Club Update--- July 2018

View from the top

... and at eye level

Photos by the "Fantastic Farrow Flying Camera"

The Weekend Warrior's - "A - Team"

Obviously those that could make it during the week had already had their fill and were not interested in braving the gentle minus 5 degree Southerly on an otherwise glorious Saturday morning. These photos of the "I don't care what the weather is ... I need to fly" group were taken by James whilst expertly piloting his/ their new DJI flying camera/drone, or whatever you'd like to call it. It's a pretty smart piece of flying technology.

From the Prez:

The last couple of club nights have been good value and hopefully what we do in the next couple will be as good.
A few things have happened since our last newsletter, so here is the current status.

Licence.
Last month I reported that it should be in the hands of Tim Penwarden in a couple of weeks. That is what I was led to believe.
Unfortunately, not.
Certain staff of GWRC are expressing an embarrassment about the delay. I know those who have been assessing the licence have also been working on the new Parks Network Plan, so I guess that has taken priority. From one viewpoint it isn't much of a problem as we are under no threat, but from another, it's extremely frustrating. I had hoped, when told work would begin on it (and did) early in the year, that it could have been a focal for the AGM which was in April.
Sadly, not to be.
Maybe be the next AGM?

Insurance – MFNZ
This has been mentioned either in a newsletter or club notices and you will have read about the new policy in Flyers World. What I perhaps haven't communicated is what this has meant for us as a club.

As a club, we were carrying a certain amount of liability insurance for our committee members.
The new MFNZ policy covers that, and we had our insurers compare our policy with the new MFNZ one.
By cancelling the duplication, we save a sum of $500.00/annum.
So credit where it is due, new policy is good for us.

Insurance – 2017 rally.
Something I meant to report last newsletter.
Those who were at the AGM will recall Jonathon being asked about rally insurance, that we had asked if we could have some refund for the 2017 rally, following a process given to us.
Having followed the process, we hadn't received any communication back, although we had chased up a few times. I am pleased to say that Jonathon did follow up on our behalf and a payment of some $300 plus dollars were received to cover un-recoverable costs (Portaloo etc.). In future we simply need to notify MFNZ each year that we are having a rally and we will do so well in advance.

Parks network Plan
I mentioned this recently and intimated that we may put in a submission. That piece of work has proven unnecessary. GWRC held meetings with each of the park user groups and sought their thoughts on park management going forward and where we felt changes were needed. They also were very forthcoming on a lot of the ideas coming forward and ideas they, themselves, had.
This was followed up by a group session which Alastair Rivers attended on our behalf.
So, it's good that GWRC are seeking users input.

Wayne also tells me that they are going to hold a park users group meeting at some point, outside of the PNP discussions.

CAA.
Those that were at the AGM will remember a statement I made that we would meet with CAA at some point to discuss our height restrictions, flying areas and use of observers.
Those that were at the last club night will recall I gave a very brief update.

Jonathon Shorer and I met with CAA earlier in the month to discuss these points and gain a greater understanding of our restrictions.
I was (and are) waiting for some better information in diagrammatic form to explain our situation, but as yet that hasn't come through.
As I know there has been much discussion in some quarters, here is a statement of facts.

Ceiling height.
We fly under a published danger area, D620.
The height of that danger area is published as 800ft AGL.
What was mentioned in the correspondence from CAA in 2011 when our current restrictions were discussed, was that a height restriction has an inherent safety buffer of 200ft AGL.
This was news to Jonathon and others and was confirmed with our meeting with CAA. To further understand this, Jonathon put in an OIA request to cover the last 3 applications for Danger areas that have been put in and granted.
What they showed proved what we were hearing. An application for a ceiling height of say 1,000ft, if granted, would be published then as a height of 1200ft. So, the published height included a safety buffer of 200ft and those (such as ourselves) flying under the D area, have only authority to fly to within 200ft of the published height.
As this affects all clubs, an article has been written by Jonathon for publication in the next Flyers World.
In reality that would mean we have a ceiling of 600ft.
The discussion with CAA at the time of the establishment of the GPS approach to runway 34 at Paraparaumu Airport gave us a slanted ceiling. As you know, 650ft slanting down to 500 ft. That reflects the glide path and horizontal penetration into D620 of the safety zones.
D620 is published as a circle, but agreement was we wouldn't fly seawards.

