

The Southern Club (ShCC)

# Windsock

Spring 2008



## *Points from the chair* Charlie Merrit SHGC Chairman reviews the last year

It doesn't seem that long ago that I was writing my introduction in Windsock as the new Chairman. In fact it was in April last year and since then I've learnt a little about what it's like to be on a committee.

At this time of year we often reflect on what we've achieved (or haven't achieved) over the last year and set ourselves goals for the coming year. So what about the Southern Club ?

Well last year I wrote to you full of enthusiasm about a committee with plenty of fresh blood that were keen to see some changes in the Club.

What I've learnt is that it takes a lot of time and effort to change peoples minds and affect change !

But what have we achieved and what should we be concentrating on in 2008 ?



I wanted to see a change in the way we introduce new members into the club, giving them a bit more direct contact and advice in their first few months of flying. Richard Chester-Nash, the then Schools Liaison Officer and Matt Pepper did a lot of work in this area but unfortunately other commitments meant they couldn't follow through on it.

We we're very lucky that Dave Nickels was able to step up and take on the role of Schools Liaison Officer and organising the Monthly Coaching Meetings at Glynde the last Thursday of every month (except December). We are introducing a new members pack that will be given to the schools in the area that can be passed directly on to the newly qualified students and hope to introduce compulsory site briefings by Club Coaches that will ensure all our members are aware of the rules on out sites and encourage more contact between new pilots and people on the hill.

Membership renewal is always a problematic area and we had a few problems last year with the system meaning that fewer members renewed. We are looking into alternatives to paying the subs although we are constrained by the legalities of having to have a system that requires two signatories. If we can make it easier we will endeavour to do so, including an online renewal form if possible.

Neil Brennan-Wright is looking to pass on this particular role as he has his hands full with Windsock and running his own business. We have a few interested members but if there is anyone else who would like to help out, please contact the committee at [committee@shgc.org.uk](mailto:committee@shgc.org.uk)

On a more positive note, we had a very successful end of year Christmas Party in December at the White Hart Hotel with record attendance and my thanks to David Webb for all the help he gave me in organising it. Hopefully you'll be able to read about it in this issue of Windsock.

Below is a the Committee as it stands now, we will be having the AGM in April so if anyone is keen to help out the Club please come along and put yourself up for election....

President	:	Johnny Carr
Chairman	:	Charlie Merrett
Treasurer	:	Peter Campbell.... Secretary : Des Huth....Safety Officer: Steve Purdie
Sites Officer	:	David Webb.... Chief Coach:Tim King.... Aerotow :Will Greenwood
Membership	:	Neil Brennan-Wright (Standing down)....Schools Liaison: Dave Nickels
Windsock	:	Neil Brennan-Wright

If you would like to contact the Committee please email [committee@shgc.org.uk](mailto:committee@shgc.org.uk)

In the meantime as the days get longer I wish you all many hours of safe flying in 2008 and look forward to seeing you on the hill.

Charlie Merrett  
Chairman

### **Editors Bit,**

**This is the first time I have got out windsock finished on time! Thanks to the bad weather! I hope you enjoy this issue, Please, if you have stories, theories or experiences please email me [neil.brennan-wright@virgin.net](mailto:neil.brennan-wright@virgin.net), have a good year and let the thermals be kind and high. Neil Brennan-Wright**

# Safety officer spiel:

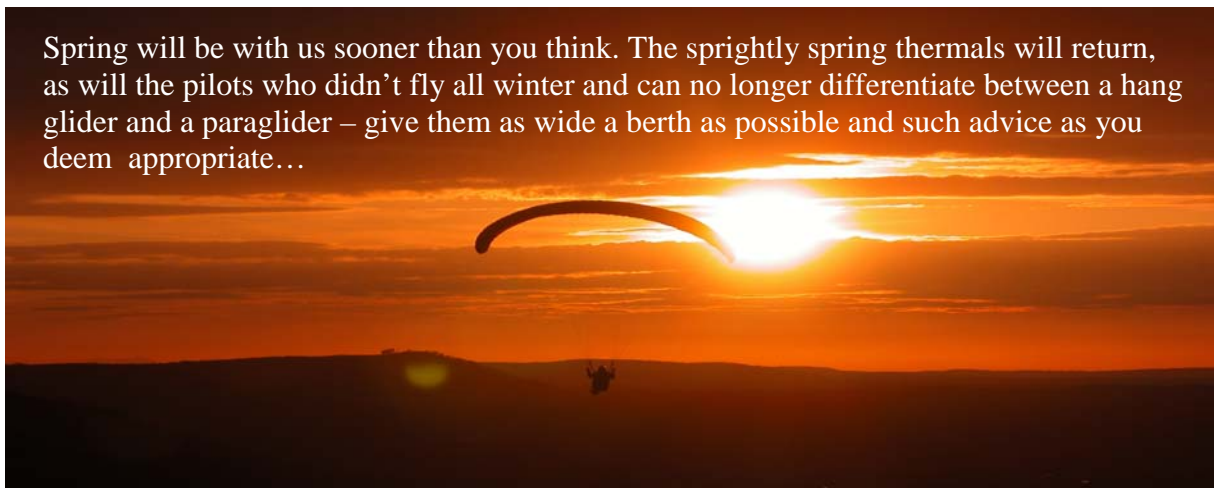
Well, as I write this, it is just 2008 and Neil has promised that this issue of windsock will be on your doormats before the end of the month. With that in mind, I feel I should warn you all about the dangers of dehydration during the hot summer days which will no doubt prevail as you read this...

