

GLIDEPATH



The Journal of Wessex Soaring Association. June 2019
BMFA Club No 2759

From the Editor

Just got back from a weeks holiday up in the Cairngorms. There are some great slope soaring sites up there but unfortunately it would be a bit of a hike to get to most of them.

Following my request last month, a couple of new members have sent me a few words describing their modelling background, so thanks to Mike Bleathman and Dave Bradfield for that. Richard Docketty has provided a very detailed account of his Eddie the Eagle model. In fact he has written so much about it I have decided to publish it as mini serial. So this month we have the details of its background and construction, while next month he will describe its flying.

From the Chair

Slope Tour 5th May

The planned tour went ahead and in the end 4 chaps came along; David Bradfield, Mike Bleathman, Roy Lockyer and Richard Docketty.

We met up at Win Green as planned, and went to Horses/ Barbara's slope then on to Stoney Down and Berwick, then down the track to the road and along to Donkey Valley, OXO and Swallowcliffe. Richard had been on the tour the previous year but wanted a refresher, the other 3 were new recruits and seemed very pleased with our slopes. Mike and David are active members of the Whitesheet RFC so hopefully we can create more links between us and our neighbours.

The Track

Recently I have been up the track to Horses quite a few times in the company of various vehicles, my observations are that the cars that tend to have problems are those that have "dangly bits" sticking down underneath, exhausts etc, most of the more modern flatter bottomed cars seem ok if driven carefully.

40 Years of the WSA

SO FAR, I HAVE HAD VERY FEW REPLIES TO THIS_If you are thinking of coming along PLEASE let me know at martinburr9@gmail.com so we can organise parking/bigger field than usual etc. The committee has set aside the 23rd of June for this BBQ at Chalbury and also a fall back date of 7th July.

Flying at Win Green

It was excellent to hear of model glider flying returning to this lovely location, and I am proud to have helped make this happen. One small point to note; our new agreement with Compton Abbas does not give us any right to the airspace, full size **always** has the right of way.

CAA registration etc

It seems we cross one hurdle to immediately find another! I expect you will have seen this proposal by now. I sent a link recently, containing a few sample letters drafted by our secretary Bill Ebdon (thanks Bill). PLEASE act and express your views. I hope that the BMFA will fight our corner strongly for us.

Slopeside by Pete Carpenter

What we believe to be the situation on each slope is as described below, however it is not always possible to contact every landowner each month and we have no wish to pester them. For Sallowcliffe and OXO please take extra care when parking, and do not drive down past the brow of the track in wet conditions or you may get stuck. If in doubt, walk onto the field and track first to check! 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.carpenter@yahoo.co.uk or 01722 328728.

- 1) Winklebury:- Available.
- 2) Norrington Down:- Available
- 3) Donkey Valley:- Available.
- 4) Swallowcliffe :- Slope available. It is believed that this slope is going to be put back to cereal, in which case we must obviously not drive onto the crop.
- 5) Quarry: 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 paraglider 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: Available and at the last check, sheep-free
- 7) Horses/Barbara's Field:- Available.
- 8) Daltons 1&2 :- Available
- 9) Crockerton :-Available subject to rules in slope guide.
- 10) Death Valley. **Not Available until 1st August**
- 11) Berwick St John, Stony Down :- 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:- Available. it is available but there is now 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.

Meon Valley Soaring Association by Frank Bayes

I recently visited the Meon Valley Soaring Association easterly slope site at Wether Down near Petersfield, after a recommendation and invitation by club member Richard Docketty. What a great slope site, massive landing area, wonderful views, superb large area of lift and although a few miles away (an hour and 15minutes drive from Bournemouth) it was worth it.



Non-members are not permitted to fly at any of the sites at which the MVSA has a controlling interest arrangement with the owners, unless they have received permission from one of the committee and there is at least one MVSA member there too. I have now just joined the club, which only costs £10 per annum, plus £10 joining fee. A Great range of models are flown including some large moulded models etc. They are a very friendly group and for those like me that cannot risk their car on the bumpy tracks on the two easterly slopes we have in the WSA, it is worth joining.

Here is the link to the MVSA website if you wanted to check them out yourself: <http://mvsa.bmfa.org/>
Post code of the site is GU32 1BF if you want to check it on the satellite photos on Google Maps.

New Members by New Members

Following the request in the May Glidepath a couple of new members have sent me the following information about themselves.