There is and will be no change to our allowable ceiling heights.

Observers
There are some that have told me that prior to the agreement with CAA in 2011 the club did not fly with Observers. Having spoken to numerous long-standing members, that is not the case and Don recalls the club having a rule for observers back when he joined in 2001.
The use of Observers is primarily a club rule.
However, in the discussions with CAA in 2011, in return for not taking away D620 and reducing the ceiling to the standard 400ft, and allowing the sloped ceiling we have, the Club was asked to mitigate risk with full size aircraft. The current Observer requirements were born out of that requirement.
Can this be changed? Yes, any club rule can be reviewed, but in the case a review of our Observer rule needs to be made so that it still mitigates the risk and CAA want to review any changes made.

Activation of D620
It has been suggested by a member that the Tower at Paraparaumu Airport be given details of our weather station so that they can observe when we are active through the camera and advise aircraft accordingly. I put this suggestion to CAA but it was rejected. The issue, of course, is that by agreeing to do this creates a responsibility. Besides, they do not see it as being necessary.

In summary.
Whilst it has been a useful exercise in my gaining a much better understanding of how we got what we have, it has only affirmed what we have in place and the work done by those in 2011.
A review of our current club rules late last year saw a few tweaks but little in the way of major change. A request for members input was made in the September newsletter last year, but nothing was received.
A review of how we use observers will be made at some time in the future, in the meantime the current rules stand.

Club rules exist for the safety of club members and members sign up to the rules when they become members. Ignorance of the rules or not agreeing with them doesn't change the fact that all members need to abide by them.

This topic is now closed for discussion.

A visit from the Paraparaumu Airport manager
Just after I left the strip the other day we had a visit from the Airport Manager. They had observed Colin's glider and come for a look. (must have been using binoculars I guess) Why you might ask? Just to affirm he was flying at the club site. They have had some problems with unidentified models/gliders flying in the Raumati area. That's in line with the discussion I had with one of the Aero club instructors a few months ago when it was noted a model flying in the area where aircraft join the circuit. Apparently rogue use of models and drones in the area is causing some problems. What it shows is that, irrespective of our behavior, we are tarred with the same brush of any loose use of models by any member of the public.

Steve

Necessity is the mother of invention...

We seem to be quite an inventive club. I've seen a lot of stuff that members have experimented with , with varying levels of success.

Thomas Edison was one of those inventive greats. Without him we would not have had, amongst other things, the electric light bulb, the nickel-iron-alkaline storage battery , the universal electric motor

He was reputed to have once said, "I have not failed, I've just found 10 000 ways that won't work".

Alistair Haussmann has a Durafly EFX Racer which flies really well, but is a mission to get into the air. Hand launching is a bit of hit and miss and unless the launcher has the ability of someone like Johannes Vetter it often ends in a repair job. So after several attempts he came up with another " detachable dolly" design, this one with oversize wheels almost resembling a monster truck and a third small steerable wheel . Most of the parts were made on his 3d printer. Although it was not 100% successful, he did manage to get the plane in the air. I'm sure we will see the new revised version soon. Hopefully it does not take 10 000 attempts!.

Photo by James Farrow

A Winter's day at the field (29 June 2018) ... Article and photos by Alastair Rivers

An ideal day for flying? – big frost and a clear sunny day to follow.
Best recipe for a good turnout at the field and so it was on several days to end June.
To prove the point, here are some photos .

Steve's 'Mini Smith' was there in all its glory to have engine and taxiing runs, but when he actually tried to 'Maiden it', it proved 'coy' with the engine being 'unco-operative'. Back to the hangar for another fix. It will be wonderful to see it in the air – soon, we hope!

Colin's latest glider (they seem to get bigger every time there is a new one) was assembled and photographed. I didn't see it fly (*did it?*), but 'the other one' flew well with the launching help from John's workhorse.

Ian's little tiger moth looked as graceful as ever, but distance, eyesight and hills ended one of the flights. No harm done (except to Ian's pride) and it is ready to fly again.