However, as I hold Neil's timeliness in high regard J, I will actually brief you about the hazards of winter flying:

- Its cold, very cold! About ten years ago, I got frostbite on a finger while hang gliding, an experience I certainly wouldn't like to repeat. Make sure that you dress well – thermals are a must and often several thin gloves are warmer than one thick pair. Mittens are much warmer than gloves if you can still fly safely.
- Electrically heated gloves are fantastic, but Mycoal hand warmers are a good second and cheaper.
- Land *before* you get too cold to control your glider on the ground.
- Visored full face helmets seem like a good idea, but they seriously affect your ability to determine your air-speed and really limit your peripheral perception.
- Frozen ground is hard so don't land on your backside, as if you ever would! Hang glider pilots might like to get their wheels out again if they have boldly removed them from the glider. They will save the anodising on the base bar if it is frozen and keep the vario out of the mud if it isn't.
- The low sun can be an issue. Paraglider pilots can always shield their eyes using a hand while still holding the brake.
- Trees can be harder to spot, especially at Firle (west) when the sun is low – be careful.
- There may be extended periods of high winds – don't be tempted to fly when it is still too strong.
- There may be days when the airmass is so stable that it is rough despite there being no obvious reason. Respect this and don't fly if it is blustery.
- The roads up to Firle and Bo Peep can become heavily iced. If you are struggling to get to the top, think what the slide down could be like and leave your car at the bottom.
- If you pack a snow covered paraglider, keep it somewhere cold until you get a chance to dry it.
- The resin used in carbon fibre spars does not like the cold and will become brittle below its glass transition temperature – possibly not that cold. If in doubt, check.
- Don't fly in heavy snow, it'll build up on or in the wing and cause all sorts of amusement.



Spring will be with us sooner than you think. The sprightly spring thermals will return, as will the pilots who didn't fly all winter and can no longer differentiate between a hang glider and a paraglider – give them as wide a berth as possible and such advice as you deem appropriate...



# *The Early Days of Hang Gliding and the Southern Club*



*Out on the hill I'm often asked about the early days of Hang Gliding and my background in glider design and manufacture, so it came as no surprise when Neil asked me to write something on the subject for Windsock. It's always hard to know how and where to start on something like this. I guess it'll have to be the beginning...*

## [The Idea](#)

Back in the early 70's I saw a short news item on TV showing a bunch of guys flying some very basic hang gliders off a hill in California. They seemed to be having a great time, but were arriving at the bottom very shortly after take-off, so for my purposes at the time, there seemed little point to the activity and I very soon forgot all about hang gliders. I had been for some time working on a jump-start gyroplane design, having realised that the only way I could afford to fly would be to build my own aircraft. Design work was progressing nicely, when I came across a photo of a primitive hang glider in a newspaper. Again, I thought little more about it until later that evening when I suddenly realised that if you flew the thing off a steep enough hill in a wind of 20 mph or so, you would actually be able to stay up! What's more, I already had all the equipment and machinery required for the job; a hacksaw, a pistol drill with a couple of drill bits, a small Victorian sewing machine, a pencil and a slide rule. I immediately set about designing and building a hang glider. What could possibly go wrong?

## [Aeronautical Engineering](#)

Unfortunately I had failed to keep the photo, so I had very little to go on, thus my first attempt was a glider with 21ft leading edge tubes and 18ft keel. The nose angle was around 105 degrees and the resulting wing area about 340 sq ft - pretty big, but I had only reckoned to get a maximum lift coefficient of about one. After a lot of phone calls and driving around to get materials ("You're going to built a what??! - You must be crazy!"), I was finally ready to start construction. I made the sail first, laying it out roughly on the lawn and sewing it on the kitchen table. I drilled the main spars in my back yard with a pistol drill, marking around the circumference with bits of paper for the pilot holes, then using masonry bits for the through holes (to save blunting the drills on the concrete). Reinforcing inserts had to be 'machined' down with a file to fit inside the 16 gauge tubes. For the A-frame tubes I soaped the ends and heat-treated them on the gas cooker before shrinking inserts into place in the kitchen sink. Probably the hardest bit was drilling the Woolworth's hardware dept bolts to take key-rings to secure the wing nuts. After load testing the frame by balancing one end of the cross tube on the garden fence and the other on the shed roof, then jumping up and down in the A-frame, I was ready to go flying.

