

GLIDEPATH



The Journal of Wessex Soaring Association. September 2021
BMFA Club No 2759

From the Editor

The prize for star Glidepath contributor of the month goes to Dave Camp who has produced not one but two articles for this edition. Dave has recently retired so now has more time for model building, but I doubt if he will be attempting anything like the model described at the end of his second article. Meanwhile the award for athletic achievement in the name of flying, goes to Richard Docketty who describes taking his models up to Ballard Down, a 1km walk with over 100m of climb from the car park.

From the Chair

I hope you are all keeping well, not so much flying this month due to the rather unfavourable conditions

E Soaring

Sadly despite a valiant attempt on the day, the conditions were deemed too turbulent to fly in the afternoon so only the morning event went ahead.

Picnic Site

Nothing extra to report at this time.

Impromptu Slope day

I keep an eye on the conditions and one day it looked favourable for a trip to Horses/Barbara's slope. So I sent out emails and on the day I think about 10 chaps turned out and had a really good time. The conditions were pretty good and we managed to park our cars around the two caravans without too much trouble as people came and went during the day.

Slopeside by Pete Carpenter

As far as I am aware there is no change regarding the Oxo/Swallowcliffe situation. There is also still no change with Stoney Down so for the time being we can continue there as we have done. **Please note that Death Valley is no longer available for use this year.** The situation regarding the other slopes is shown below. Please use your own common sense and apply the countryside rules. Therefore if things look different at a site, particularly if it involves crops or livestock, please do not enter and contact me on pete.carpenter12@gmail.com or 01722 328728.

- 1) Winklebury (W to NE wind) - Available.
- 2) Norrington Down (S to SW wind) - Available.
- 3) Donkey Valley (SE wind) - Available.
- 4) Swallowcliffe (NW to NNE wind) - **Not Available**.
- 5) Quarry (W to WNW wind) - Available. Access to the slope must be via the Stony Down / Berwick St John route only. Launching and landing from the slope face is OK, but the slope is perfectly flyable from the Berwick St John field. You may encounter some paragliders as they also have permission from the farmer to fly there. In this case it is best to have a friendly chat with them and see if you can agree separate airspaces for models and paragliders.
- 6) Oxo (WNW to NW wind) - **Not Available**.
- 7) Horses/Barbara's Field (WNW to NW wind):- Available.
- 8) Daltons 1&2 (NW to NNW wind) - Available.
- 9) Crockerton (NW to NNW wind) - Available subject to rules in slope guide.
- 10) Death Valley (SW wind) - **Not Available**.
- 11) Berwick St John (SW wind), Stony Down (ESE to SE wind) - Available. Code on gate padlock is 5823 . Please do not over fly the parked cars on your landing approach at Stony Down.
- 12) East Bowl (NEE to E wind) - Available. There is a gate with a keycode, which is 7850. The shepherd is Mr.Fletcher (red Toyota pick-up) and he has asked that anyone parking on the track put a little note on the dashboard of their car, letting him know that they are a WSA member.

There are also a number of public slope sites, particularly in the Purbecks that anybody can fly from. A list of these is maintained on [Christchurch Club's website](#) so please have a look there for details.

Flat Field Update

If you are the first to arrive at Chalbury go to the green box in the farm yard.

1. The field number is shown on the small plate on the box front . LEAVE THAT WHERE IT IS.
2. Remove the large red plate from inside the box and place it on the box front. It indicates the WSA are on site.
3. Also take the required equipment out of the box and to the flying field, i.e peg board, bungees etc.
4. If it is an event where you are expecting a large number of people take the corresponding field number out of the box and place it on the fence hook at the road entrance to the drive. There is no need to put the number on the hook if you are flying there alone or with just a few other people
5. The last to leave the site, ensure everything is replaced in the box, including the red plate and number on hook if used, but LEAVING THE FIELD NUMBER INDICATOR ON THE BOX FRONT.

Be aware of the field condition, e.g. after rain. Do NOT leave wheel spin marks. If in doubt, park off the lane outside the field. Leave space for farm traffic.