Mike Bleathman

Mike "midweek" Bleathman, so called, because I am always flying midweek! I am coming up to 67, living in lower Odcombe with Caroline my partner, 3 dogs and 2 cats. I did a little bit of thermal soaring in the late seventies, but nothing more until I joined Whitesheet just over 2 years ago. I enjoy all aspects of sloping and my models are; Pitbull 2, Jedi Lift, Wasabi, 2 Ahis, CX4, and the Flea DLG. I also have a Mk 1 Multiplex Alpina kit that I have had for 27 years and have just finished! I will be using a Geist 90 brushed motor, with 18 cells for power. The motor I bought at the same time as the kit! I also have a Chris Foss Hi-Phase with a built up wing. Looking forward to meeting you all on one of your lovely slopes soon.

David Bradfield or Bradders

Age - 59 going on 7. Married with 5 children, 1 dog, and a van. Occupation - autotag.co.uk

Flying history:

Age 10 - control line - KK Firebird

Age 12 - Veron Impala - Ivinghoe Soaring Association

Thereafter mainly slope soarers with a few years flying power with Neil Tidey and the Laser Team at various shows. Had to get BMFA fixed wing B to fly at shows.

I moved to Somerset in 2003 and mainly flown at White Sheet where I am currently the Vice Chairman. I am also member of Frome Model Flying Club (Power) and Wincanton Falcons (Power). My son Jamie (aged 12) flies power and slope, preferring Dream Flight Ahi and the Chris Foss Wot 4. I do also have a fetish for Alpinas which some find strange.

On to the Flat by Mark Deverell

I recently joined a flat field club to get some more flying in when WSA sloping gets cancelled. County Model Flying Club have a well groomed grass site in the middle of a farmer's field of crops. It sits on top of some gentle rolling hills on the Dorset/Wiltshire border and is delightfully quiet with good views. Unsurprisingly I am not the only WSA member to turn up there. At the end of March I was flying there in what I thought were calm (10-14knots) conditions only to find my electric gliders hobbyhorsing around and being generally difficult to control; the culprit was the SW wind, I ranged further and found stonking lift on the west side of the hill. My vario registered rising air and I went between 100m and 230m in the blink of an eye, as good a lift as most slope soaring sites. Being a particularly vivid 'blue sky day' I came out of the lift and dived down to keep my gliders in easy sight. I have a history of losing a glider in strong blue skies and did not want to repeat it again.

When you find something as good as this then there is often a down side and with the strong lift came a turbulent buffeting caused by, and I am guessing here, a down wind 'lee' wave from the lift. The one I usually fly in above Cheddar is a known phenomenon and is higher and more settled in easterly winds promoting accessible lift to our gliders, enough to leave and fly around before going back into it for more lift. When you get into turbulence it is good to experience it but not to stay in it,

If you ever want a good read try 'Exploring The Monster' by Robert Whelan. It is about soaring in lenticular clouds with lee waves forty miles away. Reaching up to 45,000feet high in plywood gliders.

Eddie the Fledgling Eagle (Part 1) by Richard Docketty

To put this story into some context I have to take you on a journey which started way back in the last century, the 1990's to be precise, when I flew a live Red tailed hawk called Kalataka, or Kal for short. Kal and I had many expeditions into the Surrey hills and I loved watching him soaring high above me on a crisp winter's morning before returning to my fist (or not, as the mood took him). Alas, sadly Kal became ill with Aspergillosis (commonly known as Farmers lung), a fatal respiratory decease and that was that. I laid Kal to rest at the bottom of my garden under some trees and hung up my glove.

Time moved on as it has a tendency to do and in 2004 it was my turn to get seriously ill. It left me with a different outlook on life and in 2008 I managed to 'engineer' early retirement for myself and became what my wife described as a 'house executive'. 2012 came around quickly and with more free time on my hands my interest in flight was rekindled by a very good friend of mine who re-introduced me to RC Slope Soaring. I had dabbled in it back in 1976 as a member of the Meon Valley Soaring Association, but a new career in London and family commitments meant it was a short lived affair.

I re-joined the MVSA and under my friend's tutorage my piloting skills steadily increased, and over the years so did my fleet of planes much to the wife's consternation, "Why do you need another one?" she asked more than once, sound familiar? I have always been a bit of a DIY/fettling type of guy and in 2016 I helped build a 5m Slingsby Petrel based on the excellent kit from Old Gliders in Poland. This really whetted my appetite so in early 2017 I decided I quite fancied scratch building something rather than buying another off the shelf model or another kit, but what? An online search of available plans presented a myriad of weird, wonderful and even beautiful glider designs, some I thought were beyond my capabilities until I chanced upon the 'Eddie the Eagle' plan by Jack Edwards from the 80's. A full size replica of an Eagle made from ply, balsa, and foam. The idea of flying another bird of prey again, albeit without the involvement of the local rabbit population, really fired my imagination. The plans duly arrived in the post and my initial enthusiasm was somewhat dented when it dawned on me 'Eddies' design was based on the technology available back in the 80's and also had something called 'drag ailerons'! It became clear a bit more 'fettling' away from the original plan was going to be necessary to utilise more modern things like aileron servos. It was time to do some research and to find any Eddie builds which kind hearted folks had posted online. I was in luck as two guys had already posted up their builds on RC Groups some years earlier and between them had identified a fair few pitfalls with the build and some inaccuracies in the reproduced plans themselves.

