

GLIDEPATH



The Journal of Wessex Soaring Association. July 2022

From the Editor

Just getting this edition out before I head off on holiday so I will keep this brief 'Hope you enjoy Glidepath'.

From the Chair

Again not much to report this month, the windy spell that has prevented much flat field activity looks like it may move on. Hopefully the slopers will have been making the best of the breeze. Sadly I have not been sloping for what seems like ages. I aim to rectify that soon...

Slope fly-ins will continue as the first Sat/Sun with the second Sat/Sun in the month as fall back. The E Soaring series started in May but strong winds prevented the June one taking place. With any luck the weather will be kinder for the July one. Same rules as usual and I will do the normal reminders beforehand.

"Winter" Warmer

I have not forgotten this idea. I have been rather busy in my family life, but I hope to get something going later this year.

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. 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) - Available but have to park on track
- 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) - Available but have to park on track
- 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) - Available to mid August

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

1. The field number to be used is determined by the farmer to suit his activities and is liable to change periodically.
2. The current chosen field is shown by the number on the hook located on the front of the club (green) cupboard in the yard opposite the Farm House. **Leave this where it is.** NB, after a period of strong winds the number may be blown off its hook and might then be found nearby on the ground.
3. The location of the fields is shown on the numbered map to be found in the club cupboard.
4. If you are the first to arrive, take out the red sign from inside the cupboard which reads (WSA ON SITE) and slip this into the grooved slot on the front of the club cupboard.
5. On competition days take out the required equipment; tapes, cones etc. and take to the flying field.
6. After the flying is finished return any used equipment to the club cupboard and remove the "WSA ON SITE" red notice and put back in the cupboard.

Ensure that the field number remains where it is, hooked to the front of the club cupboard.

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.

Death Valley Revisited by Nigel Bennett

Following Rob Newbury's article last month explaining there is more to Death Valley if one explores a bit further, I drove there as it is only a couple of miles from Shroton where I live. I have used the site in SW winds but on more than one occasion regretted the restricted landing area at the top of the narrow bowl. As we have a lack of easily accessible SW slopes in the WSA, I decided to have a look, taking my M60 plank and my 2m Opterra powered flying wing.

As Rob says it is best to access using the stile opposite the car park area, and either use the bowl or turn right and walk down the hedge. After about 200m there are no more trees or scrub and a very gentle SSW facing slope with a very large, slightly uphill landing area in long grass and daises. Walk another 200m or so and the slope turns more to the right and lift is possible from due west, or even north of that with electric power.

The wind was WSW at about 15 mph and as usual lift from the bowl, near the wooden seat, was very strong. Flying the e-powered Opterra, a real pussy cat of a model, I tried one approach near the hedge, where there is some clear space, but it is a downward slope and I aborted that and walked

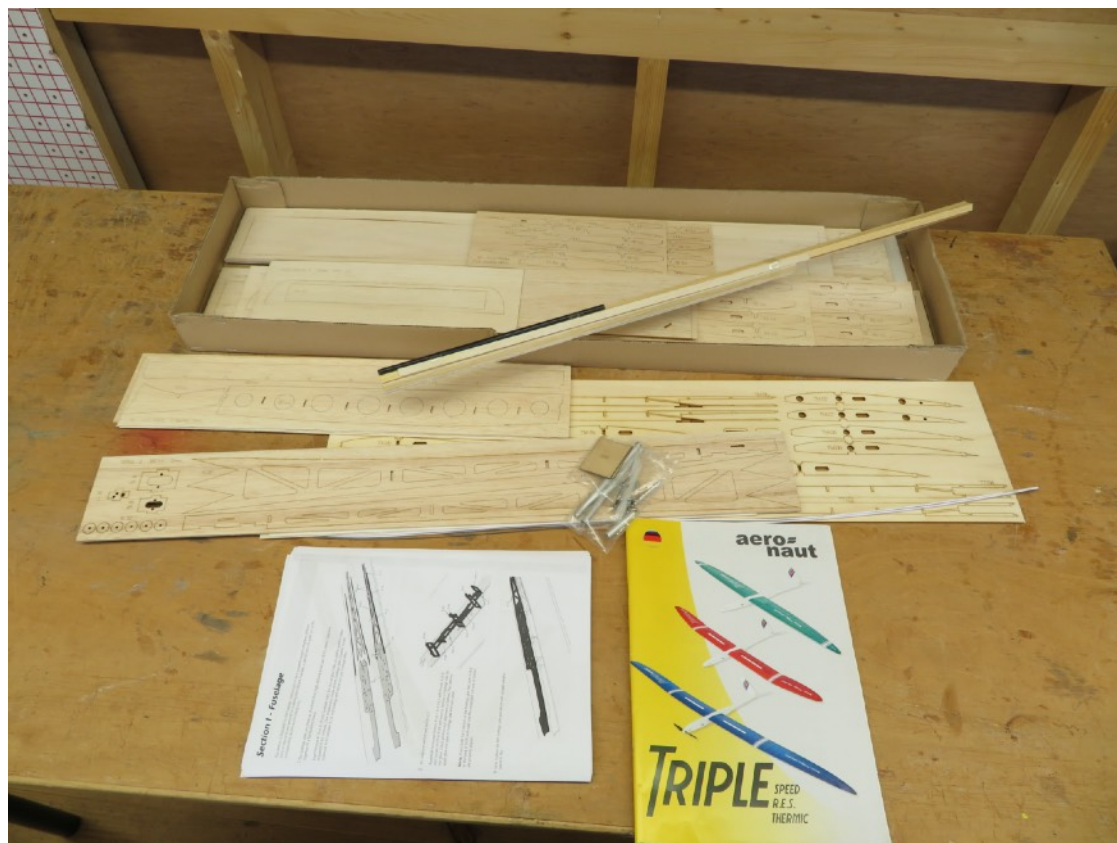
down the hedge about 200m, where the slope is facing nearly south. As expected the lift is much lighter here with that wind direction, but the landing area is huge and very easy to land in the long grass and wild flowers. I had several flights and landings there with the Opterra and really enjoyed that aspect of the site; the southerly views are wonderful.

