GLIDEPATH

The Journal of Wessex Soaring Association. June 2022

From the Editor

Despite all the goings on this weekend, this issue of Glidepath is totally free of any mention of a certain 70th anniversary (except I have just mentioned it !). There are though articles from Martin Burr on the first e-soaring event of the year, from Dave Camp on adding to his collection of 2m models, from Rob Newbury about flying at Death Valley and finally from Biill Ebdon on how not to get stuck while installing hinges. I hope you enjoy them.

From the Chair

Not much to report this month, hopefully you are making the most of any flying opportunities.

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 on May 22nd, I will do the usual reminders beforehand. Same rules as usual, hopefully the weather will be kind.

"Winter" Warmer

It looks like it MAY be possible to hold something later in the year (Summer/Autumn) so watch this space !

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 form. A list of these is maintained on Christchurch Club's website so please have a look there for details.

Flat Field Update

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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.

E Soaring Round 1, Sunday 22nd May by Martin Burr

We were blessed with near perfect conditions for the first event of 2022. We were in field 13 just behind the farmhouse and 6 enthusiastic chaps turned out to do battle with the fun getting underway around 11am.

I opted to fly the large class first to make a change. This progressed well, 6 entrants meant an easy run with 3 timing and 3 flying in every round. The conditions were very variable as in some rounds everybody was down within five minutes, while in others the ten minute max was reached by a number of models, so it was all decided on the spot landings. Terry Antell took a well-deserved win, mainly due to being the only one to spot and follow the lift in the last round. Also special mention must go to Roger Crickmore coming in 3rd campaigning with trusty old Gentle Lady. *Just to make the others feel really bad, I will point out that not only had I handicapped myself by using a model with just 2m span that was designed back in the 1980s, I also had somehow managed to set my height limiter to just 100m rather than the 150m everybody else was using. Ed.*

After a short break for refreshments and a repositioning of the spot landings as the wind had shifted slightly, we made a start on the afternoon's event of up to 2.3m planes. Unfortunately Nigel had a rather terminal test flight that put him out of the running and Terry does not have a 2.3m plane, so that left just 4 competitors. We ran a couple of rounds, but then Jon Couldridge had to retire when his ESC stopped operating properly. At this point we decided that continuing with just 3 people was not worth it so we just settled for the points as they were, giving the win to Doug Bowman.

The full results are shown below. Thanks to all for coming along and supporting this event. I am hoping for more kind weather next time and a few more chaps to participate.

2m class

Position	Name	Score	Round 1	Round 2
1	Bowman, Doug	2000	1000	1000
2	Crickmore, Roger	1893.9	893.9	1000
3	Burr, Martin	1718.5	1000	718.5
4	Couldridge, John	875.3	875.3	0

4m class

Position	Name	Score	Round 1	Round 2	Round 3	Round 4
1	Antell, Terry	3816.6	980.2	972.4	864	1000
2	Burr, Martin	3600	1000	1000	1000	600
3	Crickmore, Roger	3353.5	1000	769.6	583.9	1000
4	Bennett, Nigel	3343.3	690	1000	1000	653.3
5	Couldridge, John	3115.4	561	964.8	992.9	596.7
6	Bowman, Doug	1268.5	407	542.2	0	319.3

Walking & Flying at Death Valley by Rob Newbury

I enjoy both walking and model flying and I have found a way to combine both. A few years ago I bought a backpack into which I can place a model glider fuselage and wings. This is made by Turnigy and is available from sellers on Ebay. In addition to the model backpack I use a small conventional backpack for my transmitter, spare battery and a few tools. The backpack for the model I sling over one shoulder with the conventional backpack over both shoulders.

I live in Fontmell Magna which is a walk of about a mile and climb of 100m or so to our WSA Death Valley site. The site is more conventionally known as Sutton Hill, the correct name for the valley itself being Combe Bottom. Death Valley is a bowl that faces south west and when the wind is from that direction it is channelled by the valley sides to the valley head.

Aerial view and map of Death Valley (from OS maps)