Be aware of footpaths across the fields, Do not launch if walkers are on the paths. Do not launch if horse riders are nearby.

No low flying over power lines. **No flying over farm buildings and the cottage, AT ANY HEIGHT, or immediately upwind of the farm complex.**

Fly SAFELY at all times. Especially launching and landing. Do not launch over cars and do not approach a landing over other flyers, fly a proper circuit.

Report any problems to the flat field rep, Doug Bowmann.

E Soaring Round 2, August 22nd by Martin Burr

As I mentioned in "From the Chair" we only managed the 2.3m plane morning competition as the wind was causing some rather worrying turbulence on take-off and landing.

Six chaps did battle and Doug scored a well-deserved win, chased home by Geoff in second place. The scores were remarkably close for the first 4 competitors.

Hopefully next time things will be a bit calmer and more pleasant. Thanks to all for taking part.

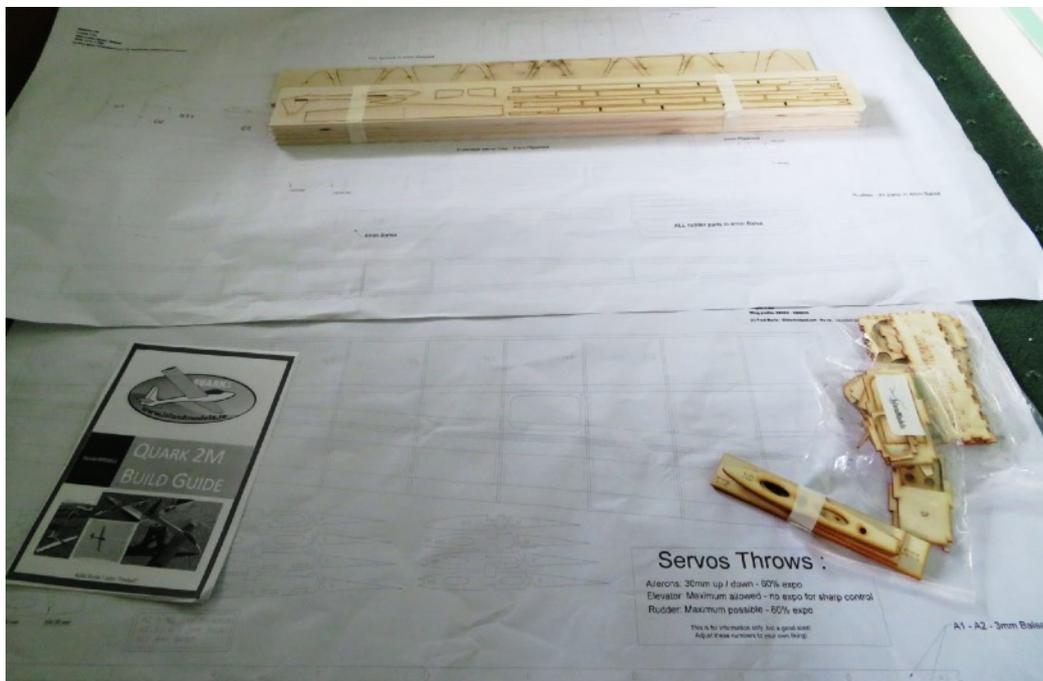
1st Doug Bowman 3730
2nd Geoff Collins 3631
3rd Martin Burr 3514
4th Nigel Bennet 3322
5th Ian Wettstein 2946
Retired Alan Butterworth

Quark 2M by Dave Camp

I spotted the Quark 2M a few years back when making a check on the IslandModels web site, www.islandmodels.ie, which is a 'Cottage Industry' type of business run by Fred Maries, a Frenchman living in Ireland (Eire). He has a range of scale models (I have a couple in my 'retirement to do' stash) and some non-scale types. Kits and plans are sold, the kits being more of a 'plan-pack' type which include laser cut formers and ribs with the builder supplying sheet, strip and fittings etc. The Quark 2M is an aerobatic slope soarer with a design that I think is more in the style of the 3D type of aerobatic type as opposed to the more traditional Phase 6 type design. Anyway given I have never had a fully aerobatic slope soarer and with the possibility of early(ish) retirement to give building time, in a moment of weakness with the credit card I made the move to order a kit. A bit lazy really as the plans would have been sufficient, but I was thinking of a quick build and avoiding the fretsaw.