## Flight Testing

The maximum lift coefficient turned out to be rather better than I had estimated - no question of needing to run for a landing; a lazy walking pace was plenty - the wing was way too big. This was not the only problem either, as I found out on my first flight. I had located the hang point by assigning a first guesstimate and then accurately calculating the difference to where it should be. Five inches. I carefully built the wing with the hang point five inches further aft. Disaster! It should have been five inches further forward! This made my first flight a little tricky with the hang point some ten inches too far aft - bear in mind, I had to teach myself how to fly at the same time as figuring out the shortcomings of my design. Even so, I did manage to top land on that first flight at Anchor Valley in a stiff Westerly breeze - by virtue of being unable to get to the bottom! I rounded the flight off in style with my first ground-loop. Thus ended many years of confidence in my own mental arithmetic and began the first of many years of flight-testing, bending, bodging and re-testing countless experimental aircraft. Some might call this a career. It certainly involved a lot of careering around the sky!

## Flying, Flying, Flying

Following the first few flights, I re-designed the wing, mostly with a hacksaw. I cut the leading edges down to the same length as the keel. That way it folded neater. I reduced the nose angle to around 90 degrees, which cut the wing area to about 220 sq ft and went off to learn how to fly it. Things were much better now. Although the glide angle wasn't so good, I could take off and land reliably and, better yet, I could actually steer the thing in flight! Then in the Spring of 1974 a new development emerged. Other people! There were other people out there on the South Downs attempting to commit aviation just like me!

Apart from the obvious social benefits, flying with a group like this produced a real boost in my learning speed, since I could learn from the mistakes of others as well as my own. I soon discovered that I could get higher and stay up longer than most by virtue of my superior sink rate. Conversely, my glide angle was so bad that often I couldn't make it over the fence into the landing field with everybody else. Eyeballing my fellow aviator's mostly cobbled-up, home-made or kit-built machines revealed that the ones that glided best had, amongst numerous other differences, one key element; non-porous sails. By now thoroughly hooked on flying, as opposed to sewing, I rushed out and purchased a ready made rip-stop nylon sail and after ten minutes with the trusty hacksaw fitted it to my airframe. Success! It flew a treat! I had an even better sink rate and could now actually out-glide most of the others as well. The glider looked a real beauty too in its two-tone blue. A man could be proud of a machine like that. Well, until he realised that he could make a much better one...



## Competition Success

It was on this same glider that I entered the first British Championships held at Steyning Bowl that Summer (1974). There was no entry fee and, better yet, when you signed-in as a competitor they gave you six bottles of Stella lager, so it was well worth entering. Unfortunately the wind was a brisk SW and, even after a couple of breakfast beers, the idea of flying through appalling turbulence to the bottom of the bowl for a pointless spot-landing task didn't appeal. I went to the sponsor's tent, cadged another six bottles of beer and went off to Mill Hill to go flying.

This turned out a brilliant day for me. I got in several hours of soaring, my bottles of beer jammed inside my denim jacket. I opened them in flight on the A-frame corner brackets and came in for a succession of top-landings to dispose of the empties. Best of all, I finally worked out how to top-land (this was quite a new thing at the time). On my first attempt I got it all wrong and knocked one of the spectators out of his wheel-chair. Luckily I was undamaged and he apologised profusely for getting in the way! Anyway, I got more free beer and more flying that day than anyone else entered in the competition, so I reckon I won.

# *The Early Days of Hang Gliding and the Southern Club*

## Theory Into Practice

I had written an article for the national association magazine on the theoretical possibilities of gaining extra height in ridge-lift using thermals. The first time this happened in reality was such a surprise to my fellow fliers that they stopped flying and abandoned their gliders at Anchor Valley, having seen me flying from there at Mill Hill. The whole bunch piled into their cars and rushed down the road to Mill Hill to regail me with questions to which I had very few answers. I wasn't sure at the time if it had been thermal or wave. These days of course any one of us would immediately recognise thermal lift and the onset of sea-breeze convergence.

On another afternoon we were soaring at Mill Hill when the sea breeze became a true Southerly. The turbulence was fairly severe and the only real lift was way out over the bushes at the North end. So someone said "How about Newhaven? That faces South..." A bunch of us jumped in a couple of cars taking my glider and a Hiway Standard with us and shot off to the cliffs. Now at this time we knew it was theoretically possible to fly a cliff and had read of some guys in California flying a coastal cliff by launching from a big hill behind it and landing on the beach. But actually launching from a cliff?? After walking back and forth along the top of Newhaven cliffs for half an hour or so scoping out the severe rotor (it was blowing over 25mph), I chose a rounded bit of cliff edge with clean airflow and enough space for someone on the nose wires and off I went. After a short flight in smooth, strong lift I made an easy top landing in a rotor free zone and had a second flight, quickly followed by Martin Farnham, the component maker at Brighton HG manufacturer Hiway - now 'fully recovered' from 'the towing incident', who flew my wing rather than go and fetch the other one.

