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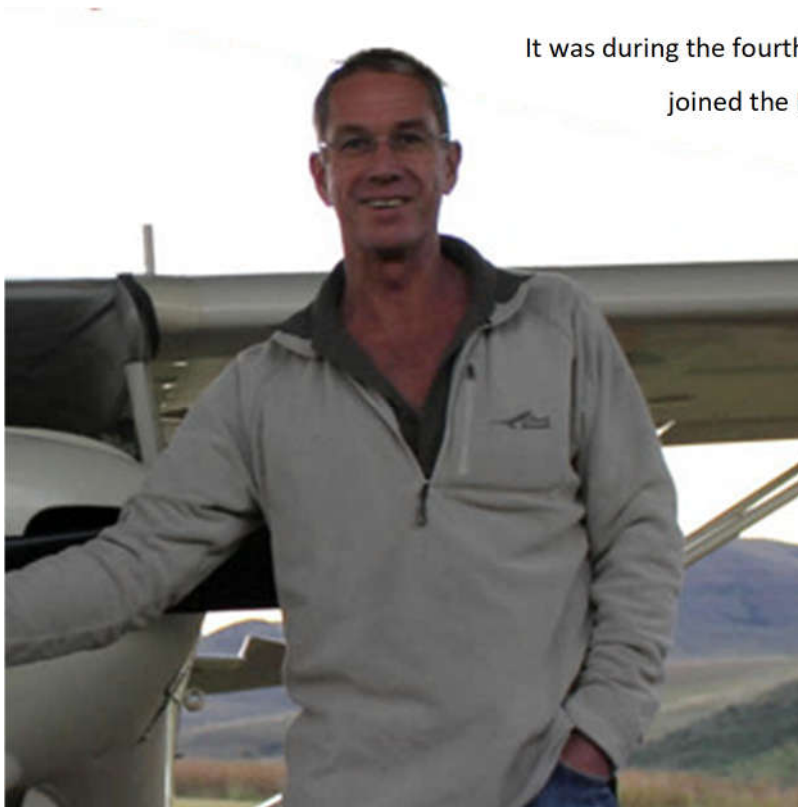
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## Pub Talk

### KZN's Summer Weather Patterns



It was during the fourth quarter of 2013, shortly after I joined the Pmb Aero Club as a Flight

Instructor, when Alick Rennie was CFI here. He gave me an article he wrote on KZN Summer Weather Patterns, which you will find below, and said he had many different interesting relevant articles to share.

Sadly this is the only one he had a chance to share with me before his tragic death in the Sportstar in our GFA in December of 2013. I fly over

the accident site every time we train in the GFA and remember him. I wish I had had the opportunity to get to know him better as I developed a great respect for him in the short time I knew him, and everyone I have ever met who knew him speaks so well of him.

Here's his article, (I have added some illustrations):

#### **Kwazulu Natal (KZN) Weather**

The KZN weather has taken its share of VFR into IMC accidents and is notorious for its sudden changes especially in summer. Why should the KZN weather be any different from anywhere else in South Africa? It is because we have warm moist air off the Mozambique current adjacent to the continent rising in a series of ridges to the top of the Drakensberg at 11000' in 100km. KZN has a pronounced daily change on general flow patterns with downslope-offshore land breezes overnight, and the reversal of this during the day to onshore-upslope winds. This moist maritime air flowing inland, is pushed up by the terrain, expands, cools and condenses on the peaks and ridges and is not the ideal environment to be VFR in any aircraft. There are, however, many high time VFR pilots in KZN, it can be done safely but with knowledge, caution, and the maturity to know when to *quit*.

## **1. The 180° and Land**

An important manoeuvre for any VFR pilot is the 180° turn followed by a precautionary landing, generally on any airfield. It is amazing how hard this manoeuvre is for some to do, yet it takes a life-threatening situation and turns it into one of mild inconvenience, especially nowadays with the advent of the cellphone. It amazes me how society accepts delays on the scheduled airlines and even motor cars yet in GA we are expected to get through on time, every time!

## **2. Heads up Navigation**

If you fly VFR below the overcast you need to know exactly where you are at all times relative to high ground, airfields, airspace restrictions and where the cloud break procedures are. (The IFR guys above you might pop out of the overcast too close for comfort). This means navigating with your head outside the cockpit and not glued to your GPS.

To develop this knowledge, you need to fly a route regularly, first at higher levels on clear days, to formulate some options and then at low level on clear days to test those options.

Know the rules and, flying into a controlled field, understand the restrictions that are placed on the controller and when and how to ask for and comply with Special VFR clearance. If you really get your back to the wall, you can declare an emergency and get priority treatment, (and an interview with the controller and maybe the CAA, both of which are better than a funeral!).

## **3. Understand the Weather Forecasting limitations**

I take an inordinate interest in what the weather is doing for days before I fly and see how it compares to forecasts. This gives me a feel for how well the models are predicting.

The forecasts tend to go through phases of being spot-on and way off. I was once shown around the Durban Met facility and they explained how they used three predictive models to forecast and when the models disagreed they would look back and see which one had been most accurate recently and would weight the forecast towards that prediction. The models were developed for Europe and the USA with high density data points and are adapted for South African conditions but with a very sparse data input. The results are actually not bad, but every pilot has stories about days that the forecast was way out.