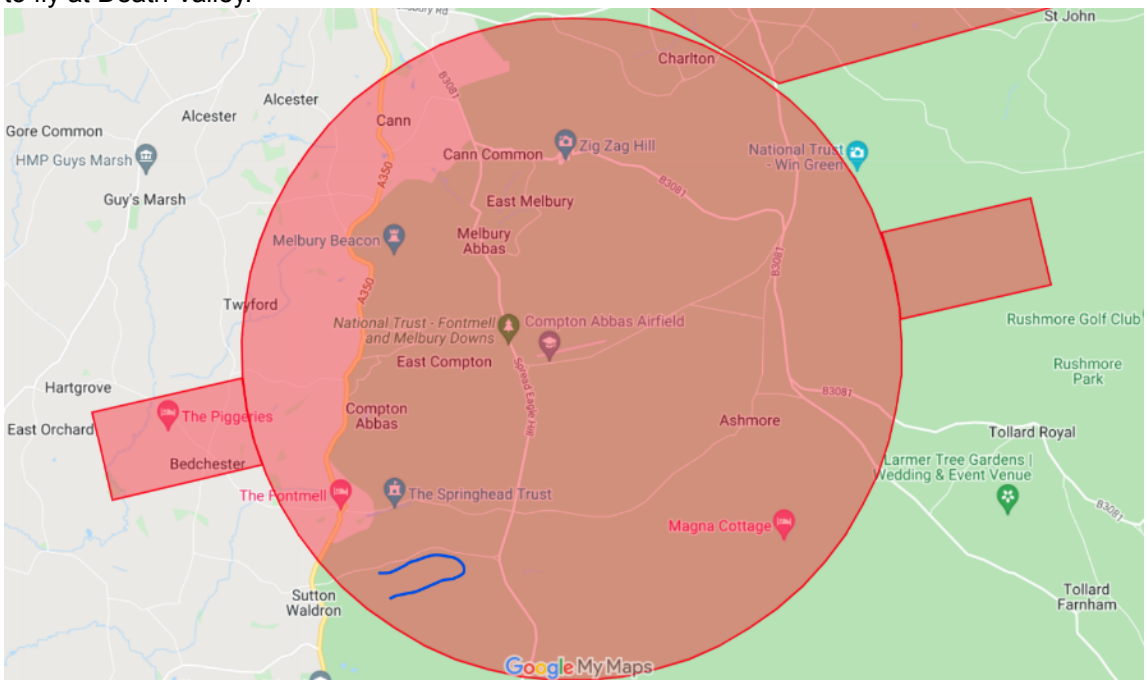
For most flyers it is natural to set out from the small parking area opposite to the head of the bowl where a breeze from the south west strikes the back of the bowl providing very good lift. However the landing area at the head of the bowl is narrow and it can be difficult to get the model down gracefully particularly for less accomplished flyers like myself. When I walk to the hill I enter the bowl through a gate from the road at a lower point on the north edge where the slope is shallower and here the landscape has a very large clear landing area. There is however no parking by this lower gate so if driving you would still need to park at the top of the slope, cross the style on to Death Valley and walk downhill keeping the hedge to your right until you see the second gate on your right.

I have discovered that with electric motor assistance to become airborne I can fly this part of the hill with the wind coming from anywhere between just shy of due south to just north of due west, whereas at the bowl head the wind must be coming from the south west plus or minus a few degrees.

Buzzards and red kites often soar above the valley which is testament to thermals welling up from the valley floor. In fact on my last flight a red kite took a great deal of interest in my glider, I think it was more curious than defensive.

I appreciate that this lower slope may not suit everybody as the slope is more gentle than at the bowl head, consequently the lift is less but it does mean that the site can be flown more often and with easier landings. Best of all for me it is easily walkable from my home and although the site is only available for flying from March to August, the farmer provides a permissive footpath that may be walked all year round. Just be wary of the two bulls that arrive in August as previously commented on by Frank Bayes (Glidepath August 2021).

Just as a footnote Fontmell Down is also easy walking distance for me; it is National Trust land which in theory can be flown without using power. I have not flown this site which is listed on slopehunter.co.uk; I must stress that the Fontmell Down site is not a WSA site. It is very close to and on the flight path for Compton Abbas Airfield putting it well within a flight restricted zone (FRZ) for Unmanned Aircraft Systems (UAS) as per Airspace Restriction (ENR 5.1), so it would require permission from the airfield to fly there. Death Valley is on the SW edge of this same restricted flight zone and I understand that WSA have an agreement with Compton Abbas Airfield for club members to fly at Death Valley.



Compton Abbas Airfield restricted zone, Death Valley shown in blue in the south west sector

Gluing Hinges Without Tears by Bill Ebdon

I hesitated to offer this as an item for Glidepath because it is a simple tip and I am pretty sure all you experienced builders out there have devised your own methods of gluing surface hinges without them being stuck solid so they will not move. But then maybe you have not reached hinging Nirvana, and this might be some good to you so here goes.

This is a method I have been using for many years and it works equally well with Mylar, pin/plate hinges or Robart-type hinges. The idea is that you cut out small rectangles cut from a polythene bag to act as glue shields. Using a knife, cut a slit in each rectangle of a length such that the hinge has to be forced to go through it and it is stretched around the hinge.