## Southern Hang Gliding Club

One of the keenest local fliers, graphic designer Mark Woodhams, approached me one afternoon at Mill Hill with John Malin, the Steyning Bowl HG school proprietor, in tow. "We're thinking of forming a club to protect our flying sites and generally look after local fliers interests. It'll cost money. We reckon twenty five quid each will do to get things started. Some of the others have already agreed, can we count you in?" "OK. As long as he doesn't get to handle any of the money..." The SHGC was founded later that Summer, the result mostly of Mark's hard work and the boundless enthusiasm of guys like Johnny Carr, who was the first to actually hand over a cheque. Everyone joined - I mean everyone. Incidentally, twenty five pounds back then was a lot of cash, like maybe 200 or more now. National Hang Gliding Association annual membership including third party insurance and the Illustrated Monthly Fly Paper was only three quid. I can still remember reading the first Exchange and Mart ads for the NHGA and being reluctant to join thinking it looked a bit of a con...

## British Hang Gliding Association

Turned out it wasn't actually a con at all, though there was a bit of deception involved. The NHGA was run by enthusiastic flier John James. It was expanding fast and had organised appropriate publicity and suitable third party insurance for flying members on a shoestring. In fact all was running quite well, despite the best intentions of rival organisation, the British Kite Soaring Association. Unfortunately, it then came out that 'John James' was actually Peter Haynes, the oldest of the Haynes brothers, the younger two of whom ran local HG manufacturer Wasp! Oops! After a lot of name calling and a hell of a political bun fight the BKSA and NHGA were merged to form the BHGA. Apart from the increased number of members and an improved magazine, 'Wings', all this argy bargy had lead to a properly constituted National Association, providing a sound legal basis for the foundation of 'Member Clubs' like SHGC.

## My First Flying Trip Abroad

I used to go to the Isle of Man for the Manx GP in early September most years with a group of friends. We'd take our bikes (typically not UK street legal) up to Liverpool in a van, then ditch the van in Liverpool and get on the ferry with our bikes. This year was different; I took my glider on the roof of my TR4a. There was a Hang Gliding Club on the island (with three members and one, currently broken, glider). Though very friendly, they didn't seem to know very much about the Met or the best local flying sites and were obviously in the very early stages of learning. However, there appeared to be no potential problem with flying more or less anywhere on the island. Despite this being a bit of an alien concept after the attitude in Sussex, I set out with my OS map to try a few sites. Anyway, I had a couple of flights, but the best was from Snaefell, the biggest peak on the island.

I took off from a shoulder of the mountain alongside the road in a stiffish SW wind. Up I went. And back a bit. And up some more. As I passed the mountain railway on the way up the driver stopped the train and he and all the passengers got out to watch! They were waving and photographing like mad. I wrapped one arm hard round the control bar to keep penetrating while I waved back. After a short, but enjoyable flight in ever increasing wind, I landed on the top of Snaefell. Early the next morning I was rather ominously awakened by a phone call

# *The Early Days of Hang Gliding and the Southern Club*

at my B&B. Expecting it to be the plod, or some irate land owner, I battled my way to the phone very carefully past the biggest Manx cat you've ever seen ("Well, that's sort of 'his' room. He's absolutely fine as long as he likes you..."). It was Manx Radio wanting to know where and when I'd be flying today so they could tell people where to go and watch! Oh, and could they be of any help with weather forecasts or anything like that? A stark contrast with the attitude to fliers still prevalent in Sussex today.

## **Building A Better Glider**

My airframe still had the original un-anodised extruded alloy tubes, much bent, re-straightened and cut about by now, together with rusty Woolworth's bolts and bare galvanised steel rigging wires clamped with those horrid little U-bolt cable clamps. I had done a fair amount of development work and added some extras. I had one of the first king-posts, though mine was only fifteen inches tall and had just a single fore and aft cable to hold the reflex in the keel. The tendency of the cross tube to get bent when parked nose down in a wind, requiring it to be constantly un-bolted and inverted (no kidding, this was common practice!), had been more or less eliminated by the addition of a shackle on the nose wires to allow the wing to park flat on the ground. The control bar had always had a 'belly-bulge' in it ('speed bar' it's called these days) and was removable using wing nuts and safety rings, though I rarely bothered to fold the A-frame, preferring to keep it rigged as I had no bag to keep the glider in anyway and it kept the wires from flapping about while the glider was stored on the roof of my car. My variable geometry crosstube ends had also been very useful for fine tuning the billow and I had now reached the practical limit of performance from the rip-stop nylon sail.

Realising that there was a big boost in performance to be had, I was mad keen to get a new sail made in some decent heavier polyester sailcloth and, at the same time, tidy the rest up a bit. After ordering the new sail for me, the guys at Hiway let me build the fiddly bits of my new frame in their factory in Bernard Road, Brighton. This time I used anodised tubes all round - no more black marks on the sail and black hands after flying - and, after tweaking and tuning the wing, I added a complete new set of properly swaged plastic coated rigging. The finished glider looked superb with its pristine all white sail. It flew really well too, fully justifying my extra expense and effort. Glide and especially penetration performance were much enhanced. A man could be proud of a machine like that. Well, until he realised that he could make a much better one...



## **Next Issue: The Hiway Days**

That's it for now. In the next issue of Windsock I'll talk about the technical developments that took place locally and tell you more about the people involved (should give them a chance to bribe me to keep quiet!)