In a fairly short space of time a box arrived which was well packed and all ready for this supposedly quick build. Well moving house, sorting out a workshop, decorating, blah, blah all got in the way, so it was not until October 2020 that I actually got around to starting the build. Then a load more work on the house plus not sorting stopping work until June this year, kind of delayed matters. It was not until mid-June that I finally got down to a proper building session, going through to completion.

For the building I am not going to give a piece by piece account you will be pleased to hear, just some general findings. The photo below shows the basic parts, out of the box including a stack of laser cut sheet plus bagged cut ply parts.



The quality of the laser cut parts is very good and the plans are clear, with all the required parts printed full size along with the usual construction plan. It did help finding a Quark build blog on the RC Ireland group forum, plus the basic instructions in the kit. Just one 'gotcha', but not really significant,

the design is all metric which I have absolutely no problem with but the majority of balsa that we get in the UK is still cut to imperial sizes. For some areas this is not significant e.g. 1/16th balsa is 1.5mm and 1/8th is 3mm near as dammit, but the Quark uses 5mm wood for spars and other parts and that does not match so closely to an imperial size. The issue here is ensuring a good fit with the laser cut parts, as it rather defeats the object if one has to keep resizing slots etc. Luckily I found that Gliders Model Shop (Newark) do sell some balsa in metric sizes (Graupner branded I recall), so I got hold of some 5 mm sheet to strip down to 5 x 10mm for spars, longerons and leading edges. The only other problem area was with the wing and tailplane joiners. The plan calls for carbon tube and rod, but I did not have the specified sizes in my stash. Of course the key is to have very good fitting combinations of tube and rod, but with some juggling around and mail order work I got it sorted. I still ended up having to drill out the relevant parts for the incidence tube and tail joiner tube, but all went well. The point of my detailing the above is that in reality, if I had just bought a plan then I could have adjusted the drawings and parts to imperial and whatever joiner tubes I had available. However having the majority of parts laser cut was a significant time-saver.

The tailplane was maybe the trickiest part as it is an all flying type and over time the design has been modified from a flat plate section to a symmetrical built up item. I much prefer having a 'proper' symmetrical airfoil on any all flying tail, but I did need to do a bit of careful jigging and design modification. The plan shows large lightening holes in the sheeted tails, but I just could not see how that was going to work and maintain rigidity and more significantly stay true during assembly. So I opted for an all sheeted tail and developed my own spar web set up to keep the joiners true. It will have added a bunch of grams excess weight at the tail, but I preferred that over potential flexing or twisting during assembly.

The wings are straightforward and there are a few options given on the plan; full, partial or non-sheeted. I went for partial sheeting, although that still results in about 70% of the main panels covered in 1/16th (1.5mm) balsa. Interestingly, the wing is built upside down, so the top surface is flat with the taper due to thickness change all being on the underside. I have never built a wing like this, but with the jigging tabs all part of the laser cut ribs it was straightforward and good practice as I have a couple of scale 'plan packs' in my stash that will use this technique. The ailerons are large with significant downwards movement required, so they are also built inverted and with a combination of ribs that are angled due to the tapered planform this was another bonus of having laser cut parts. For the technically interested the airfoil is SB96V at the root and SB96VS at the tip. I have done a bit of checking and these are airfoils designed for slope aerobatics by Serge Barth. The SB96V is 9.35% thick with 1.25% camber, while the 9sVS is 9.75% thick with 1.25% camber. I expect that use of full span reflex of the ailerons will aid inverted performance.