Not the story for Mike's stick, that unfortunately encountered the dreaded bogy of not responding and unfortunately it then took two trips to bring the pieces home. Tough luck Mike - but he accepted it as 'one of those things'.

Terry's 'floater' was doing that to perfection today in the still air and looked very graceful as it did so.
A day's weather that we hope will continue for at least the moon cycle (full moon last night!) and let even those in full time work, get some flying too.

Club Night June.

This was very well attended with 25 members in attendance. Whether it was the lure of some pending bargains that were on offer from Derek Symes' collection or to hear what Mike Hall had to say about the various air shows I'm not sure. Mike gave us a very interesting talk about the air shows that he has attended. If you are looking at attending any shows (full size) in the future , have a talk to Mike , I'm sure he will pass on a few recommendation and tips.

There were also some planes on show , Terry had one that he had built from a short kit by Hangar One. Steve had his Smith Mini plane and John Ellison had his "Rudder Bugger" . Unfortunately I never took any close up pictures of the planes , but did get this poor quality photo of members looking at the items on display.

The Kotare room is a really great venue , and with our newly upgraded biscuit menu it makes for a great evening out. So if you have never been to a club night , come along. It's a good time to catch up on the local gossip.

Thanks to John Von and Colin for assisting with the hot beverages.

So!! What's going on in your shed? ... Words by Ian Crosland, Photos by Alastair Rivers

One wet June morning Alastair Rivers and I visited Terry Beaumont's work shop. This is the first of a series that Alastair and I plan to do for the newsletters over the winter period. So if you would like us to do an article on your latest or any interesting project then contact Alastair or myself.

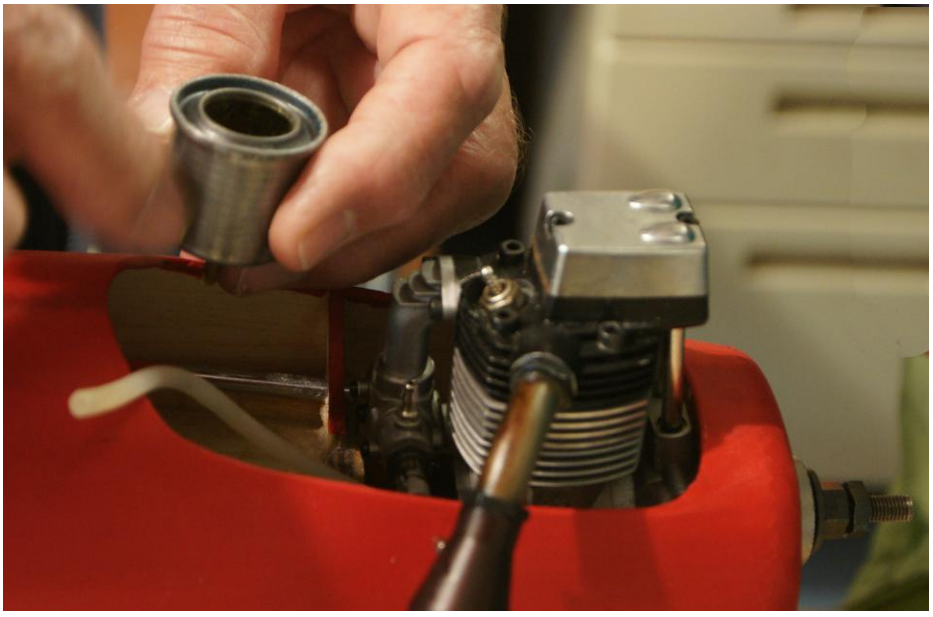
As you can see from photos Terry has a very tidy workshop, carpet on the floor, everything in it's place. Terry is a veteran modeller who enjoys building as well as flying. Sawing and sanding [etc] is done in a separate shed and models are racked in his work shop and in his caravan with some stuff in the loft as well, [every modeller has to have 'stuff' aye].

His latest almost completed model is a 1930's vintage Ben Shereshaw 72" 'Mercury ' 3 function powered with a 52, 4 stroke. Mods from the original are:- slightly longer and more streamline nose, wing bolts

instead of rubber bands and duralumin plate under cart instead of spring steel wire. As well as the main fuel tank a smaller secondary one made from a Humbrol paint tin installed for Texaco competitions.