### **Hello Jolly Southerners,**

A friend of mine in India has finally got enough money and skills to begin flying tandems for the tourists and has asked me to source some kit, so if you can help with any of the following:

Harnesses for pilot and passenger, anything with a sensible back protector and a rear reserve container would do the job.

Karribiners for the above.

An old, cheap, but servicable tandem glider.

Please pass this around if possible, you'd be doing a poor young man (and his family) from the mountains a big favour.

e-mail me at [info@skylarkparagliding.co.uk](mailto:info@skylarkparagliding.co.uk) or call 078840725 Best Regards, Dave.

# First Flight 2008

New years evening its 9.00 we are all in watching the TV, Champagne in the fridge, and we got snacks on the table ready to celebrate 2008. I got one of those thoughts, "I know, I fly into the new year" with a look outside it's a very light SW and the tides going out, what could be better? With this in mind I put it forward to the wife and kids, "if you think we are going to Firlle! No just up to Galley Hill" our little site only 2 minutes away. Kids dressed up, dog and champagne in car, off we went!



11.45 set up glider and did a quick site inspection, yep, sea is out, only the grouyne to avoid, but that ok im armed with a head torch, what could go wrong? I have been flying this cliff site for about 4 years, but this was different, I cant see a bloody thing, so with airing on the side of caution I just do a top to bottom. But its still scary, with the array of fireworks

exploding over Eastbourne, Hastings and Bexhill, and bow I have attracted a small audience of bystanders, I launched myself, off I went a full 24 seconds in total darkness., landing onto the beach that was really eyrie! But I did it ! Can I Say I Am the first person to fly in 2008?



*I Neil Brennan-Wright condones all reckless stunts and strong advises you do not try this at home! I await the public flaming! (The kids and the audience were impressed !)*

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# Aspects of aspect ratios

By Paul Hargreaves

For a long time I would nod wisely at the mention of “high aspect ratio”, understanding the expression to mean a high performance wing, without really grasping the meaning of the expression and its role in wing design. What nagged away at me was that the formula for calculating an aspect ratio could result in two different shaped wings having the same ratio, so how could it be used in evaluating a wing’s performance?

Aspect ratio (AR) is the ratio of wing-span to chord (chord being the distance from leading edge to trailing edge of a wing). If the chord was constant, such as in a perfectly rectangular wing, the calculation of AR would be easy. Since wings are not usually rectangular, different methods may be used for calculating AR and they may be expressed like this:-

$$AR = \frac{\text{span x span}}{\text{wing area}} = \frac{\text{span x span}}{\text{average chord x span}} = \frac{\text{Span}}{\text{average chord}}$$

If you had a rectangular wing, the chord would be constant. With a curving or elliptical plan shape, the chord changes along the span of the wing, so it is difficult to work out the mean, or average chord. In these circumstances the first formula above may be easier to resolve.

In fig’s. 1 and 2 below, imagine the grid is made up of squares measuring 1m x 1m;

Fig 1.  
Span of dart-shaped wing is 2m, area is 4m<sup>2</sup>, aspect ratio is 1  
 $(2 \times 2) / 4 = 1$

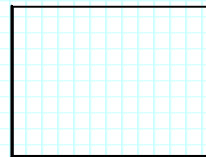
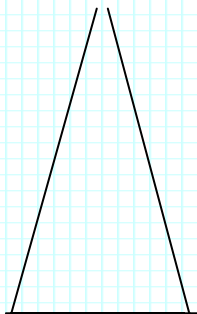


Fig. 2  
Span of square shaped wing is 2m, area is 4m<sup>2</sup>, aspect ratio is 1  
 $(2 \times 2) / 4 = 1$

Both the wings illustrated in fig.’s 1 and 2 have a span of 2m and an area of 4sq. m., so they both have an AR calculated like so:-

$$\frac{\text{span x span}}{\text{wing area}} = \frac{2 \times 2}{4} = 1$$

A word about “ratio” at this point; we are all used to ratios being an expression of a relationship between two quantities, such as 1 instructor to 5 pupils being a ratio of 1 : 5. In mathematics, a ratio can be a quotient, or the result of dividing one number by another. So a 4:4 ratio can be expressed as 1. I hope I’m not alone in having found some problem with a ratio being expressed as a single number. The wings illustrated in fig.’s 1 and 2 with an aspect ratio of 4:4 or let’s call it 1, have a very low AR.

# Aspects of aspect ratios

You will still get medium AR wings of different shapes sharing the same AR, as shown in fig.'s 3 and 4 below. Imagine the grid is made of 1m squares again;

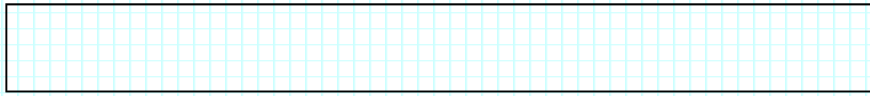


Fig 3.