The forecast is a very well-educated estimate but what you see out the windshield is what you get and the forecast gives some clue as to what is causing what you see, and can influence the tactics in dealing with it.

The clammy stuff in KZN comes in a number of forms; early morning fog, low pressure systems (coastal lows and frontal systems), convective storms and evening mist. To deal with each of these

we need to take a look at the Topography of KZN briefly and then have a look at how to approach each of the weather phenomena.

#### **4. A brief look at KZN Topography**



KZN is typified by a number of prominent ridge lines paralleling the coast with deeply incised river valleys cutting through these ridges. Northern KZN has a relatively low escarpment as the western boundary from the Swaziland border to Witsiehoek and the main Drakensberg escarpment. To the north east a large coastal plain is separated from the inland areas by the Lebombo mountains, these rise almost 2500ft from the flat coastal plain just 300nm inland of the coast, there are three narrow gaps where the Pongola, Mkuze and Msunduze rivers have punched through. The coastal plain itself has a section, from Sodwana to Richards Bay, where dunes rise to 500ft straight out of the surf. The rest of Zululand is characterised by rolling hills, some quite high like the Qudeni hills around Ngome and Nkandla and meandering river valleys of the Hluhluwe, Mfolozi, Mhlatuze and Tugela catchment. These are very easy to get lost in if the weather is low! The Tugela Basin and valley is the primary bolt hole for Durban and the coastal areas, if you can clear the escarpment at Harrismith. From here south the river valleys include the Umvoti, if you get over the Greytown escarpment, the Umgeni if you can clear the Mooi River, Karkloof and Hilton escarpments but if you follow it to the coast you will infringe on Durban's controlled airspace. For the South Coast the options are the Umkomaas and Umzimkulu valleys. To get into these you have to track along parallel to the main Escarpment and cross several high ridges like those at Nhlosane and Bulwer-



Donnybrook. There are high outcrops away from the main berg like Thambamhlope, Bulwer and in the South, Mount Currie, behind Kokstad, and the Ngeli Range between Kokstad and the coast.

In some cases the rivers, (Bushmans and Mooi), travel virtually parallel to the coast to find a weak zone before cutting through coastward. Where the rivers make these cuts the valleys are narrow and deep and the implications of a narrowing valley and aircraft turning performance, to get back out if the valley ahead shuts down, needs to be understood. The basins between the escarpments are where the fogs and mists sit.

## **5. The Mix, Topography and weather**

Looking at the weather most likely to be encountered from the start of a new day:

### **5.1 Early morning fog and mist**

Overnight radiation cooling causes the air on top of the escarpments to cool to be denser and heavier than the hot humid valley air. The landmass cools faster than the warm ocean which creates an offshore flow as the cold dense air off the land slides out under the lighter warmer air over the sea as a landbreeze.



As this cool air slides off the escarpments and into the low lying areas it displaces the warmer air upwards to form an inversion, mixes with and cools the humid valley air of the previous day to below dewpoint and causes fog to form at the valley bottoms. The tactic here is to find a suitable airfield above the mist top, (inversion), land, and wait it out.

As soon as the sun heats the valley air sufficiently the mist will disperse quickly, especially once the sun manages to break through on a few places.

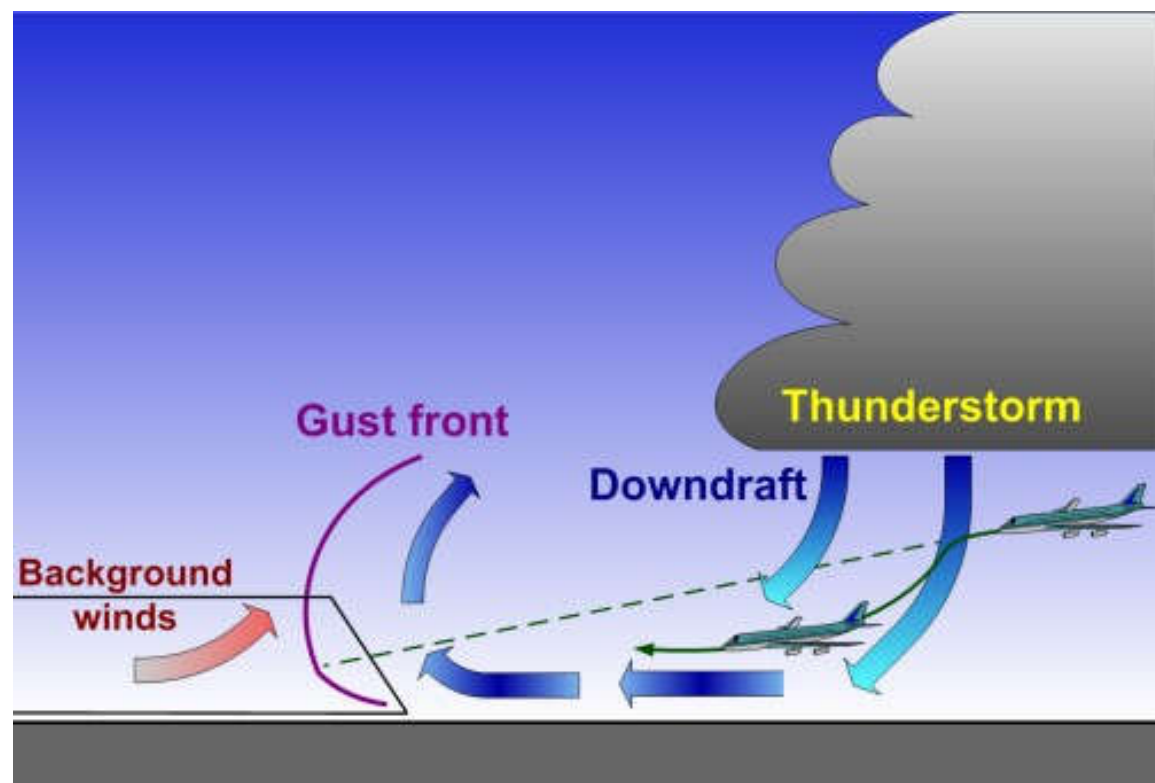
Generally speaking this doesn't last long, though on odd occasions it can be infuriatingly suborn. A classic for this is Pietermaritzburg sitting enshrouded in its river basin with the Hilton Ridge sparkling clear.