I flew the M60 from the bowl and did manage a couple of "arrivals" on the downhill area near the bench, but flying further down the side of the bowl when the wind direction allows is much more relaxing. It is well worth a visit while the site is open to us till mid August.

Aeronaut Triple Thermic by Dave Camp

This design had caught my eye several years back when reviewed in the Aufwind magazine. Aeronaut are quite well known for having a range of model boats and planes using traditional wood construction, or maybe with glass mouldings and wood wings. The concept of the 'Triple' is having a basic fuselage, either pure glider or electric launch, and then 3 wing variations namely; 'Triple Speed 1.8m with ailerons, Triple RES 2m with spoilers and Triple Thermic 2.5m with ailerons and spoilers. The wings are available as separate kits, so in theory one could buy a single type and then get 2 additional different wings. I think the Triple Speed is aimed at slope flying.

I had not intended to get this model when I first saw it, although the Thermic did have nice lines to it. It is certainly not a competition design, but with the elliptical outer wing panels it did have a certain elegance. However when calling in to 'Gliders' near Newark on the way back from a business trip up North that had not been much fun, I picked up some brass and steel wing joiner material and then spotted the Triple Thermic kit; oh dear. A quick look inside gave me the thought it was worth putting in the 'retirement stash', well it was dug out of the stash in May and a double build started with the Libelle Evo V2 (see June Glidepath). So what was found in the box and how has it gone together?



The box of bits

The wood quality and laser cutting has been good though I found some of the wing rib material rather light and a few ribs did fracture during handling. There is a German instruction booklet with illustrations and available for download was an English version. To be fair Aeronaut does apply a rating of construction difficulty as 'advanced' and I would certainly say that this is not for a first or second model. Now one thing that interested me was that there was no plan. I guess with laser cutting and CAD design with all parts interlocking there is no need for an actual plan, but I would have appreciated some sort of exploded view of certain areas to work out what the designer had intended.

A jig is supplied for wing construction but that is not what I expected, it was just a couple of pieces of 3mm Depron with the wing plan scored into it. Now I do have in the 'stash' a couple of other Aeronaut pure glider kits where jigs are supplied rather than plans but these have location slots to align the parts. I did a bit of a web search and came across some comments on a forum about the Thermic, its performance was reckoned to be OK but there had been some issues with rear fuselage breakage on 'firm' landings. Bearing this in mind I had thought about adding some reinforcement, then noted in the downloaded English instructions that balsa longerons were applied, but they were not in my kit. Then it dawned on me that my kit was an earlier version based on the included German instructions not showing any longerons, but I assume an update has been applied and it was easy enough to make a modification. This design update also reared up when it came to the V-tail surfaces. I thought they looked a bit weak with the balsa being quite light. The latest instructions showed a thin spruce leading edge reinforcement which I also did not have. I made my own modification by putting a groove in the leading edge and adding a 1mm diameter carbon rod, and also a 3mm square spruce strip along the tail trailing edge/hinge line. The inclusion of a simple ply jig to allow the tail halves to be joined and reinforced during gluing was a nice touch. The fuselage is a combination of balsa behind the wing and light ply in front, with several interlocking formers to carry joiner tubes and servo mounts etc. There are three hatches for access to servos, receiver and cables plus a large canopy opening giving easy battery / ESC access.