Thin, rectangular wing; span is 8m, area 8m<sup>2</sup>, aspect ratio is 8 (8x8) / 8

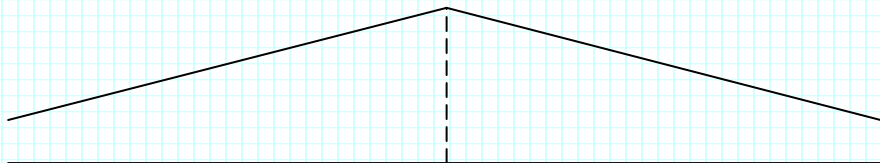


Fig 4.

Thin, tapering wing; span is 8m, area 8m<sup>2</sup>, aspect ratio is 8 (8x8) / 8

Both the wings illustrated in fig.'s 4 and 5 above have the same aspect ratio and whilst they are different shapes, they share that characteristic.

High AR wings are extremely long and narrow, such as are found on rigid wing sailplanes, whose AR can exceed 30. It should be clear that paragliders cannot hope to approach such AR's. A competition paraglider wing might have an aspect ratio in excess of 7, whereas that of a DHV1 model might be around 4.5. High AR is not a term that should be applied to any paraglider – or hang glider: it's an impossibility.

To understand what different aspect ratios do for wings, we need to go back to the principles of lift and drag. An aerofoil shape moving through the air creates lift. Bernoulli's theorem is often used to demonstrate how air accelerating over the top of a wing results in lower pressure and thus lift. Trouble is, this elementary explanation usually illustrates the air accelerating over the wing in order to meet up with the air flowing a shorter route under the wing so it can re-join the air on exit behind the wing. What actually happens is that the air flowing over the top surface of the wing does indeed go faster than the air below it and continues to go faster when it leaves the wing at the trailing edge – creating vortices.

The complex physics of lift generation get quite difficult from here and I'm going to leave it by summarising what happens when an aerofoil moves through the air; it creates pressure differences, lift and vortices. Vortices produce drag.

# Aspects of aspect ratios

All parts of a paraglider create drag when moving through the air. There are different kinds of drag;

**Parasitic drag** The Pilot Handbook divides this into form drag and skin-friction drag. Elsewhere you may see reference to profile or pressure drag. Because of all the pressure variations over a body as it moves through the air and the viscous drag caused by the wing's contact with the air, parasitic drag results. Parasitic drag does nothing useful – it just gets in the way and slows you down. This form of drag is proportionately much greater in fast aircraft, but it is still one important form of drag and is the reason one of the latest trends in paraglider design – reducing the number of lines.

**Vortex drag** The Pilot Handbook calls this “induced drag” and it is caused by the rotating vortices which trail behind any wing. It may also be called vortex-induced drag. It is the most important form of drag in slow flying aircraft.

Vortex or induced drag is the important one for the purpose of this article. It is produced as a result of the process of producing lift. You cannot have aerofoil lift without it. We've all seen those spiralling vapour trails coming off an airliner wing tip - these are vortices. Look at the water circulating downstream behind the piles of a river bridge to see vortices.

Greater or more vortices = greater or more drag.

A high drag wing sets up more vortices than a low drag wing. A high AR wing creates smaller vortices than a low AR wing. This is because a high AR wing moves through a larger mass of air and therefore only needs to displace the air it passes through by a lesser amount than a low AR wing, which has to displace a smaller mass of air by a greater amount to produce lift.

The designer of a paraglider or hang glider has to find a balance between safety and performance, as does the designer of anything that flies. In the design process, many other variables such as speed or thrust and angle of attack are considered. The aspect ratio of a wing is just one variable that a designer can work on when attempting to achieve the balance required.

In a competition paraglider, the higher aspect ratio may be visible in a narrower wing (smaller chord). A narrower wing usually means a thinner wing because otherwise you would have an excessive hump in the wing. It will be more sensitive to changes of trim and to up and down gusts in flight. A thinner wing profile also means the wing is more sensitive to changes of angle of attack. In other words its usable range, from an angle of attack where no lift is generated to an angle of attack where the wing stalls, is smaller. Which is why the pilot of a competition paraglider needs to have greater input and skill than the pilot of a lower aspect ratio wing.

Hoping this results in more of that wise nodding at the mention of this topic whilst waiting on the hillside.

© Paul Hargreaves

# Club Members Trips



**After organising a small club trip to Morocco last November, I enjoyed it so much I am doing it again!**

I am no different from you all, waiting for the UK weather to clear, cant get consistent, and wanting to do so much more! The only way is out! (3 hours flight and a GMT time zone!) I love to see you out there, so read on and come and join us.

## **Flying trips to Morocco in February and March.**

They are the basis of a long weekend Thursday to Monday, however if you are wanting a longer time, no problem,

Cost is £65.00 per day this includes Airport transfers, all accommodation, 3 very good meals a day, coaching and retrieves and of course a English flying pilot/ Guide (Toby Colombe) who is well respected within the local villages. Airfares are Extra, they are approx £120.00 return (EastJet) Gatwick to Marrakech.