## 5.2 Convective Storms

Usually the skies clear for four or five hours before the commencement of the real convective build-up, from about midday. Dealing with convective storms should not be anything new to any South African pilot and the rule, without exception, is avoid them like the plague.

Everywhere, convective storms come with extreme turbulence. The only difference in a mountainous region is that the turbulence can be amplified by the topography. Avoid storms by a large margin and beware of things like gust fronts ahead of storms – sometimes these are marked by roll clouds, indicative of extreme turbulence.

In general, in KZN, the storms move eastwards from the Drakensberg towards the coast. This means that the clever avoidance route is around the western side of the storm, if possible, as here the storm



has moved through already and relative calm has returned. If in doubt, get onto the ground and if at all possible get the aircraft under cover, as hail is an ever-present threat.

I have stood by and watched my aircraft be totalled by duck egg size hailstones and it is not a fun experience!

Hail can also be experienced in clear air ahead of a storm, falling out of the anvil driven off the top of the storm cloud. If you end up in turbulence then turn around and run directly away from the storm and



simultaneously reduce speed to turbulence penetration speed ( $V_a$ ) or less.

No matter what you are flying, you will always be able to run ahead of a storm provided you have the storm core directly behind you. Afternoon storms often link seamlessly with low cloud moving in from the coast.

### **5.3 Evening mist**

This phenomenon is essentially the opposite of the morning fog formation. During the day the landmass absorbs and re-radiates considerably more heat than the ocean. This causes the air mass over the land to heat and become less dense than the oceanic air, it rises, and the cooler humid oceanic air flows in underneath.

As evening approaches and the heating effect of the sun reduces, this moist upslope airflow cools to below dewpoint and evening mist starts to form on the ridges. With further cooling the condensation level, and the cloud-base, start to lower.

There is a subtle trap in that with the lowering cloud base, darkness comes earlier than the official sunset times. If you were planning to get in just before dark, you might be embarrassed. Also, if it starts to drizzle, the visibility through the windshield will decrease drastically. The other side to this trap is that by threading your way down river valleys you travel on a devious and much longer route and will arrive well after your flight planned ETA with a higher fuel burn than anticipated. Low level in a valley, failing light, running out of fuel... the classic content of an aviator's nightmare!

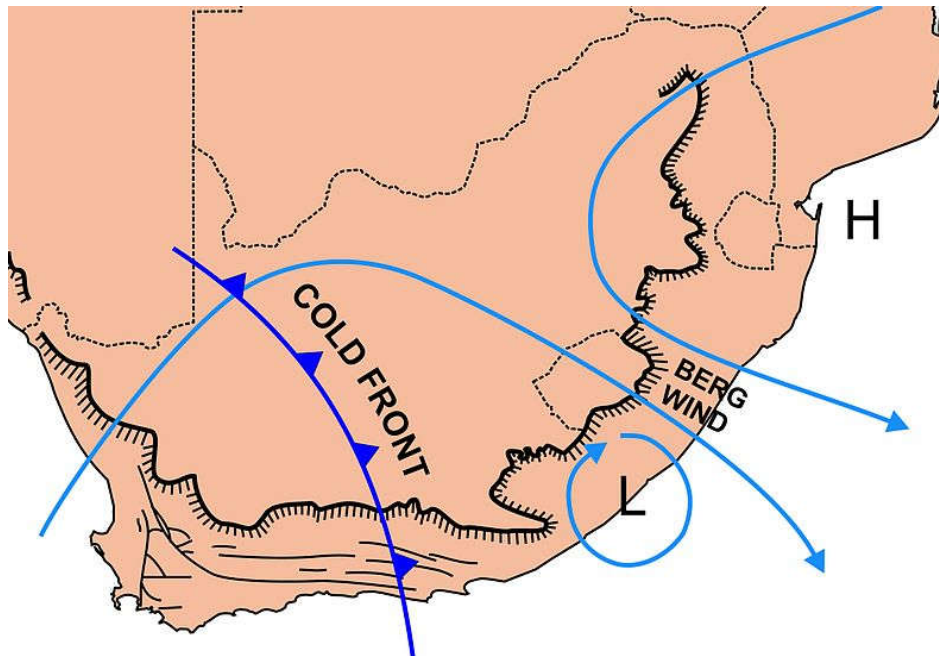
If the forecast is doubtful, leave plenty of time with plenty of fuel and expect the unexpected.

