

Waikato Whispers



Waikato Hot Air Balloon Club: www.waikatoballoonclub.co.nz Tel: 07 856 0060

CLUB NIGHT Wednesday 1st June

7:30pm Woodworkers Guild Hall Storey Ave. Flight Rules and Landowner Relations

CLUB DAY Sunday 5th June

6:45 am. Innes Common. Tether/Fly and cold inflation of older envelopes

NEWS IN BRIEF

Subs Due: Subscriptions are due and remain the same as last year. \$60 per person. Thanks to those who have already paid.

Our bank account number is: **38-9015-0216761-00**

Ideas for Club Night and Club Day activities – we need your ideas please. Guest speakers, social activities, flight activities, places to go/fly from. We do have a couple of new people from Auckland and one from Levin wanting to participate in what we do.

Ballooning in Dubai – A report from Andrew Parker. Dubai is an interesting place. There's always something going on. I thought my flying skills were quite good before I came here, but I have refined them a lot. It is a surprisingly challenging place to fly and a lot of airspace issues and no-fly zones. We're flying 425's to 500's.

I haven't done a lot of windy inflations in big balloons before coming here. Sometimes it gets quite exciting. We don't take off in more than 8kts. When it is 8kts on the ground, it can often be 15-20kts at the top of the balloon, so it is impossible to get it up. Landings can be quite fast, 12kts is normal. The fastest this year was 22kts. We do drag landings about 50% of the time. All passengers wear safety belts. It is very necessary here.

(22kts is approximately 40km/h)

Service Bulletins – A Service Bulletin is a document issued by an aircraft manufacturer to advise/direct an aircraft owner/operator to do specific works on the aircraft. Members within the club own balloons from a range of manufactures: Cameron, Kavanagh, Kubicek, Ultra Magic and Boland. The aircraft manufacturer sends out the Service Bulletin to all the civil aviation authorities around the world. Here in New Zealand, CAA then issue a Continuing Airworthiness Notice. Once a month they issue a

[Airworthiness Directive Amendment Schedule Nr 16-02](#) - effective 25 Feb 2016

Which summarises all the Airworthiness Notices. Aircraft owner should subscribe to this email notification service so that they can arrange any maintenance works which may be required. There is one out at present which affects Kubicek balloons and potentially the same problem may affect Ultras Magic balloons.

How is Balloon Fabric Made – copied from the Cameron Balloon web site.

“Nylon polymers and other components are melted, mixed, heated, extruded into fibres and sent through a spinneret (a plate with fine holes) to form filaments. This mix of hexamethylene diamine and adipic acid produces an exceptionally high performance fibre, whose foundation properties, tremendous durability compared to weight, great heat-resistance and general toughness are perfect for balloon fabric.

This type of fibre is just the start of a fabric desirable for hot-air ballooning. At this point, the fibre is tested for conformity and uniformity at the yarn spinners and yarn that passes has outstanding tenacity (strength), elasticity, dye-fastness and a high melting point.

This A1 yarn is then woven into huge rolls of sheet fabric using Cameron Balloons specified 'recipe' of particular denier threads – this adds our characteristic grid of 'rip-stop' thicker criss-cross threads which increases both the tear and overall strength. The fabric is then colour-dyed to one of our 23 standard colours or indeed a customer specified special colour.

Then the substrate is tested again for conformity to design specification and colour consistency.

Next it is the turn of a machine which looks rather like an automatic 'butter' spreading-machine. This covers every millimetre of fabric uniformly with our special-recipe coating. (Depending on its end-use needs, some of our fabrics have every fibre coated before being woven together and for other Cameron Balloons fabrics, either a single or both sides of the woven fabric sheet is coated.) To make a balloon efficient, all woven fabrics need coatings to prevent air-flowing through the otherwise porous weave.

At the fabric manufacturers, under laboratory conditions, each batch of every single colour of fabric, is tested to ensure it conforms exactly to our design specification. This check involves; chemical composition, warp and weft tenacity, cold-crack, shock-and-stretch, colour verification and extreme heat and humidity cycle tests. If it passes all of the tests throughout each process, it can be released for use in our hot-air balloons.

Cameron Balloons uses more than a kilometre of fabric for a small, four person balloon but still for every batch of fabric we at Cameron Balloons use, we put it through our own in-house tests. We start by using an extreme 'weatherer' machine to invoke, under-test conditions, some of the harshest environments known to man. Then in order for us to be totally satisfied we also test each batch of fabric for warp and weft tensile strength before and after the extreme weathering tests too. If the fabric passes all of those tests only then, will it be released by our Design Engineers for use, for the balloons we manufacture here in Bristol.