The fuselage is quite large, a significant contrast to say a Phase 6, but it all went together well although I do confess to not getting perfect alignment when joining the sides yes, I confess a slight 'banana' shape. It was my fault for not sorting out a jig as I was rushing things a bit. Covering is in Profilm and as usual I struggled a bit with that in places; I am much happier using glass cloth or Solartex type materials, but they are not appropriate here. I have used Hitec metal geared wing servos and some Multiplex small servos in the fuselage and it was a pleasure to have plenty of space compared to squeezing gear into smaller models. There is closed loop rudder control and pushrod for the tailplane. An Eneloop 2000mAh battery was used up front and some lead was required to get the balance point as per the plan. The control throws are large/extreme though time will shortly tell if I can cope with that. All up weight is 1.4kg (about 3lb) ; the plan gives the range as 1.2 to 1.7kg. Maybe because of the overall size, but it does not really feel like a 3lb model when picked up.

In all I reckon a Quark could be built from a kit with some focussed effort within a couple of weeks. I guess, if we ignore the various interruptions, then I took about three to four weeks but certainly not solid building. The next page has some photos of the naked wooden structure and completed model.



That's Quite a Hike or A Tale of 'Aerobic' Slope Soaring by Richard Docketty

With my birthday looming, I decided I would definitely try a slope I had not flown before as my birthday treat to me, but where to fly? Southerlys were forecast for the week so my attention centered on the Purbecks and in particular Ballard Down. My birthday duly arrived and despite the forecast of increasing winds and rain arriving by late morning, Ballard Down was still the slope of choice. Having never flown there before I took two planes; my trusty Mini Ellipse and the larger FVK Dynamix.

Early advice from some WSA members, mostly about how far away from the slope you have to park (Studland South Beach CP not far from the Pig restaurant), did not put me off as I had my trusty Sherpa (Yvonne) along to share the load and take some pictures. Maybe it should have done as it is a fair way from the NT car park to the top of the hill on an increasingly steep gradient. However, if you look behind you as you climb you are treated with really spectacular views of the coast all the way from Poole harbour to Hengisbury Head and the IoW. I admit I did enjoy those views a few times on the way up!

Eventually we reached a gate leading onto the hill along a gravel track. By now we were both feeling a bit on the hot side as the sun was shining and there was no breeze at all. We need not have worried as on reaching the top we were greeted with a nice grass downland slope plus an unexpectedly stiff breeze. Actually it was a proper wind blowing a steady 22mph with some stronger gusts, but I thought at least it was still dry and large patches of blue sky beckoned! Once I had got my breath back from the climb I rigged up the Mini Ellipse while I had a conversation with myself about whether to fly or not. I looked at Yvonne to see she was looking all expectant and ready with the camera to record the event so it would appear the decision had already been made for me.

A first for me was launching the ME with my left hand so I could keep my right firmly on the stick while keeping the wings level. A firm push and the ME climbed away nicely as I breathed a sigh of relief. All appeared well with enough time to retrim to take account of wind while watching the ME move forward and climb into the lift. That is until it was about a 100ft up where the wind turned pretty turbulent and it was increasingly a challenge to keep the wings level. Hang on a minute I thought, this is my birthday it is meant to be an enjoyable flight not this 'bucking bronko'. I was trying to calm down and made a note to myself, ballast! Time to bring the ME home.

My first attempt to bring the ME back over the slope was not a complete success, but I did manage to turn back into the wind and penetrate again before it disappeared over the back on a 'let's frighten a few sheep' mission. A few more attempts and fraught minutes later the ME was safely down although the landing was a bit on the heavy side, though nothing that cannot be fixed. The wind was continuing to increase and was now gusting 23mph and above so the first flight was the last flight. A shame as in lighter winds I think the slope would be a pleasure to fly.

The return journey felt like it took just as long even though it was down hill all the way. Returning the models to the car, we trekked across the headland to take a look at Old Harry Rocks which we had never seen first hand before. Boy, the wind was really howling there and the seascape look just like a force 6-7 with the foam tops of the waves skitting across the surface. Within 10 minutes of arriving it started to rain, light at first but you could see it could only get heavier. It was a good decision to not fly again.