## 5.4 Frontal Systems

Natal's frontal systems come in two species:

The coastal low, and

The full blown cold frontal system from Antarctica.



In both instances relatively cool dense air moves North-Eastwards up the coast pushing underneath the warm continental air causing the uplift of the

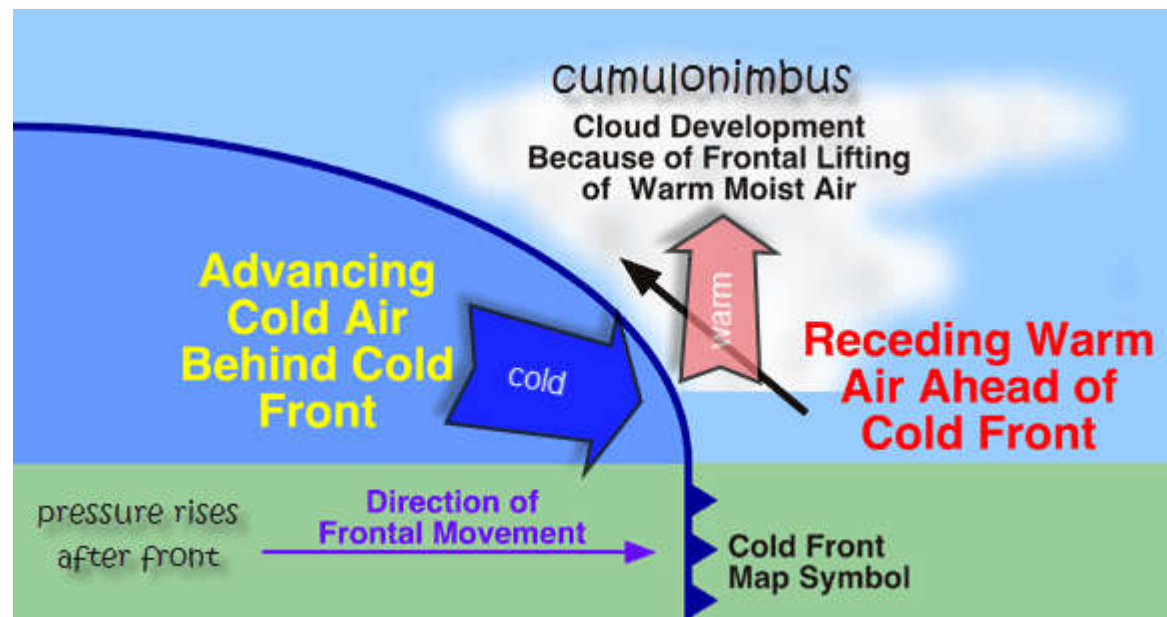
warm air and the formation of a line of storms in the case of a cold front, and the influx of a layer of drizzle producing stratus or strato-cumulus up to about 8000' to 9000' AMSL in the case of a coastal low.

Combined with the passage of the frontal zone is a complete wind shift from an offshore Berg wind out of the northwest which can be a strong, turbulent, hot, wind. With coastal lows this pre-frontal wind will be present but maybe not as strong. A coastal low is actually a by-product of a Berg wind blowing off the escarpments and is caused by a phenomenon known as cyclonic vorticity. The wind will swing to blow hard out of the southwest or in the case of a weak coastal low possibly a southerly or south easterly. Often a coastal low precedes the full blown cold front. The atmospheric pressure ahead of the depression will fall steadily and a reducing QNH with a strong Berg wind is a sure sign of frontal weather on the way.

Dealing with frontal systems is a sequential process. Ahead of the front there will be strong turbulent winds caused by hot stable descending air as it flows down off the escarpments, often accompanied by dust and smog causing poor visibility. When the frontal surface arrives, a brief period of calm is followed by winds out of the South, a sharp temperature drop, pressure rise and a rapid build up of medium and low level cloud. Occasionally the front arrives with a band



as a southerly buster and can be seen approaching with a dark wall of dust and smog being driven ahead of it.



VFR your options are to get low level, on the ground, or divert ahead of the front. Low level in river valleys can get extremely turbulent until the frontal plane has moved through, the southerly wind abated and the cloud base stabilised at a fairly constant level. If the system moves through late in the day the evening drop in temperature can cause the bases to drop frighteningly quickly. I recall doing a Baron conversion and in the space of three circuits the base at Pietermaritzburg dropped from over 1000' to less than 500' and we had to terminate the session!