Hyperlast

Cameron Balloons designed Hyperlast, is a market-leading fabric frequently used in passenger-rides hot-air envelopes. This smooth fabric is made up of an incredibly strong substrate - an individually coated silicone-elastomer yarn. It is woven and then 'calendered' (compression rolled) to ensure a smooth even and strong weave from this more robust denier Nylon fibre."

To read the full article go to: <http://www.cameronballoons.co.uk/spotlight/spotlight-which-fabric-is-best>

Flight Rules and Landowner Relations: A topic which we haven't covered for some time but has recently come to the attention of CAA. Two incidents in and around Palmerston North and Levin which were brought to the attention of CAA. Pilots AND crew are now under scrutiny so it is important we review our procedures and 'educate' ourselves in what we should do.

There are many adventure aviation operators who like us need to be able to land on private properties. As recreational aviation operators, our Club procedures should closely mirror those of the commercial operators so that we as a Club are respected by our local landowners.

For our Younger Members: (Copied from Kids Learning Resources by Cameron Balloons)

1) What do I need to be a good balloonist?



- * Gloves – and to begin with, any gloves that are comfortable will be great.
- * Layers of clothing; it can be cold early in the morning & a waterproof jacket keeps out any cool damp air
- * Walking boots or wellington boots.
- * Camera (optional...) but a really good idea!!
- * Water bottle and a little snack
- * Binoculars - if you have them
- * Notebook and pen
- * Fun, excitement, good humour and great listening skills
- * Little rucksack to put all the bits-and-pieces in

Don't forget boots! I hate soggy feet!



Don't forget 'to pack' your most fun grown-up too!



There are 16 of these so we will be following Freddie and Theo and their friends over the next few months.

When You Least Expect It (From Hanger Flying – Balloon Life February 2000)

In South Louisiana, scheduling a flight for someone who lives 100 miles away and who doesn't want to get up early in the morning is like picking numbers in the Lottery. For one couple, their lucky day, or unlucky, as the case may be, was about to arrive.

After trying to schedule this couple's afternoon flight for more than a year and having one disappointing "no go," which they weren't happy about, we finally thought we had the perfect Saturday afternoon. It was mid September. A weak cold front had passed through on Wednesday, then light northeast winds had appeared on Friday and Saturday, with a high pressure system dominating. For Saturday afternoon the forecast was north-east at 5 mph, calm after sundown. We couldn't miss.

Our passengers drove in and met us at a local restaurant. Doing what I thought was routine and kind of a show for the passengers, I put up a pibal. It went straight up and slightly to the southwest. The temperature was 91 degrees which was cool compared to a few weeks earlier, and there was nothing on radar within 200 miles. The highest wind recorded that day at the local TV station was 9 mph during the late morning. Since the observed (pibal) winds were light and variable, we chose a launch location central to landing spots since we would be flying over subdivisions with lots of trees, and some powerlines. Great place to launch. We had done it on many occasions before under similar conditions. There were two passengers, myself, and fuel to safely fly for 1 hour and 10 minutes.

We launched an hour and forty minutes before sundown. My first tip as to what was to happen that afternoon came during inflation when we noticed a slight wind gust from the southeast. At about 700 feet I got my second tip. We picked up speed to the north, which came as a complete surprise. Flight in this direction would have to be cut short. Not wanting to disappoint the couple again with a short flight, I noticed the flags on the ground were calm. No problem. We just dropped down to calm air at about 200 feet. But, in about a minute, my third tip came when we started picking up speed in a south-easterly direction.

Three strikes and you're out... Having flown balloon more than 600 hours, I have experienced frontal gusts and thunderstorm outflows, but had never experienced anything like this. Not knowing what was going on, I made the decision to land in a small open lot I was approaching, realizing I would have to explain to my passengers later why they drove here again for only a 10 minute flight. Before reaching the lot, the balloon made a ninety degree turn to the northeast toward powerlines. Altitude was in our best interest. Rising up over the trees, low and behold, it felt like someone was really looking after me because the wind settled out to the northeast at about 3 to 5 mph. We had a good time for the next 35 minutes.

Now the flight is 45 minutes old. I will have no problem with my passengers if I land, but we have gradually changed direction again to the southeast. With the wind conditions we were experiencing, we were too close to some cross-country transmission lines to attempt to land.

Radioing to my crew (yes, I love my radios) that I would land as soon as I cleared the "big powerlines," we changed direction again to the southwest, back to the very lot where we had launched, believe it or not.

Being very big on visualization, I visualized landing at our launchsite and proclaiming the ultimate balloon flight. Of course my passengers would heap praise upon me about my flying ability while enjoying the Champagne celebration. NOT! The wind was picking up again. I burned out my other tanks and switched to my last 10 gallon tank and was looking for a place to make a possible 10 mph high speed landing (not fast in many parts of the country, but Louisiana is a different story). My crew was on the wrong side of a canal and had to go around in order to help me. Luckily, I was entering a subdivision that had all underground electric and open cul-de-sacs.