So armed with the RC groups blogs and the plans taped to the garage wall I started work on the wooden fuselage components. All went well until assembly time when there was clearly a bit of a twist in the finished article. Scratching my head it was back to the plans with a ruler and set square and

consulting RC groups again it became clear the dimensions of two of the formers on the plan were wrong. So a second fuselage was constructed with new formers and this time with no twist detected.

Then it was time to think about the wings, which were made entirely from foam with a laminated balsa and carbon fibre spar (another departure from the original) cut to match the profile of an eagles wing and laminated ply wing tip 'feathers'. I had decided to replace the original bent wire wing joiner with a solid glass fibre rod so an angled slot was cut in the spars to take a brass tube for the wing rod and then strengthened with carbon ribbon wrapped around the spar and tube then epoxied in place.

I enlisted the help of the then chairman of MVSA for cutting the foam as he had a large homemade hot wire cutter. Each wing was made up of four sections so to give the correct wing section and profile so it was necessary to cut out a number of plywood ribs as guides for the cutter. The old adage 'measure twice and cut once' was never more true at this stage, but after a few hours careful measuring and cutting the component parts of the wing were ready for the next stage. This involved sanding the ends of each section to obtain the correct profile angle and to match exactly the profile of the spar, then came the next fun part. Carefully cutting each of the sections in half laterally and then gluing them, front and back, to the spar and to each other while also introducing the wiring loom for the servos. Yes, there were a few swear words uttered during this stage, but in the end I had the makings of two Eagle wings.

Next, the trailing edges had to be 'scalloped' to give the impression of the tips of feathers and then sanded down to give as thin a section as possible. Not all the 'scallops' survived the sanding intact as the foam is very brittle and would break off if caught by the edge of the sandpaper. Some remedial work was necessary to restore them, more annoying than difficult. Balsa leading edges were added and shaped along with plywood formers at the root, double checking the roots were at the correct angle for the dihedral. It probably was not necessary, but I also capped the spar, top and bottom, with carbon tow for extra rigidity and impact resistance. What does that tell you about my confidence in being able to pilot this baby?

It was time to cut out the ailerons and holes for the servo trays, replacing the original design of Bowden cables and elastic bands. All pretty straight forward except for cutting the slots under the wing for the drag plates which I decided I would make from some acetate sheet glued and screwed to the ailerons themselves.

The tip and Alula feathers were the next task. All made from two pieces of thin ply cut to shape and laminated together with epoxy. The interesting part was finding various sized curved objects (ok, let's call them pots and pans, but do not tell the wife!) to wrap the ply around while it dried. I had to do this again for some of the tip feathers as the angle on them was not quite right; they all needed to be perpendicular to the wing so in flight their front edge faced directly into the airflow.

With the 'feathers' glued in place and more carbon tow added to the undersides where they joined the wing to strengthen the joint. It was time to add the glass fibre covering. Now for an admission, I had never done this before and I was really concerned I would make a complete hash of it and ruin the model.

2017 Build Paused Alert

Between July and October 2017 we were in the process of moving house from Surrey back to the coast so all build work and most of the flying ceased throughout that time. Then once firmly ensconced in our new home by the sea, it quickly became clear the refurbishment and extension project, to be known as 'the project', we were embarking on was going to drive a horse and cart through all of my modelling activities for quite a while, and that included progressing Eddie.

2018 Build still paused, but not far from my thoughts and a little dabbling taking place

How to carve an eagles head out of balsa, I had had a go previously with very limited success. It was obviously I was no sculptor so alternatives needed to be found, but what? Various thoughts passed through my brain but it was not until I joined the WSA Slope Tour in May 2018, even though I was not really in a position to restart flying at that point, and met Frank Bayes who hearing of my dilemma suggested a 3D printed head might do the job. Lightbulb moment! He even found a print file of an eagle's head online and set about a test print for me. God bless you Frank! Unfortunately the scale was not large enough so he put me in touch with the guy who runs the 3D print shop in Boscombe who was very helpful. He was able to scale up the print file and use a different material for the print. The result was a near perfect and rather fierce looking eagle's head.

The head was hollow, of course, so the first thing was to fill it with something to give it strength and some impact resistance. What better than Gorilla (foaming) glue which worked very well, filling all the nooks and crannies and setting rock hard. A piece of hard balsa block was added to the back of the head to extend it from the body to improve the aesthetic and then sanded to match the head's profile. A nylon bolt was also added for attaching the head to the body, in case it ever needed replacing.