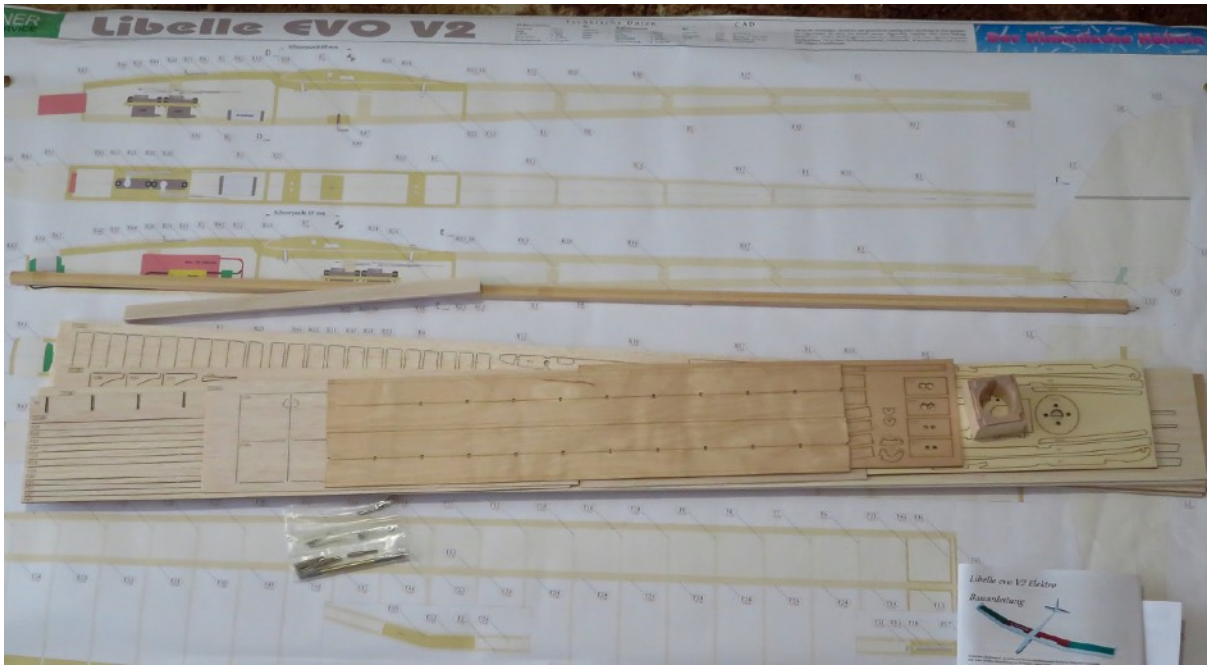
Put epoxy in the hinge slot or hole and push the hinge in as deep as it needs to go; the polythene shield will act to prevent the epoxy reaching the hinge pin/axis. If a lot of epoxy squeezes out use a cocktail stick or similar to remove the excess as the hinge is inserted, do not rely solely on the shield.

Repeat the process for the other side of the hinge (preferably after the first side is set). When both sides are set, just pull the polythene shields away with tweezers. I must admit that I am always relieved when a surface still moves after the glueing process, but so far it has been reliable.

Libelle Evo V2 – Elektro by Dave Camp

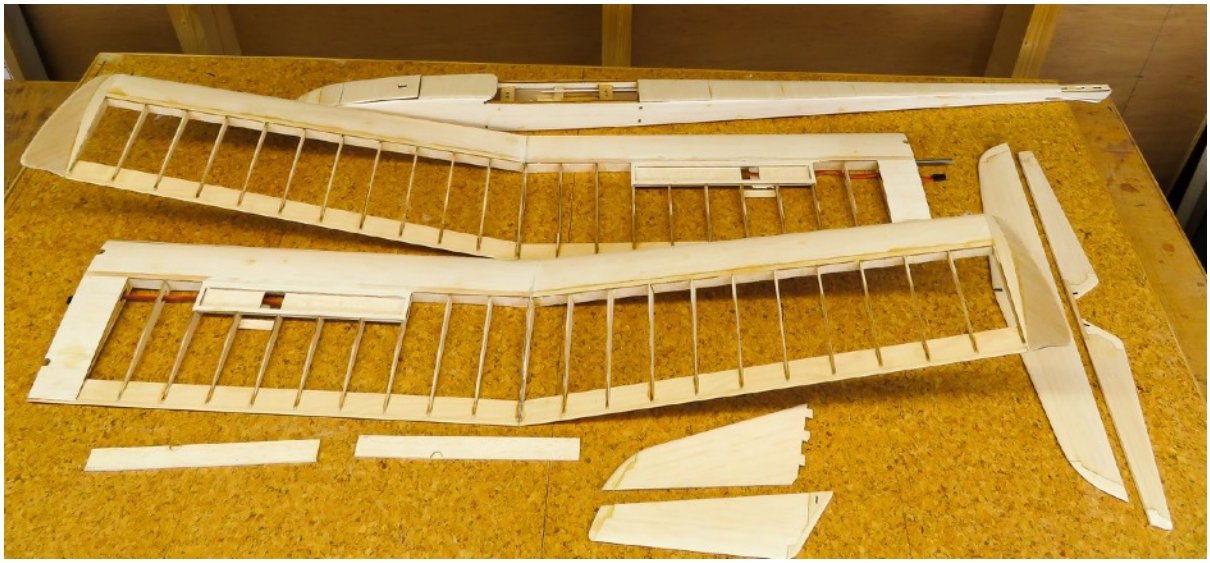
This is a design/kit from the Höllein model shop in Germany that I bought a few years back when starting out switching to electric launch for flat field flying. I had intended building it before the AndREaS (May 2022 Glidepath) which is a competition orientated design but plans and intentions do not always get followed! So why build another 2m span RES model? Well I knew that construction would be a pleasure and also I had a feeling that the end result would be a robust good general flying model, and with a bit more installation space for gear as I have found the AndREaS very cramped. I actually carried out this build in parallel with the 2.5m Triple Thermic which you will be able to read about in next month's Glidepath. I am not sure I would do a 'double build' again, but it was interesting in parts to compare quality and design form two different German based suppliers at more or less opposite ends of the scale; Höllein being a more cottage industry operation.