Now, let the finale begin... I started to pick up speed. Since I was going away from the big powerlines I didn't mind too much. It was gusty but I figured it was not a problem with my crew waiting. We'd land between gusts. But instead of slowing down, we changed direction again to the west, then the northwest, then north. We started going around in a big circle, maybe half mile in diameter.

Then the circle got smaller and when I would get close to the treetops, the balloon would distort, closing the throat, and actually swinging the basket from side to side. The speed would pick up and slow down. The circle shrunk to 100 yards in diameter. Checking my fuel, it was at 20 percent of my last tank, which eliminated the option of going up to get out of whatever I was in. Each time around,

I passed over the wide canal which had mostly briars and weeds in the bottom, and trees on both sides. My decision was to land in the bottom of the canal and later fix the damage I was sure to have.

As I came around for the fourth time my passengers were in the bottom of the basket. I started preparing them for the landing when I saw that two of my crew had jumped an eight-foot-high fence and were in the dry canal. Thinking I might have a shot at saving us and the equipment, I threw a drop line to them and told them to wrap it around a tree on the bank, which they did. I burned like you know what, when the drop line started to tighten up. As it broke off branches of the trees, I swung on around and down close to a rooftop. I circled back over the canal once again, and almost stopped. The wind was light to the south now. My crew gave me some slack, we eased over to a driveway where the landowner had moved his car, and we landed as softly as we had launched. We walked the balloon to the street where more than fifty people had gathered to watch the excitement. Happily a lot of them helped us pack up.

The celebration included the Balloonists' Prayer and a "real" prayer. My crew were the heroes, as usual. The passengers? They had an experience, regretfully, that they will never forget.

Safety lesson learned... My research on what caused this wind condition has not led me to anything that I could have done, or should have done, that would have told me about the possibility of this happening. Now I know it can happen —when you least expect it.

Carson Lane

This report reminds us all to be always alert to what is happening around us – both pilot and crew – and to be ready to respond accordingly.

Often as we rise the balloon moves to the left then as we descend moves to the right and we (the pilot) take that into consideration when ‘planning’ our landing. How many of us have experienced the right hand shift having disappeared or swung further to the left! Urgent re-planning of the landing site.

One thing the crew can do is to let the pilot know what the wind is doing on the ground. This is the advantage of using radios – the crew can provide information to the pilot without distracting the pilot who would otherwise have to answer a mobile phone. You step out of the car to look for the balloon and notice that the wind has picked up – let the pilot know as that might allow the pilot to reduce flight time so as to land safely!

For our Junior Balloonists: For those who like to look at the weather maps – www.metvew.com and wonder what the symbols mean – the following covers wind speed and direction.

Wind Speed & Direction (From <http://www.srh.noaa.gov/jetstream/synoptic/wind.htm>)

Wind speed. A combination of long/short barbs and pennants indicate the speed of the wind in station weather plots rounded to the nearest 5 knots. Calm wind is indicated by a large circle drawn around the skycover symbol.

One long barb is used to indicate each 10 knots with the short barb representing 5 knots. At 50 knots, the barbs changes to a pennant. For wind speeds higher than 50 knots, long and short barbs are used again in combination with the pennant(s). (See examples below.)

Observed wind speed	0-2 <u>kts</u> (0-2 mph)	3-7 <u>kts</u> (3-8 mph)	8-12 <u>kts</u> (9-14 mph)	13-17 <u>kts</u> (15-20 mph)	18-22 <u>kts</u> (21-25 mph)	23-27 <u>kts</u> (26-31 mph)	28-32 <u>kts</u> (32-37 mph)	33-37 <u>kts</u> (38-43 mph)	48-52 <u>kts</u> (55-60 mph)
Rounded to the nearest 5	0 <u>kts</u>	5 <u>kts</u>	10 <u>kts</u>	15 <u>kts</u>	20 <u>kts</u>	25 <u>kts</u>	30 <u>kts</u>	35 <u>kts</u>	50 <u>kts</u>
Plotted as									

Wind FROM 340° (NNW)	Wind FROM 040° (NE)	Wind FROM 190° (S)
---------------------------------	--------------------------------	-------------------------------



1kt = 1.8km/h. If a pilot has a GPS in the balloon with speed indicated, we will usually have this set to km/h.

President	Nicholas Norris	021 213 8861	nnorris@ihug.co.nz
Chief Pilot	Dave Norris Mark Brown	021 351 957 021 912 679	nenya@ihug.co.nz
Secretary - temp	Linda Norris		bellan@vodafone.co.nz
Treasurer - temp	Dave Norris	021 351 957	
Whispers	Dave Norris		nenya@ihug.co.nz