## 6. In flight tactics

So much for all the theory and understanding of why you are VFR below a lowering cloud deck, in failing light, low on fuel but what can you do? ***If you don't want to kill yourself and your passenger then, what you don't do, without a full instrument rating, properly equipped aircraft and with suitable approach plates, is try and climb through the cloud.*** The answer is: turn back to the nearest airfield and land *BEFORE* you get into IMC.

If you do continue, then some tips:

The cloud bases are generally a little higher on the windward sides of a valley and the downwind side of a ridge where the airflow descends, however, beware of sink and turbulence on these areas. If you get caught in a strong downdraft do not try and out climb it, turn away into the valley and accelerate away from the descending air, any glider pilot will tell you this! If you

doubt the advice, check the arithmetic. Your chariot climbs at 500ft/min at  $V_y$  of say 75kts, you have gotten into a 1000ft/min downdraft that extends 1nm into the valley. At  $V_y$  you will still go down at 500ft/min if you wait 1 min before realising that this is not going to work you will have lost 500 ft and will now have to turn away and will lose a further 400ft before clearing the sink, with the aircraft hanging on the prop and battling to accelerate. If you turn away immediately, lowering the nose to add ft/min to the ft/min and accelerate to 120kts you will be out of the downdraft in  $\frac{1}{2}$  min and will have lost 500ft and have kinetic energy in reserve to initiate a climb away!

If you can, fly the upwind side of the valley you will be flying in rising air and will be able to recover some lost time or fuel by flying with the nose down to counter the orographic lift but beware of high ground speeds in poor visibility.

Look out for powerline pylons, they are a lot easier to spot than the line itself and once seen, fly directly over the pylon as you can judge height and distance from it. The human eye cannot accurately judge distance from a long wire.

Never cross a ridgeline if you are not sure what is behind it and cannot see clear air on the other side.

If failing light and fuel reserves allow it, slow down and lower the flaps ten or fifteen degrees, this gives you time and space to manoeuvre. If you do get into a narrow constriction in a valley and find you have to turn back, your turning radius is proportional to velocity squared for a given bank angle, (stalling speed increases with bank angle, beware!). This means that at a fixed bank angle if you halve your speed, you will use four times less sky to turn around in!

In poor visibility on the coast, use the surf-line as a guide, it will stand out clearly in the gloom. Turn all your lights on and watch out for anyone else doing the same.

Flying in cool air just below the condensation level at a partial power setting, is ideal conditions for carburettor icing! Use carb heat judiciously and be on the lookout for the signs of carb icing.

Always have an alternate plan. If you don't have a back door open when the front door slams, you are trapped! If you are getting worried about turning around, turn NOW. If there is any doubt, there is NO doubt, take the safe option.

*None of the above is an invitation to go and try this and there are a lot of oversimplifications and general rules in this article.*

Always plan ahead with the basics, fuel, time and alternates. Check the met reports and inform your passengers and those at your destination and have a plan, before you depart, that way you will never get caught out or “lose face” (whatever that is!) because you did not “get through”.

\* \* \*

## Upcoming Events

### Christmas Party Dinner

**When:**

24 November

**Where:**

Pmb Aero Club

**Time:**

From 6pm

**Dress:**

Smart Casual

**Cost:**

Members & family: R150pp

Non-Members R195pp

payable to Julie, cash or  
account.

**RSVP:** Julie on

033-386-3952 or

pmb-aero@mweb.co.za

## Christmas Dinner Buffet



### SALAD BAR

Fresh lettuce,

cherry tomatoes romanita,

carrots, red onions, cucumber vinaigrette,

roast peppers, crumbed mushrooms, continental croutons

Portuguese cocktail roll, butter & continental salad dressing

### MAIN

Mozambican

charcoal grilled chicken,

Continental roast beef, Roast potatoes

Roast vegetables, Portuguese savoury rice

Gravy

### DESSERT

Ice cream & Fruit salad & Christmas Pies



## Mozambican & Portuguese Restaurant

Eat  
Fly  
Love



Dan  
CARLOS



## Monthly Grass Roots Breakfast

Every 1st Sunday of the month, from

08h00 till 09h30 *breakfast* will be served at Grass Roots.

*Runway Specs:*      *Direction: 12 downhill / 30 uphill*      *Length: 440 m*      GRASS

*Freq 124.2 (Dbn Special Rules)*      *Elevation: 2200 ft*

*Position: Just outside PMB CTR towards Durbs, it is almost spitting distance from Light Flight, and almost sling-shot distance from Emoyeni.*

*Co-ordinates: S29°45' E030 °34'*

Brekkie consists of a bacon and egg roll and a cup of coffee for the princely sum of R25.00.

Any and all profits going to Grass Roots club house.

All welcome.

**Contact Russel on 083 463 7753.**

## Fuel Price

	Previous Rate	Current Rate
AVGAS	R19.30	R19.90
JET A1	R11.40	R12.10



## Fleet Hours & Hire Rates

	June 2017	July 2017	Aug 2017	Sept 2017
C150	5.6	7.6	1.0	0
per hr hire rate	R1480	R1480	R1480	R1480
C172	34.8	24.5	8.6	10.4
per hr hire rate	R1850	R1850	R1850	R1850
Sling 2	n/a	14.3	60.3	65.7
per hr hire rate	n/a	R1000	R1000	R1400
Instructor rate	R387.60 per hour flying R250 per hour briefing.			