The kit is very complete containing a very clear plan, superb laser cut balsa, some thin ply parts, plus wire in tube snakes and fittings for servo ends and the spoiler actuation. There is a 32 page instruction booklet with stepwise construction and photos plus listing of part numbers involved at each step. Although it is in German I found no problems as the photos were in English!



So to the build, well it was very straightforward. I was using the recommended motor, prop & ESC bought at the same time from Höllein, so there were no issues with parts fitting. The wood quality was excellent throughout. There was a lot of nice features, for example all the cross-grain fuselage sheeting were laser cut to the exact size. The tail surfaces are simple sheet balsa but incorporating cross-grain elements to help prevent any warping with time. On the wing construction I found several nice features, the trailing edge is 1mm ply 25mm wide, accurately notched for the ribs and far more robust compared to the AndREaS, where I think weight saving was taken to the extreme. A nice touch is the use of a jig to ensure the ribs are spaced correctly and kept vertical while glue is drying; very simple and effective. The wing has a 1.5mm sheet D-Box, pine spars and full depth webbing, making for a very stiff but light wing. The sheet spar webbing was all individually laser cut and every piece fitted without adjustment. The spoilers were straightforward made from warp free laminated balsa, with a micro servo operating them. The wing is in 2 parts with a main 4mm steel joiner fixed in one half and brass tube in the other, incidence being maintained by a 2mm steel pin near the trailing-edge. The wings are fixed to the fuselage with four 3-mm nylon bolts. Courtesy of the laser cutting everything lined up perfectly. The tip panels are glued on, using a laminated ply brace socketing into rib slots and supports between the spars.

Wing panels under construction, note jig in use.



All the parts ready for covering

My covering choice was Oracover on the fuselage and Oralite on wings and tail feathers. With the fuselage having a bit more space I could use a standard MPX 5-Ch 2.4GHz receiver, with the tail end of the aerial fed out the top via a short length of tubing. Two Graupner C261 servos were used in the fuselage. I think this model took around 3weeks to complete, and that was not solid day in and out time.

So the flying, well I was not expecting any issues and this is the case. I balanced exactly as per the plan and a hand launch showed this was fine. The first launch under power was also trouble free, quite a steep climb but very controllable. The only issue was that I had not programmed the motor brake but even with a wind-milling prop the glide performance was good. Tight circling was possible without any sign of dropping a wing and the spoilers seem reasonably effective. Now the brake programming should be simple, but trying to do it via listening to the bleeps and melodies has foxed me, so I have ordered a programming card to do it simply.

In summary, although I have just had the one short flying session I would not hesitate to recommend the Libelle evo V2 to anyone that is looking for something around 2m span that will give a good performance without being as delicate as an out and out competition machine. The wing section used is Drela AG35 so that should help give a good glide performance.

The Details

Span 1.78m, flying weight 640g (circa 1lb 6oz), motor Roxxy 28-3410 880kv, prop Aeronaut 11x6, ESC Roxxy BL722 (22A rated), battery 1300mAh 2S Overlander 35C pack. I did end up having to use 10g or so of lead just ahead of the fin to get the balance right. I could probably change to a 1000mAh LiPo to achieve balance without tail weight and also get a slightly lower all up weight, but that seems a bit costly and I would rather stick to a larger available capacity. Current Höllein list price for a kit is 93 Euros.

Calendar

Sun 19th June E Soaring, Round 2
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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