2019 Build Restarts in Earnest Alert!

Early 2019 with the dust finally settling on the project, well, at least part of it, so it was time to retrieve Eddie from his hibernation in the loft and take him to my brand spanking new workshop. Poor Eddie's wings had not survived 'the project' completely unscathed. Both of them looking a bit battered and bruised, but nothing a bit (most of a pot actually) of lightweight filler would not put right

Still pondering how to go about glassing the wings, I decided to put them to one side and concentrate on cladding the fuselage frame in foam and sanding to shape which turned out to be a bit easier than I had expected apart from the blue foam dust which stuck to everything, including me. Not being able to put it off any longer, I decided it was time to cover Eddie in glass, but rather than using epoxy laminating resin I chose to use water based resin called Eze-Kote. I had not used it before so it was a bit of an experiment. I need not have worried as one coat of the resin on the foam as a key, then once dry a second coat over the glass cloth was very easy to do and gave a very good finish.

Around this time a friend from the MVSA club showed me his method of hinging ailerons using rip stop nylon sailcloth. I removed the original Mylar hinges and employed this method instead for the ailerons and elevator and it seems to be working very well. Emboldened by the finish of the wings the body was treated in the same way with the same results.



To connect the wings to the body 2 nylon bolts were added to each of the wing roots in preference to the designer's elastic bands and hooks. Makes for a nice tight fit and the bolts can be replaced quite easily if one breaks. I wanted easy access to Eddie's insides so a front, middle and rear hatches were added and shaped to match the profile of the neck and shoulders. All held in place by rare earth magnets, another departure from the original plan.

Lateral stability was a bit of a worry as the plan did not have any form of stabilising fin and also I was not sure how the drag ailerons would make Eddie behave when landing, so after some discussions with various knowledgeable friends I decided to do two things. First, I split the large elevator into two so it could act as a rudder as well as an elevator. Secondly, a 'temporary' clear plastic tail fin was

added (I used the tail fin from my NCFM Half Pipe 60 as a template). Both these additions are still experimental at the time of writing.

Adding the radio gear was pretty straight forward as was setting up Eddie's programming and calibrating the control throws as per the plan. Getting Eddie's CoG right required some significant brain surgery and the adding of 14oz (nearly 400g) of fine lead shot inside his head.

To be continued

Tarrant Hinton Events by Geoff Collins

I have cancelled my 100" comp scheduled for the 30th of June, as I am informed this clashes with the Christchurch Rose Bowl that is being held at Chalbury on the same day, which would make it very difficult for everyone to be in two places at once. Therefore with the help of James Parry we are going to run it on the 22nd of June, i.e. bring it forward to the Saturday before. This also happens to be a BBQ day at TH, so there we have a chilled out comp supplemented with bacon sarnies and other gourmet delights rustled up by Mr Erriott and James. So just a reminder, any electric launch glider with a maximum span of 100" is allowed, but they must have a height limiter fitted and set to 150m. Round Robin scoring with no spot landings. One on One rounds.

Results of the comp held May 26th

1 st	Doug Bowman	WSA/ Christchurch
2 nd	Geoff Collins	WSA / TH
3 rd	Darren Bumpass	WSA/Phoenix
4 th	Mike Simms	TH/ WSA
5 th	Pete Rose	TH / WSA

Darren Bumpass was helping me set up a plane, we were getting no where with it and as I was running out of time I packed up and left for home, After supper I went to the work shop and had another go. I knew the servos were working prior to fitting, so whipped it out and placed the servo tester on, nothing. Picked it up and I noticed it was warm and then the penny dropped, I had given the horn set screw a final tighten and this screw was not the supplied part, I so removed the horn and the servo worked. WHAT I HAD DONE WAS TO DRIVE THE SCREW DOWN INSDE THE SPLINE AND BIND THE OUTPUT SHAFT. Lesson learnt there, always check after tightening any screw or nut.

Hope to see you next time 22 June at Tarrant Hinton

Calendar (WSA events in bold)

Sun 16 June	E-soaring round 3
Sat 22 June	E-soaring event at Tarrant Hinton
Sun 23 June	WSA 40th Anniversary BBQ
Sun 30 June	Rosebowl Event
6/7 July	Slope Fly-in
Sun 7 July	Fall back date for WSA 40th Anniversary BBQ
Sun 14 July	E-soaring round 4
Sun 28 July	E-soaring event at Tarrant Hinton
3/4 Aug	Slope Fly-in
Sun 11 Aug	Limbo event
Sun 18 Aug	E-soaring round 5
0/1 Sept	Slope Fly-in
Sun 22 Sept	Multi-task event
Sun 29 Sept	E-soaring event at Tarrant Hinton
Sun 27 Oct	E-soaring event at Tarrant Hinton

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