Wings on the 'jigs'

Overall the build went OK, but a plan really would have helped to work out where the ply spar webbing that would give the required dihedral went. Also all the instruction booklets missed out showing a key part that was on the ply sheet, but without any reference. A tricky part proved to be the tip panel fixing which was via a laminated joiner from 3 x 1.5mm shaped ply parts. Now I just could not get all three layers to slide into their pockets between the spars on a dry run as just a little residue white glue had seeped in and could not be cleared. So I resorted to two layers of ply with additional 30-minute epoxy and glass microfibers added for strength; the tip panel joint is very solid. The spoilers are operated via micro servos; I am getting used to these now. However I reckon I will be revisiting them soon as their mounts were 1.5mm ply, but they were not flat, rather warped. I used heat and pressure to get them into shape, but will not be surprised if they creep back, so I will switch to laminated 0.5mm ply with likely some glass or carbon laid on the bias to help stop twisting.

The main wing joiner is a 5mm carbon rod and I changed the incidence pin from a 3mm beech wood peg glued in the root rib to a 3mm carbon rod located in a carbon tube running out an inch or so with webbing support. The wings are retained by 2 x 10mm magnets each side.

So overall the kit went together OK, but there were frustrations and certainly the need to activate the grey matter to work out what was intended. Now I reckon a plan would have made life easier.



The parts before covering

I covered the fuselage in Oracover and Oralite was used on the flying surfaces. Hi-Tec mini wing servos were used for the ailerons and 'Feather' servos for the spoilers. Spare Multiplex Tiny-S servos were found for the V-tail operation and the servos were installed from the fuselage underside and operating via wire in plastic snakes. Regarding the motor, well this was a little bit of an unknown for me. Aeronaut gave a guide range but for the first time in my very limited time with E-Power I had no

specific motor recommended. I did use the Höllein web site to cross check various designs and try to see something similar with motor recommendations, and ended up using the same as for the Libelle but with the plan to run on 3S and hopefully find a prop that would give a reasonable balance between climb performance and not excessive current draw. I see now that the Höllein web site is now offering a complete package of motor, ESC, prop and spinner for the Triple Thermic and it is not far from what I selected, although I started with the wrong prop, a 10x6. Although Aeronaut suggested putting the LiPo in the access bay in the fuselage bottom I could not fit the intended 2200 mAh pack in there. However it fitted easily in the nose area, along with the ESC just in front. A Multiplex 7Ch 2.4GHz receiver is used, running the twin aerals at 90 degrees to each other in plastic guide tubes. When I checked the balance it was nose heavy with the 2200 mAh LiPo, so I swapped to an 1800 mAh 3S that I had lined up for another project and that gave perfect balance without any nose or tail weight.



The finished model ready for test flying

So to the flying. A hand launch was encouraging , quite a respectable glide performance and balance and basic trim looking OK. The first powered launch showed it was rather pedestrian compared to what I have experienced so far with E-power. Although it is not intended for competition use I was hoping for a reasonable height from a 30-second run, but that was not the case. Still I did eventually get to a reasonable altitude and with power off things look quite good; well at least it is a different shape compared to many competition gliders. Ailerons are very positive and rudder control and pitch fine, but will need some tuning no doubt over subsequent flights. Oh yes, my second time with a Roxxy 722 ESC and I had again not got the brake set, however the glide was still quite good considering the freewheeling prop. A brief check of the spoilers showed they should be reasonably effective.

I have since had a second short flying session swapping to a 12x6.5 prop. The climb is improved, but still not stellar, but I probably need to adjust my mind set regarding climb expectations as this is not a competition glider. I may just try a 11x8 as a final 'adjustment' but just getting out and flying is probably more important. I wasted time/power by trying to climb too steeply on the first flight of the second session, falling off the climb by being too greedy with the elevator.

Overall a bit mixed, not the most enjoyable build but obviously I managed to get a finished glider out of it. I see that Aeronaut have now bought out a variation on the Triple theme, the same names but with 'Neo' added and the fuselage now being a glass moulding with carbon boom. In comparison to the cottage industry produced Höllein Libelle it does not come out as well, some wood quality, clarity of instructions and lack of plan are negatives in my mind. However it is in my eye an elegant design, and at this stage the flight performance looks promising.

The vital statistics are span 2.5m, weight 1082g, motor Roxxy C28-3410 880KV, LiPo 1800mAh 3S, ESC Roxxy BL722 (22A), Prop 12x6.5 for now! Current Gliders list price is around £140.

June Slope Fly In by Pete Carpenter

The June slope fly-in went ahead on the 12th, the first weekend of the month having been largely taken up by Jubilee Celebrations and other excuses for some daytime beers!