Terry's next intended project is a 100" span 'Shear water' amphibian, powered with a Gemini 160 twin. The full size is a 4 place with a span of 36', very sleek and modern looking.

Terry Being interviewed by roving reporter Ian.



The "giant" Humbrol tin fuel tank.

Vacuum Bagging: by Bob McGrath

Vacuum is a convenient method of applying uniform pressure to a work-piece. Strictly speaking vacuum is the removal of air inside a void such that atmospheric pressure is applied uniformly to the outside of the void, thus it is really the weight force of the atmosphere that is applying pressure to our work-piece.

Uses of vacuum (sub-atmospheric pressure)

- Laminating: wing skins, helicopter rotor blades, formers and so on.
- Drying: removing water or other fluid from a matrix e.g. soil
- Forming: manufacturing “shells” in or over a mould e.g. canopies
- Saturation: oil saturation of tool handles etc.
- Food preservation (fish, meat, fruit etc)

Basic requirements

- A mould or form
- A vacuum source
- A method of regulating the applied vacuum
- A gauge
- A containment device (bag or sheet)
- A flat workspace

General equipment

This depends on what you are trying to bag, form or laminate but will probably include:

- Bags, mylars, PVC sheet, glass, glass fibre, resin
- Miscellaneous tools such as scissors, brushes, gloves, spreaders, rollers, solvents, mixing containers

In the cases of wings, tailplanes, rotor blades or any other lamination process

Advantages:

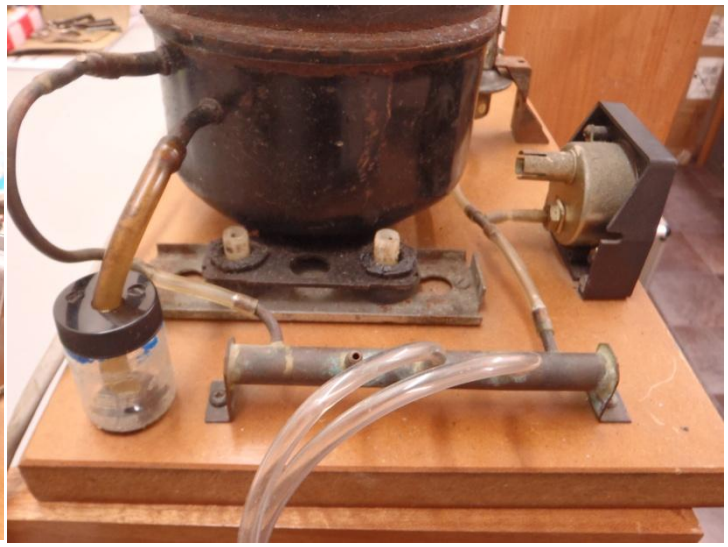
- An uniform force is applied over the whole area
- The available force is greater than is practically attainable usingother methods such as weighting or pressing
- The uniform load distribution makes it possible to safely use a very small amount of glue thus minimizing & controlling the weight added to the wings.
- There is no need for a very strong, rigid work surface to during skinning

Disadvantages:

- Some equipment is needed.
- The method cannot be used together with hollow cores (there are methods for doing this but these are limited)
- Practice is needed to achieve perfection and this can be costly of materials.

The vacuum pump

There is no need for an expensive vacuum pump; the compressor from an old refrigerator will do the job more than adequately. In addition to the pump a vacuum activated switch is needed to control the pump without this feature the foam can be crushed. The vacuum advance mechanism from automotive distributor and a micro-switch can be used for to create a basic feedback system for the pump. A small additional volume is useful, to give some hysteresis in the system that helps to avoid overheating of the pump by increasing the time between starts and stops. A small reservoir can be made from a piece of copper tube or a tin can. A car vacuum gauge is incorporated to monitor the vacuum applied.



To connect the vacuum to the bag, a length of plastic tube is connected to a nipple that is installed through the bag wall and sealed with a silicone washer either side of the plastic. The nipple can be made from an inner tube valve stem and a short length of brake tubing or could be a commercially available part. The sketch and pictures above should explain the most of it.