All prices are  
VAT inclusive.



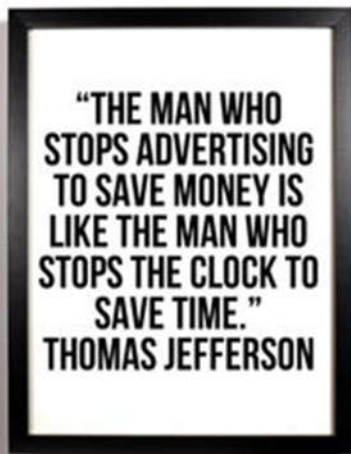
## New Members

A warm welcome to:

Malcolm Pickard, Paul Shanahan and Timothy Hewitt who have joined us to do their PPL's; and welcome back to Josh Scott-Barnes who learned to fly with us and now flies for Airlink!



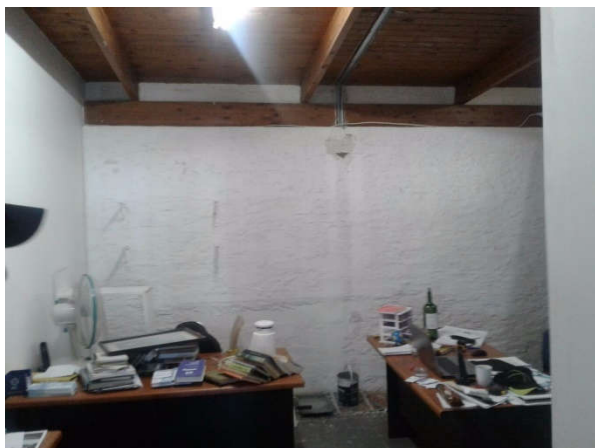
## Club Comms



### Club Improvements

A **BIG Thank-You** to John Arkley who brought his big saw and adjusted the shelves in the Instructor office.

A BIG Thank-you to our two newest members, Marcus and Ollie, who come all the way from Germany to enjoy flying through our African Skies... while waiting for their paperwork from CAA, they demonstrated German Efficiency by helping paint the wall in the Flight Instructor's Office...



Before...



During...

After looks great! But you will have to come see it for yourself... perhaps while at the Christmas Party! (Please book for the 24<sup>th</sup> with Julie. We plan to have LIVE music too).

The paint is from Mike McDonald, left over from the walls in the Club Dining Room. Once again, thank you so much for your donation Mike. We have had so many positive comments.

Speaking of which... Lucio Santoro, a relatively new member, has offered to donate a *CUSTOM BUILT* braai for all our enjoyment, **thank you so so much!!**



*Curtis and Senzo cleaning up the dead branches under the Club Pepper Tree.*

If any other Members are willing or able to donate time, money or goods to the Club, we would all benefit from: a kids jungle gym, a flat screen TV in our briefing room, to double as a teaching aid and Kids TV during functions... a decent coffee machine, (might be too much to ask, but even Pilots need to be re-fuelled), a slide into the swimming pool, and a small, but delightful viewing deck would add an incredible view and ambience, about 9m<sup>2</sup>. Please contact me through the Club or on my Cell if you can toss something our way, Telani 082-490-1654, Julie 033-386-3952.

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## Young Pilots & Co Party Night

We would like to start having an evening dedicated to YOUNG PILOTS and friends, anyone 21 and under, (or 23 and under??), and since I am such an old fart now, I need someone half my age to help with what people 21 and under expect at such an event. PLEASE STEP FORWARD and help me so you guys can have some kiff

events – (see what I mean about needing help). My contact details are at the end of this newsletter.



\* \* \*



## Pmb Aero Club Facebook & WhatsApp Groups

If you know of something Aviation Related, please feel free to post it on the Pmb Aero Club Facebook Group or WhatsApp Group, or let Telani or Simon know about it.

\* \* \*

## Don Carlos Restaurant

Don Carlos Restaurant is open at the Pmb Aero Club from Wednesdays to Sundays from about 10h30 am till the last person leaves in the evening for lunch and dinner.

If you plan to come in for lunch Wed to Sat, please make prior arrangements with Carlos.

Sunday Lunch is always available, it assists Carlos for planning if you give him a heads-up.

