

OUTLANDING

The Taupo Gliding Club's Newsletter



December 2024

Welcome everyone to this final edition of Outlanding for 2024. I trust you all had an enjoyable festive season and I wish you all the very best for 2025.

The NZ Club Class Nationals start in a couple of weeks' time and if you are available to help out in anyway would you please contact Hugh, Tom or Trace.

I would also like to welcome back Erich. It's great to have you back in Taupo. Erich is here for the next couple of months and we are back to seven day flying, so please come out and make the most of the flying season.

We will also be hosting the Piako Gliding Club during the month as the Walsh Flying School has taken over the field at Waharoa. We look forward to their visit.

As the next newsletter will be at the end of January, anyone who has an article or notification to be included into that edition, please have it to Trace by 20 January 2025.

Fly well and have fun! Cheers, Trace

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OUTLANDINGS

Since we are now well into the flying season and have already witnessed several outlandings, I thought it would be prudent to revisit this topic. What is written below is a guide for all pilots irrespective of their level of experience.

What is an outlanding or land out?

- Any landing away from your take off point or intended landing point
 - Another airport
 - Paddock
 - Sports field
 - Race track

Flying XC

- You will eventually land out
 - Either successful or failure
 - Prior planning will ensure it is successful



The Flight

- Height Bands
 - Cruise
 - Caution
 - Save / land out
- Fly from landable area to landable area
- Never fly into an area hoping that there will be an option to land
- 3000' agl - you should have a general idea of the location of landable areas, and that you remain within gliding range of them.
- 2000' agl – you have identified a specific landing area, and remain within gliding range of it while still attempting to soar and gain height.
- 1000' agl – commit to land

S,S,S,S,W

Size, Surface, Slope, Surroundings and Wind

Size

- Large enough to land in
- Hazards
 - A small paddock will look large when surrounded by smaller paddocks
 - Compare with known obstacles, houses, roads, trees
 - A good length paddock might be divided

Surface

- Select best option
- Avoid crops
- Colour – In summer green patches indicate water / irrigation
- Unknown holes

Slope

- Slopes are generally steeper than they look
- Never land downhill regardless of wind direction
- Hard to pick from directly above
- Optical illusions
 - Uphill slope – thinking you are high
 - Downhill slope – thinking you are low

Surroundings

- Trees
- Powerlines / SWER
- Stock
- Fences



Wind

- GPS
- Smoke
- Water ripples
- Crabbing of glider



Skills required

- Situational awareness
 - Options
 - Thinking ahead
- Precision landings
 - Aiming point
- Airspeed control
 - Trim



ONCE COMMITTED TO LAND – LAND!

- Have a drink and relax
- Radio call
- Don't take that 6kt thermal on base leg at 400'
- Do a proper circuit
 - Landing checks
 - Aiming point
 - Speed control – safe speed near ground



After landing

- Radio call – down safe or not
- Secure glider
- Contact land owner
- Wait
- Buy beers for crew when home

Summary

- Practise short field landings
- It can be stressful but with correct preparation it is no different than landing back at the field.

The MacCready Ring

The American soaring pilot Paul MacCready discovered that, during cross-country flying, it is possible to vary the glider's inter-thermal speed in accordance with the strength of the thermals being found. It is a simple enough theory; the stronger the thermals, the faster a pilot should fly between them in order to maximise cross-country speed.



Utilising the glider's "polar curve" of sink-rate versus airspeed, a MacCready Ring can be constructed. This ring is fitted around the dial of the variometer and is controlled by the pilot.

The arrow on the ring is rotated by the pilot to the **average** rate of climb experienced in the last thermal. Note that it is important to set it to the average climb rate, not the maximum seen by the pilot on the variometer. Most pilots are optimistic. If the ring is set too high for the prevailing conditions, the glider will be flown too fast and this may result in getting unnecessarily low on a cross-country flight and losing time by struggling back up again. In an extreme case, setting the ring too high may result in an outlanding.



Having set the ring, the pilot flies the glider in accordance with where the variometer pointer indicates in the sink range. The picture on the left has the MacCready ring set for 2.5 knots. The glider is also in 10 knots plus of sink so the pointer is indicating that the glider should be flying at 89 knots. If the pointer was indicating four knots of sink then 75 knots would be required as indicated on the ring. Increasing the speed will of course increase the sink rate and the pointer will move further downwards. However, the situation rapidly stabilises and the pilot soon acquires the knack of varying the speed of the glider to suit the variations in sink rate, speeding up as sink increases, slowing down as sink decreases.

It might appear that the progress of a glider on a cross-country flight somewhat resembles that of a dolphin. This is exactly what it does look like, and the technique of speeding up in strong sink, slowing down in lesser sink, is known as "dolphin soaring". This is often applied to the extent that, on a good day, a pilot may not bother to circle in all of the thermals, but will "dolphin soar" through most of them, only stopping to circle in one out of three or four encountered on track.

Height Bands

In the article above about outlandings it mentions Height Bands, these being; Cruise, Caution and Save/Landout. So what are they and how do we use them?

Basically you divide the sky into thirds from the ground to the top of convection, cloud base. For simplicity we will use 4,500' to 6,500' agl as the upper one third. This is the Cruise mode. In this area we tend to fly faster and only stop and take good climbs. There is no point taking a two knot climb when you have been experiencing four knot climbs.

The next one third would be like 2,500' to 4,500' agl. This is the Caution mode. In this height band we are going to be more cautious and slowdown a bit and take those two knot climbs. Quite often you can find yourself falling out of the upper height band into this area, which is somewhat inconvenient. The aim here is to get back into the upper height band, if the day permits.

The final one third, ground to 2,500' agl is where we stop in an area where we have identified a suitable landing spot and concentrate on getting a climb for the save or if the day has died, concentrate on conducting a landout. In this zone you will more likely be looking for thermal trigger points as opposed to look up at the clouds.

These bands are determined by a number of factors such

as; lift strength, cloud formation, terrain and your task or goal. You often hear the quote "Get high and stay high", this is often good advice for flying around New Zealand.



Christmas Potluck Dinner

We had an excellent turnout for the Club's Christmas Potluck Dinner which was held on the 14th of December. The weather that evening was fantastic, the food was to die for and of course the camaraderie among of club members and partners was not to be forgotten.





Left – Master Chef Phil

Fire Pit

Thanks to Craig, the club has acquired a new fire pit. I am sure that there will be many a tale about that last flight or landout with a beverage or two to be enjoyed during the cooler months around a warm open fire.

Upcoming Events

Just a quick reminder about the following events.

- *taskPilot* Championship – 02 November 2024 – 31 March 2025
- Piako Club visit – January 2025
- Club Class Nationals, Taupo – 18-26 January 2025
- Quiz Night – 22 January 2025
- Central Districts Championships, Waipukurau – 15-22 February 2025



Humour



Happy New Year