The vacuum bags:

The bags should be strong PVC, about 0.1 to 0.15 mm thick, and need to be appropriately sized for the job at hand. A rough guide is 1.5 times the width of the article to be bagged and with a margin of about 200 mm at each end. Bags can be made from plastic bought at building material outlets but care is needed in sealing the edge with packaging tape, tube material is preferable for long items such as wings if it can be obtained.

Sealing the ends of the bags can be done in a number of ways: use of a purpose made mastic material is my preference for larger jobs however plumbers putty (not glazing putty), double sided tape or servo tape all work and are also suitable for bagging a single sided layup. Folding the bag over a strip of 3 mm ply and clamping it with a plastic “spine” is also a satisfactory method that enables re-use of the bag.

The bags need to have a “manifold” that distributes the vacuum completely and evenly over the whole job. I use a length of 6.5 mm polypropylene rope taped in place around the perimeter of the bag for this. The work piece fits inside this area and is connected to the rope manifold via “wicks” which can be paper towel, felt, shade cloth or any similar soft, porous material that will allow air to flow but will not be hard enough to leave an impression on the finished surface.

The bagging process:

The fundamental process is the same regardless of what item(s) are to be bagged. The key to success is proper preparations prior to doing the job; the following generic checklist is a minimum:

- Prepare an adequate, flat, workspace that you can easily access from all sides
- Check that the pump is working and set the required vacuum for the job
- Have all hoses, valves, sealant and tools laid out and immediately accessible
- Lay out the bag complete with the manifold, breather strips and with the nipple installed and check for potential leaks (nicks, scratches, tears etc.)
- Ensure that the item being bagged will fit the bag
- Lay out the adhesive, glass, mylars (if used) or skins in an adjacent work area in a logical work order
- Apply the resin and glass fibre to the skins (or mylars) and assemble the job
- Place into the bag and check the alignment of all the components
- Position the “wicks” such that the vacuum will be evenly applied
- Seal the end(s) and connect the pump
- If a wing is being bagged then align the bag over the wing bed at this stage
- Apply vacuum and check that the correct vacuum is being applied and held (no leaks)

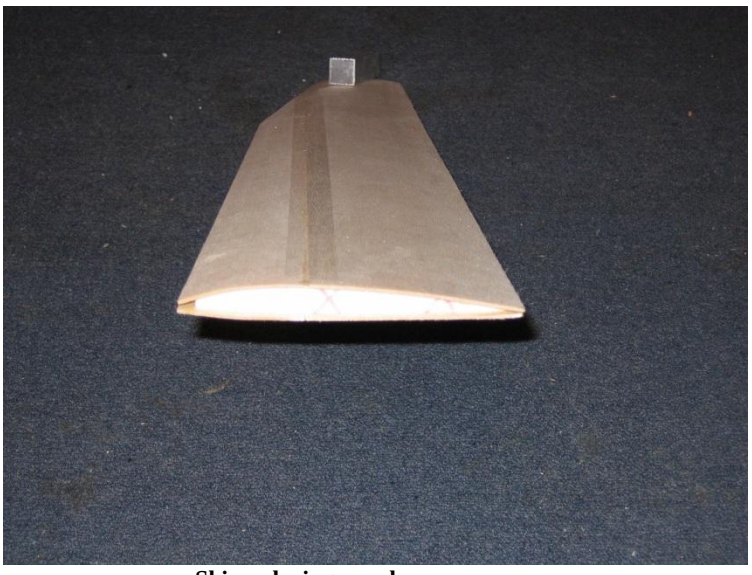
The bag can now be lifted and handled with relative immunity and can be hung vertically of you need the workspace for the next operation.

References and resources

http://www.westsystem.com/ss/assets/HowTo-Publications/Vacuum-Bagging-Techniques.pdf

Suck & Shine: David Thomas, RCM & E, July 1989, pp 574 – 576.

Phil Barnes, DVD, “Vacuum bagging made easy”



Skinned wing panel

Still looking for more stock?.

If you are still looking for stuff, then make sure you go to the WMAC Auction

For further details take a look on their website. https://wmac.org.nz

And that's it for this month.

Thanks to those that sent in their contribution, it made for a bumper issue this month , much appreciated.

If I missed something you sent me, just send me another email reminder, and I fit it in sometime.

Till next time.

Fly hard... land soft.

Cheers
Don