Back to Studland for us and a spot of lunch at the Manor Farm Tea Rooms (my hopes of a birthday lunch at the Pig were dashed) before heading home via a quick drive through Swanage which was full of tourists so we did not linger.

So if you like a bit of aerobic walking and some spectacular views on your way to the slope as well as on top, I can recommend Ballard Down but not in a howling gale! Ballard Cliffs also look awesome, but only for those with nerves of steel. And for my next adventure, any suggestions?



From left to right;
 All togged up and ready to roll
 Sherpa Yvonne. Still smiling at the start of the climb
 Coastline from Poole Harbour east to Hengisbury



Rigging M.Ellipse before my first ever left hand launch!



Mini Ellipse away safely and Old Harry Rocks

Bits & Pieces by Dave Camp

I was trying a new wood glue during the build of the Quark 2M namely 'Cascarez' wood glue. I normally use Titebond II or III Aliphatic wood glue, but due to nearly two years of non use my previously opened bottle had become very thick, and although probably usable I prefer 'proper' consistency to get a good joint. Checking the Axminster Power Tools web site (www.axminstertools.com) when about to order some more Titebond I came across Cascarez glue. It is described as 'liquid resin polymer glue' and I think we would generally refer to it as a 'white glue'. However it seems more than just a new name for the long standing white PVA glues widely used in woodworking and model-making; at least that is my view having now used it. Yes it is white, but as noted on the bottle it does have a pretty fast 'grab' time, about 10 minutes and gives a bond that can be handled after 30 minutes, although I generally gave it at least an hour before removing pins or handling with care and allow overnight drying to be sure of full strength. I found no issues with sanding any glue residue; it is not rubbery like standard PVA glue residue. As for price it is certainly not as cheap as basic PVA, although I suspect that many are using the newer 'Aliphatic' versions, which are nowhere near as cheap as the basic stuff, but do give a better bond and also sand well. Anyway Axminster prices for Cascarez are; 125ml £2.88, 250ml £3.98, and 500ml £5.98. I think that compares favourably to common Aliphatics.