## **Moroccan Flying Weather**

Average spring temperatures are around 25degC on the plains of Marrakech. The reliable north-Easterly breezes feed the warm air directly up onto our favourite sites (Aguergour and Alt Ourir) on the edge of the High Atlas mountains. As the sun warms the plains below, a constant flow of smooth thermodynamic lift sets up. This allows us to soar high above the Berber villages. Cross country flying is also possible out into the plains or along the ridges.

## **Trip 1 Low airtime pilots or newly qualified pilots**

I have planned this trip with low air, newly qualified or pilots who just need to get hours under their wings.

With local great flying sites on our door step, the emphasis is getting people flying then an introduction into thermal flying-moving on to simple goal setting, also if needed Ground Handling practice! all while having fun!

**Dates: Thursday 28th February to Monday 3rd March 2008 (extendable if required)**

**Trip 2** This course is aimed for slightly more experienced and confidence pilots who want to progress to the next stage Ideal for those who are wanting to kick start there XC career and to fly in local comps (BCC or BP cup) This is a mini XC camp, thermalling techniques, understanding and using your instruments, easy/moderate XC tasks, understanding and practicing 'speed to fly', and personal goal setting. For those wanting to go for the big one, a full retrieval service will be provided!

**Dates: Thursday 6th March to 10th March 2008 (extendable if required) Price £65.00 per day.**

There are limited places so if you are wanting to join us please email back on the trip you are wanting and for how many days, if you require more details please feel free to email or call on 0797 0814216, neil.brennan-wright@virgin.net PS For those who don't want to get their gliders dusty (Mr Pepper) launch Site mats have been obtained! I look forward to see you out there Neil

## Annecy this April?

As another season is only a few months away, I'm embarking on another coaching crusade, with a proposed 2 week stay in Annecy this April, where members can drop in for flying advice and coaching. Or just to free fly, have some fun and maybe share some knowledge. Subjects we will be going to cover.

Introduction to the Alpine environment...Alpine Meteo/differences from our environment...Safe flying decisions/actions  
Flight planning / Cp Validation in the mountains (do you know descent rates in big ears? or with big ears and speed bar applied? )  
ffvl sites, alpine etiquette etc....Active piloting in Active Air / Descent techniques....Recovery techniques....Thermal understanding  
signs/sources/triggers/ Learn the 5 star rating of thermal finding/ Slope....Surface Sun Wind Flotsam...Thermalling techniques  
Tandem coaching sessions: see video <<http://tinyurl.com/2amaov>>....<http://tinyurl.com/2amaov> and flying in Annecy <http://tinyurl.com/yonffl>  
Cloud use/escape/ unerstanding/ considerations...Gliding skills/Transitions...cross country flying....And much More....

All theory is backed up with Practical flying tasks, its a progressive move up to flying xc in the mountains and will be a real hoot. You will discover its a steep learning curve, you will learn skills that will progress your flying considerably. This course has been developed to promote good decision making and flying skills and will aim to make you an independent pilot and will aid confidence no end. You will find any fear you experience when flying becomes rationalised as the info starts to sink in. In most cases, pilots are not fearful of what they know, its what they don't know!

If you are interested please call or email me for the full itinerary on 07980 291965 or to answer ANY questions you may have. [icc-clean@orange.net](mailto:icc-clean@orange.net)

I Hope to see you there. Matt pepper SHGC Club Coach



## The Southern Hang Gliding Club 2007 Christmas Party

More than 80 pilots and guests attended the annual SHGC Christmas Party at the White Hart Hotel in Lewes and the evening proved to be a great success.

After dinner, this year's trophies were presented to the worthy winners by Ali Coombe, and this was followed by highly entertaining 'rocking and rolling' to the music of 'Soundbite' Band.

Big thanks go out to Charlie Merrett and Ali Coombe for the considerable amount of preparation they did to make this Club event so enjoyable.

## Congratulations To Dave and Sylvia Watts

On the seventh of December, Dave Watts aka 'The Mad Farmer' tied the knot, making an honest woman of Sylvia. The ceremony at Brighton registry office was followed by a bl@@dy good knees-up at the Wok Inn, Shortgate, Ringmer and a good time was had by all! Mark Watts, The Best (Super)Man



Write up by mark watts:

**AIRTRIPS**  
**Himalaya**

The Old Station, Glynde, BN8 6SS  
Tel: 01273 858108  
e-mail: [info@airworks.co.uk](mailto:info@airworks.co.uk)

Each year pilots with levels of experience ranging from absolutely zero hours since qualifying to near sky-gods come with us... Most break all their personal bests there and everyone always wants to go again!

Session 1 – late evening 4/10/08 to 19/10/08 Learn to thermal and fly XC  
Session 2 – late evening 18/10/08 to 02/11/08 XC flying

This is not a 'this is the hill, off you go' kind of trip.  
This is instruction in mountain and cross country flying to the highest standard. We have a DVD from an earlier trip to give you a taste of the adventure.

If you would like a copy please let me know.  
The cost of this ALL INCLUSIVE holiday is £1170 for each session, plus flights (currently £550). Those with a more leisurely schedule could opt for both trips for £2000 including free accommodation for the days in between.