Carlos cell: 079-784-2056



*Don Carlos is available for private & corporate functions too!*

## Aero Club Shop

### **Branded Clothes:**

Pmb Aero Club Golf Shirts	R 230	On order
Pmb Aero Club Peak Caps	R 70	On order
Pmb Aero Club ties	R 35	In stock
Pmb Aero Club Jersey	R 260	Out of stock
Pilot Logbook (large)	R 315	In stock
Fuel Tester	R 178	In stock
Pmb Aero Club Wings	R 220	In stock
Epaulettes	R 290	Out of stock
Headsets	R2,736	In stock
Headset bag	R 364	Out of stock
Durban Maps – laminated one side for easy folding: 1:500 000 & 1:1 000 000	R 50	In stock

### **Books:**

PPL – by Jim Davis	R 130	In stock
The Air Pilot's Manual – by	R 700	In stock

### **Avex Study Notes for PPL:**

Principles of Flight	R 178	In stock
Navigation	R 225	In stock
Meteorology	R 218	In stock
Human Performance	R 173	In stock
Flight Performance	R 153	In stock
Aircraft General	R 214	In stock
Airlaw	R 170	In stock



Radio Handbook – Dietlend Lemp	R 230	In stock
Aero Club PPL Bag	R 250	In stock

***Nav Tools:***

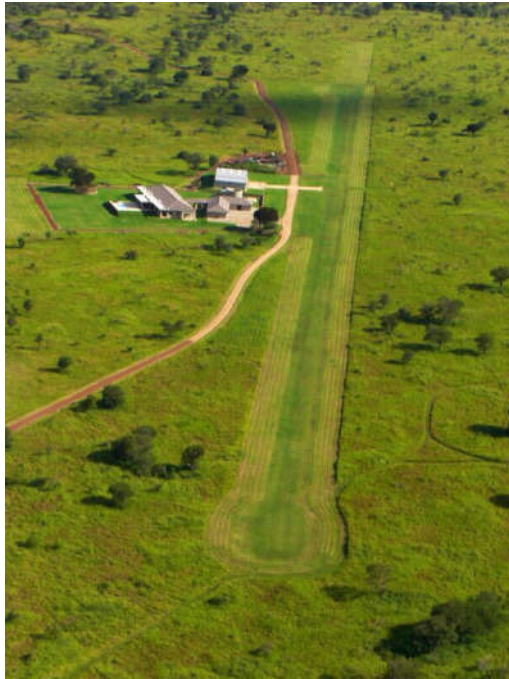
Square Protractor	R 215	In stock
Ruler	R 200	In stock
E6B Whizz Wheel	R 250	In stock
CX2 Pathfinder	R1,400	In stock
Aircraft Checklist	R 30	In stock
Kneeboard	R 380	In stock
First Lesson Brief	R 30	In stock
Bumper Stickers	R 10	In stock



**THE SCARIEST THING ABOUT FLYING IS . . .  
THE DRIVE TO THE AIRPORT**

## Weekend fly-away destination from FAPM

We will be highlighting one fly-away destination in this and following Telstar's to act as reminders of the variety of adventures there are to visit, by aircraft, in KZN.



Last month: El Mirador (FAQL)

This month: Tandweni Villa –

### ***Tiger fishing, Game viewing or just to Relax***

Distance from FAPM : 152nm

Direction from FAPM: 056°M

FREQUENCY: 124.8

ELEVATION: 574ft

LENGTH / WIDTH: 1000m x 20m

SURFACE: gravel

RUNWAYS: 01/19

CO-ORDINATES: S27°29'39" E031°57'05"

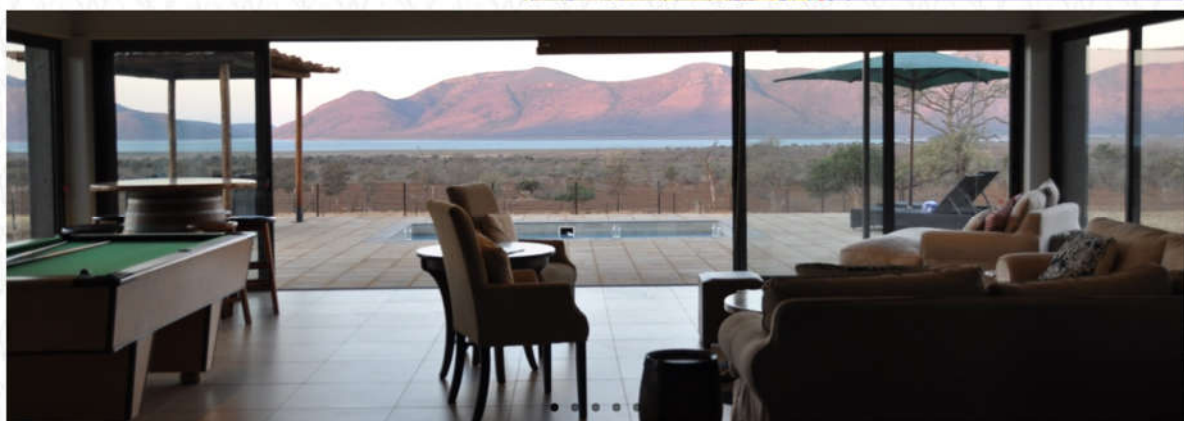
CONTACT DETAILS:

0647514068 / 0823755283

[bookings@tandweni.co.za](mailto:bookings@tandweni.co.za)

<http://www.tandweni.co.za>

DISTANCE FROM THE AIRFIELD: Co-located



## Committee Corner

### AWESOME NEWS:

ZU-WES, the Pmb Aero Club's new white & gold fuel-injected, constant speed prop Sling2 is available for hire and instruction! It took 42 days (29 working days) to achieve this paperwork miracle. 🤗

Presently the Sling is R1400 per hour hire rate. Aircraft pricing is still under discussion by the Committee.

