some gentle weaving and “feeling” of the air that will make your glider more visible to those ahead. If not, you should attempt to avoid a direct head-on arrival. You should arrive at only a little above thermalling speed, and with consideration of all the established glider's positions so that they have a good chance to see you.



3. A good concept of spatial awareness is vital in the arrival phase. While still well back from the thermal you need to have a good idea of where you will arrive in amongst the gaggle, in relation to all the gliders. There will need to be a space for you to fit into (!) and if not, you will start a gentle turn outside that of the gaggle until they have rotated further and you can see room to move in. **DON'T PUSH!**

Please, do not arrive at the gaggle at full cruising speed and attempt to pull up amongst them – this is extremely dangerous, as you will have considerable vertical velocity to judge as well as your horizontal position. It will also inevitably mean you are out of sight of one or more gliders, and they are out of sight to you at some stage. If you do this a couple of times someone will punch you in the nose, which will be a very good thing...

4. As above, you must always manoeuvre in a safe and predictable fashion. Try not to surprise the other pilots with any of your antics. As you fly at higher levels of competition, it is likely that you will have gliders flying at lesser separation, but the pilots generally behave more predictably. If the pilots of the gaggle see you approaching at a sensible speed and behaving as if you are having a good look out the front and working to fit in comfortably, they will be far more receptive and will often open out their turn a little to let you in more easily. Roll into the thermal smoothly and positively, and likewise when leaving keep all the changes of direction predictable.

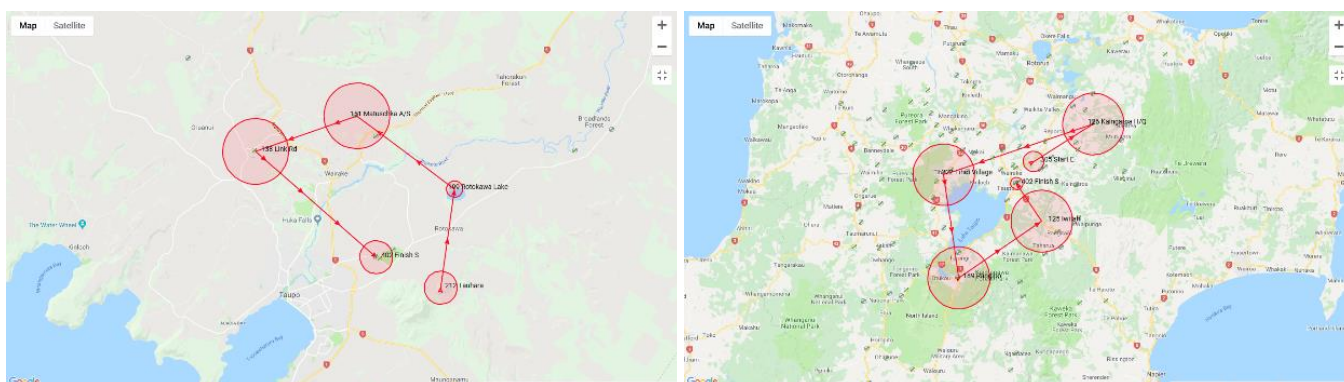
Keep a good lookout as you leave the climb, especially below as you accelerate. Above all, be careful and courteous.

Our *taskPilot* league competition will kick off at the beginning of November when the Central Plateau Soaring Competition begins on the 2<sup>nd</sup> of November. The 2024/25 TGC League will run through until the 31<sup>st</sup> of March 2025 and comprises of three classes. The classes are:

- Tauhara Class – for those pilots yet to obtain Cross Country Pilot status (XCP),
- Tarawera Class – for those that hold a XCP rating but yet to achieve their Silver C badge or have not entered a contest, and
- Tongariro Class – for those that have achieved their Silver C badge or higher and/or have entered a contest.

Any task can be flown by any pilot as long as it is within the pilots experience and the scoring system will adjust the scores to suit the pilot's experience level. This means that Tauhara Class pilots will get a higher score than a Tongariro Class pilot if the Tongariro class pilot flew the same task.

There are a number of tasks to suit all experience levels with short tasks close to home for the Tauhara Class and longer tasks that the Tarawera and Tongariro Class pilots are more likely to do.



Any task can be flown any number of times but only the best score of a previously flown task will be scored for the league table. For an example, if you flew the 'Out and About' task three time, the best score over the three flights will be scored.

What you will need to do now:

- Go into *taskPilot* and create an account
- Start playing with *taskPilot* to get use to reviewing the tasks and flying tasks in 3D before you enter the cockpit.
- Practise entering the tasks into the navigation system that you will be using.

The whole idea of *taskPilot* is to:

- give you more of a challenge rather than flying around aimlessly,
- get you use to downloading and printing tasks and entering them into your navigation system, be it Naviter Oudie or the LX8000 or XC Soar,
- get you uploading flights into *taskPilot* and the OLC (Online Contest), and
- get you analysing your flown task.

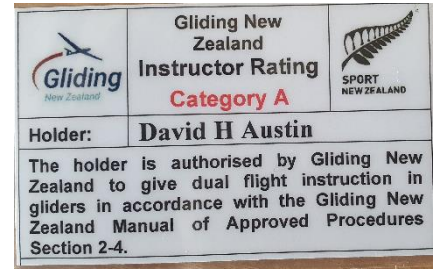
So, who will be TGC's *taskPilot* champion for 2024/25? There is a beautiful trophy just waiting to be admired in your lounge!

If you have any questions, please contact Trace.



## Achievements

It is official. Trace has his Cat A Instructor rating. Congratulations Trace, well done. This means we have three CAT A Instructors at the club; Tom (retired), Colin and Trace.



## Upcoming Events

Just a quick reminder about the following events.

- CPSC Taupo – 02-09 November
- Northern Regionals Matamata – 23-30 November
- *taskPilot* Championship – 02 November 2024 – 31 March 2025

## Humour