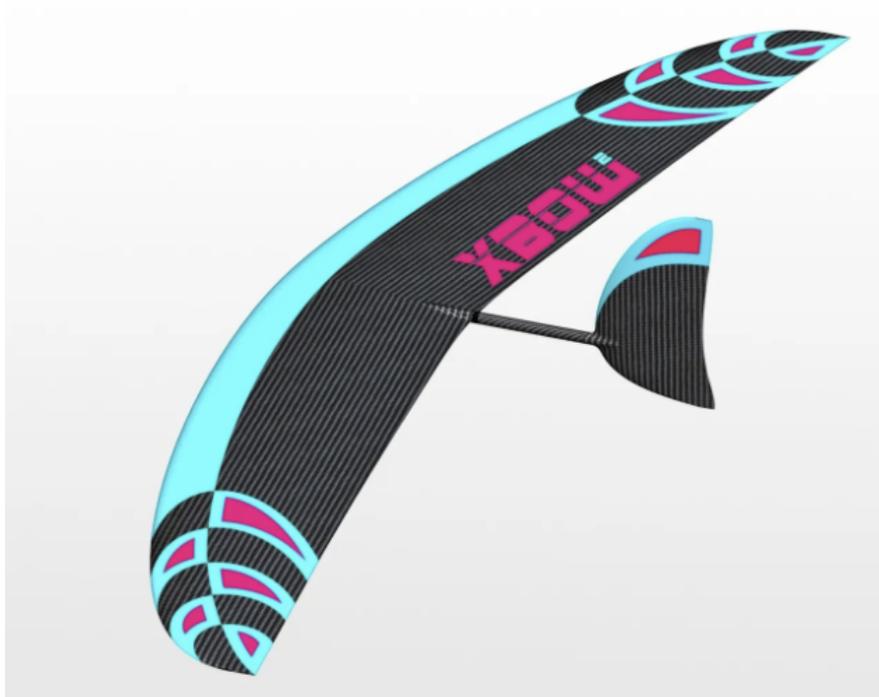


Flying Wings

I spotted in the latest 'Aufwind' magazine a review for a new small flying wing design called 'Lilloo'. Lilloo is a 0.76m (29" yes, it is small) fully moulded flying wing. Catapult/short bungee launching looks like the preferred method to rapidly gain height from the slope, particularly for 'dynamic soaring'. The web site www.onewing.de (from which various photos below were acquired) indicates it is moulded with a double carbon spread tow layup, the same as commonly used in F3F high performance racing gliders. The price in Aufwind is given as 399 Euro. I have no idea what that would work out at when imported into the UK; German VAT might well be saved but I bet there would be some UK tax and duties applied (*so probably about the same price in pounds sterling, Ed*)



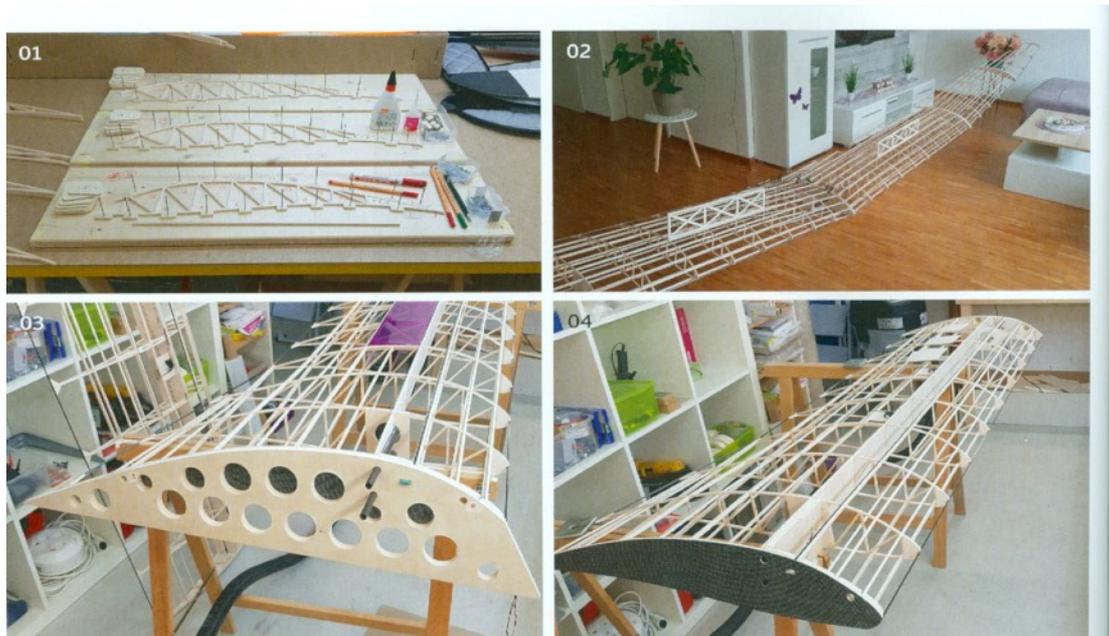
While on the Onewing web site I noted their other fully moulded flying wing design – X-Bow². I do recall seeing this in a past Aufwind magazine. It is a 1.2m (47”) ‘flying wing’, well it has a fin so technically not a pure flying wing, but pretty damn close . The web site is showing a price in the 450 Euro region. At present both the X-Bow and Lilloo are in early production, so it looks like 6-month waits for production/delivery.



And now for something completely different. Well it takes all sorts and I think we have to admire the construction and dare I say eccentricity of the designer and builder of this large electric launch thermal soarer. Photos are taken from the Aufwind 06/2021 magazine and I will leave its description to just these and some basic data:

Model Libelle, designed and built by Swiss modeller Patrick Trauffer.

Span 6.8m (22.3 ft) , Length 3.5m (11.5 ft), Weight 5.5kg (12 lb)



Calendar

Sun 19th Sept E soaring round 3

Sun 17th Oct Multitask

(Each following Sunday will be the fallback date for the e-soaring events)

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