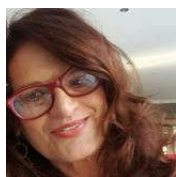
KNI is still unavailable as we wait for her engine upgrade.



It was decided, by unanimous vote, to allow the Committee to sell ZS-JKK at the SGM held on Friday 24 October 2017.

### The Committee as it presently stands:

**President:**  
**Michele Cameron**



**Chairman:**  
**Anthony Grant**



**Vice-Chair:**  
**Cameron Mackenzie**



**Treasurer:**  
**Martin Hellberg**



### Committee Members:

**Steve Svendsen**



**Gary Keyser**



**Gary Hughes**



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## Instructors Input – My favourite map folding technique!

It is law to carry an aviation map covering the area you are flying over, in your cockpit. There is nothing worse than an impractically folded map in a small cockpit. If you can follow this chart folding method, then you certainly have my vote in favour of being PIC. It is not all that tough, but requires a certain level of sobriety and commitment for successful completion. The following Marvellous Method of Map-Folding was originally posted by Duncan McKillop on the Flyer magazine forums/mailling list. Enjoy.

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### Map folding method

#### Tips:

- Practice on a sheet of A4 first (stuff on one side, blank on the other), this will help you avoid making a cock-up with the real thing.
- Buy a nice shiny new chart from AFE so that you don't get your old and new folds mixed up. Besides which, they were good enough to produce the natty little badges, so we should make it worth their while!
- Break the back of all the folds, i.e. make the fold one way and then turn the sheet over and make it the other way, this helps the finished chart to lie flatter.
- Finish each map folding by running along it with a lump of plastic, this makes a fold a fold, not a bend.
- Give yourself plenty of room on a nice big table and get a pal to help you keep the folds from going wonky.
- Be prepared to modify the instructions for charts that are taller than they are wide, Scottish chart for example.
- If you never want to look at the key panel across the bottom of the chart, simply fold it back out of the way and treat the remaining area as per the following instructions.
- If you get it right you will end up with three horizontal and seven vertical folds.

Right, if you're ready here we go.

#### Fold 1.

With the chart printed side down, fold the two longest edges of the chart together so that you get a nice fold running east west along the middle.

#### Fold 2 & 3.

Open out the chart and fold the lower edge up to the centre fold, repeat for the top edge.

You should now have three horizontal folds running east west across the chart. (If you haven't, give up and go down the pub!)

#### Fold 4, 5 & 6.

Open out the chart and repeat the previous process, only this time make the folds north south.

You should now have three horizontal and three vertical folds dividing the chart up into sixteen little squares. (Fun isn't it).



All of the remaining map folding will be north south.

Fold 7.

Open out the chart printed side down and take the left-hand edge and position it on the first fold in from the right-hand side. Take a soft pencil and write "not this one dummy" along the resulting fold. (You'll see why next).

Fold 8.

Open out the chart again and repeat step seven again only this time from the other end. By writing along the previous fold it will hopefully stop you making fold 8 in the wrong place! Remember to fold the edge to the FIRST fold at the other end.

You should now have five vertical and three horizontal folds, if not, the pub option will apply.

Fold 9 & 10.

Open out the chart and fold the left-hand edge in to the first fold on the left-hand side. Repeat for the right-hand edge to the first fold on the right-hand side.

You should now have completed all seven vertical and three horizontal folds and all the vertical folds will be the same distance apart. No? Pub!

Final assembly. Open the chart out flat on the table printed side down and fold the top and bottom segments into the middle. Turn the chart over with the open edges away from you. Starting with the top fold, make the first fold away from you. Next fold towards you, next away and so on until you have a series of concertina folds.

Open the folds out between the second and third peaks of the concertina, turn it through 90 degrees and fold the top away from you.

The job is now finished (yippee).

To use, flip the chart open so that there is an equal number of concertinas each side and page left and right through the concertinas to see the centre portion of the chart. To see the upper and lower portions of the chart, flip it over towards you and page left and right through the concertinas.

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This concludes my favourite map folding technique. The map reads like a book and is supremely user-friendly. I hope you find it as useful as I have!

You can buy a new map from Julie in the Club pilot shop, we laminate the maps with a matt finish *on the chart side only*. This way it can still fold easily, be written on it in felt tip pen or pencil, and one can remove the marks without damaging the map.

We keep the 1:1000 000 and 1:500 000 Durban maps in stock. If you want other maps, please ask Julie to order them for you, (they come from Cape Town), so give plenty of time since they come from the Government Printers.

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## Safety Culture

Please remember, if you experience any hazard in our surrounds, to fill in a hazard reporting form. This is a feedback system so that dangers to pilots may be noted and any repetitive hazard can be addressed in the appropriate manner.

The Forms are available on the sign-out desk just outside Julie's office.



## Members Submissions

Please feel free to contribute if you find something interesting, an article, a joke, a recommended book, or, even better, a personal experience.

Please also feel free to contribute flying related content on the Members Only Facebook Group: Pietermaritzburg Aero Club (PAC).

Until next time, happy flying!



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