The forecast was good, although there was a question mark over whether or not the wind would be too westerly for Horses, the preferred venue. As it turned out it was pretty much spot on, or certainly close enough to make for some excellent conditions. Just Ian Wettstein and myself were in attendance, Ian commenting later in the day that at least I would not have too much trouble remembering who was there, for this GP report! The wind was around the 15mph mark and the lift, for the most part, was excellent. We had some good flights together but also let each other have a clear sky a few times, making the most of the lack of other gliders.

Ian had a nice flight with his Typhoon and I managed to get my Lunak airborne; the first time this year I think. I also got to maiden my TopModel Minus Acro, a tiny 700mm span glider that I bought (having seen Mike Seale with one at Oxo once) to fly from a slope close to my house. It is yet to fly that sortie, I just need a good NW wind. My Red Arrows Hawk also saw some air under its wings and flew well. That said I just could not relax flying it despite the strong lift, because of its tendency to fall out the sky. the moment the lift weakens to anything less than spectacular. In fact, since that flight it has been sold and in August will be enjoying a new life in Guernsey, where the cliff lift is super strong, so the new owner tells me.

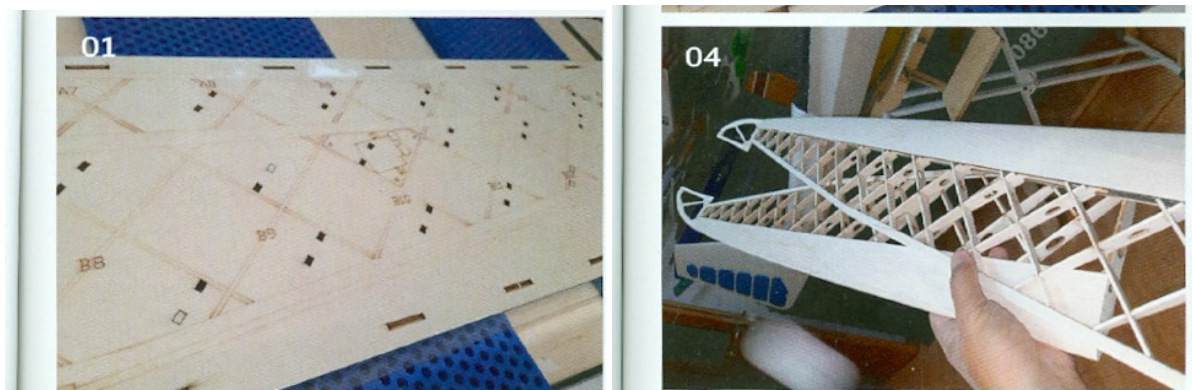
As for the Horses parking area, the grass where the burnt out caravans were is slowly growing back. I did take a rake and a large magnet on a string and managed to remove a large number of tyre-puncturing screws and nails with success. There are still some in the ground, so I do not advise parking on the bare earth for a while yet. It was great to get out to the slope again and to catch up properly with Ian, and get some decent air time in. Hopefully the July fly-in is not too far away!

Tera V5 Electric Launch Glider by Dave Camp

I spotted this new design in the July/August 2022 'Aufwind' as it is a little different from the numerous electric launch gliders that are around. The wingspan of 2.2m falls outside the normal 2m class, but would be eligible for WSA '2m' class competition, and also as a smaller general purpose model it would stand out from the crowd. The pictures below, lifted from Aufwind website, give most of the info. It is the geodetic wing construction that really caught my eye; the reviewer confirms the wing is very torsionally rigid. Construction is all wood laser cut and made in Germany. I gather that clever use of the lid and bottom of the shipping box provide a jig for aligning the wing parts, but according to the manufacturer's web site there is also a full size plan in both German and English. The design can be built as a pure glider or electric launch and the motor suggested is the 28mm size, with a 20A ESC and 1300 mAh LiPo and 9x6 prop. The wing has flap and ailerons, but I could not find mention of the airfoil section.

Basic spec – 2215mm span, length 1030mm, weight ca 640g. Price Euro 179

For more info see the web site – [Tera V5 \(Laser Cut Balsa Kit\) / 2250mm, 179.00 € \(pichler.de\)](http://Tera V5 (Laser Cut Balsa Kit) / 2250mm, 179.00 € (pichler.de)) or search www.pichler.de I see it is also listed by the Hollein model shop in Germany.



Calendar

2nd/3rd July Slope Fly-in
Sun 17th July E Soaring, Round 3
6th/7th Aug Slope Fly-in
Sun 14th Aug Limbo event
Sun 21th Aug E Soaring, Round 4
3rd/4th Sept Slope Fly-in
Sun 18th Sept E Soaring, Round 5

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