If you are interested, call Steve Purdie on 01273 858108 or look at our website for more details: [www.airworks.co.uk/trips.htm](http://www.airworks.co.uk/trips.htm)



# The BP CUP

It's a great way to see the goings on of a comp in a chilled out way, (you can be serious if you want!) but the tasks set are not unachievable and there are always a few of the top guys there to show you the way. Of course you don't have to do all of them! For more information [www.bpcup.co.uk](http://www.bpcup.co.uk)

Provisional dates for the Bp cup are:-

3-4 may....23-26 may....21-24 june....12-13 july....8-11 aug

I expect the first one to be held at ths Scottish Borders, 21-24 July at the Mynd just before the British Champs. At the same time Mark Leaveslys XXX festival will be on locally.

The other locations will be S.E Wales, Dales, and N. Wales in no particular order.

## The Triple X Free Flying festival

will be held at the weekend of the 20<sup>th</sup> – 22<sup>nd</sup> June 2008 at Walcott Hall, Lydbury North, Shropshire. This is the inaugural event in what is hoped will become an annual event. Held near the legendary Long Mynd flying site, there will be plenty of opportunity for flying, whatever level of experience pilots have.

The festival will to be an event for the whole free-flying community, with flying and non-flying activities planned for each day of the festival. Activities confirmed to date are: go to

**Info on the venue:** <http://www.walcothall.com/>

**John "Windy" Lancaster** was the recipient of this year's Red Ribbon Club *Pilot of the Year Award*, presented at the SHGC Christmas party. This award is voted by RRC members and members of *Airworks*.

There were 5 people nominated in total, but in the end the trophy went to.... "Windy" John Lancaster.

Some of the comments and reasons given for voting for John included:

"...for being continuously friendly, approachable and helpful on the hill....."

"He always seems to turn up just when you need him....his advice a while back made the difference between me giving up the sport and continuing flying - so here I am, still going for it!"

"He's just a great character to have around on the hill!"

So, well done, John..... and thanks for all the support you give everyone!

Bernard.



## Results of the 2007 Airworks *Red Ribbon Club Open PG Competition*, held back in November

Despite a very iffy day for flying, a determined group of pilots set about the various tasks given at Caburn. All made a brilliant effort in the difficult conditions, which nonetheless proved to be great fun. It was a jolly and slightly damp group that beamed at the pub afterwards, having collected their silverware!

### RRC Class

1st: **Matt Botterman**  
2nd: **Neil Charles**  
3rd: **St.John Gilbert**

### Open Class

1st: **Chris Drabble**  
2nd: **Krzystof Birowka**  
3rd: **Ronan McDonald**

# BCC British Club Challenge 2008

Last year I enthusiastically signed the club up and got a group to the first meeting in Wales for a sunny Easter round and, although we (or at least most of us) may have lived up to a Southern Slackers reputation, we managed to get a respectable result and I thought we might be off to a good year of BCC events.



However, it didn't quite work like that, mainly for three reasons. First, the weather put paid to many proposed rounds - I guess there is not much to say about that. Secondly, for some reason the BCC system of automatically emailing when a new round is proposed stopped sending to my address - so I failed to notice rounds until they were already fully subscribed. And, finally, my work - which I had thought was going to be very quiet for the first half of the year - turned out to go mental so I had less time to monitor the website and keep on top of it.

Most of the earlier proposed rounds got cancelled and I think that the only rounds that were actually held other than the South East Wales ones were in Cumbria and the Dales.

So now we are in 2008 . who knows about the weather, work is currently less hectic but uncertain but if there are enough club members who are keen to participate and unless someone else is willing to take on the task I am willing to try again and hopefully get us to more rounds.

If there are enough members who are interested I will sign the club up. Please let me know on-list or off- if you would be interested in participating (since the club teams can be made up of different members at each round there is not obligation to make it for all rounds). It would also be good to know if in general you would be willing to participate at rounds in all parts of the country or if you are Southern-slacker that wishes to resist travelling to the North.

You can be at any level from club pilot up (indeed the scoring is handicapped to reward achievements of club pilots over those of pilots and advance pilots) but it would be good to have a few sky gods to join us and help advise, guide and encourage.

The BCC is a friendly inter-club competition which is a much less pressured atmosphere than competitions like the BP Cup but the combination of good sites, good colleagues and task setting can see many people fly personal bests (myself included).

What follows below is an extract from the website (<http://www.flybcc.co.uk/>) on the ethos of the competition.

The competition has been designed to encourage paragliding and hang gliding pilots to improve their flying and cross country skills through a friendly yet competitive coaching environment, by competing in teams against other clubs.

The primary pillars under laying the competition are flying, fun and safety.

The aim is to encourage teams to visit other areas of the UK and fly new and different types of sites to help improve the scope of their flying abilities.

At the same time pilots will have the chance to learn from one another, exchanging views and ideas on the continual improvement of skills and the sport.

Each team has up to six members, one captain/coach and five team members.

The team can comprise of club pilots, pilots and advanced pilots, and the competition is designed for the more experienced can coach the less experienced members of the team.

Mark Rubinstein Please contact me on [shgc@mrluk.com](mailto:shgc@mrluk.com)



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