

GLIDING AUSTRALIA

Issue 53 September - November 2020 magazine.glidingaustralia.org

MAGAZINE



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WINNING THE MENTAL BATTLE 2**



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GLIDING AUSTRALIA

MAGAZINE

No. 53 September - November 2020

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WELCOME TO THE NEW SOARING SEASON

Despite to the lock-down measures impacting gliding over the past months flying is continuing in most of the country. Let's hope normal operations can begin everywhere soon. In the meantime, this spring season is here and although drought conditions in the east are less of a factor, now is the time to fly while we can.

This is the second issue of GA in the new formats. As long as you have an internet connection on your device of choice, you can read GA wherever and whenever you like. Go to magazine.glidingaustralia.org.

You can also download a PDF version of GA from magazine.glidingaustralia.org/past-issues.

You can order a very special DIGITAL PRINT copy of the magazine as well. Each magazine will be ordered and printed just for you, so it will be a limited edition – rare and collectable. Order your very own copy here bit.ly/2TUKFs5

I would love to hear what you think about the new formats and the magazine in general So please contact me any time. Or you can leave me a message on the website at bit.ly/2McMqYu

I hope you enjoy this edition of Gliding Australia Magazine.

Sean Young



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If you are sending documents they must be emailed to returns@glidingaustralia.org

SHOP The GFA Online shop has a range of useful products including a Form 2 kit, www.store.glidingaustralia.org

GFA OFFICE
Before calling the GFA office, please check out our website www.glidingaustralia.org to buy items, find documents and other information, and renew your membership.

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FROM THE PRESIDENT

Many good and exciting events, decisions and changes were taking place when this financial year started, and some that were not as good. But by and large we were moving forward in a positive and progressive manner – until the fires, smoke and virus hit and some of those elements were taken out of our control. Some items are listed below.

CASA, FUNDING CHANGES AND GENERAL

Our reporting requirements had changed with last year's allocation, which meant less money and more reporting, CASA advises that because this is public money, we should always have been giving this information. Our Current agreement lasts two years. As this is the second year, I recently signed the Deed of Agreement and sent them the two paper copies they require. Really – paper in this day and age.

Moving on, I am concerned that this funding will cease or be lowered further in the future, causing a need for us to decide which aspects we will continue with, as a large portion of our costs are specifically about CASA and its requirements. We also have to apply and pay for some of those authorities that actually assist CASA as much as our members. "Is it worth the cost and effort?" is a question I can see members asking a lot in the future.

Recently, I have been included in some correspondence about heavy handed dealings that CASA is taking with some other groups outside of the sports aviation sector, and have advised the Board so they may stay on top of it. We need to be careful of supposedly well justified Bureaucracy both in CASA and within our own organization. It is very easy to add rules, regulations etc, but very hard to remove them.

In SA, they have just brought in 'COVID Marshalls', which affects my gliding club. The club has taken a reasonable approach and asked all instructors to do the test (yes, there is an online test) so that we will always be 'compliant'. One instructor that I know and absolutely respect has said he is not going to do that and has taken himself off the instructor's roster. I totally understand. It's just another barrier, and with every barrier, we lose good, capable people, regardless of who sets up that barrier – the Government, GFA, the regions or our clubs. A barrier to participation is just that, a barrier.

PART 149

I sent an email to CASA recently asking for an extension of the fee-free time to enter part 149. This request was based on the recent history, the time and difficulty seen by the one group that has entered the 149 system and, of course, the COVID 19 aspects. Your GFA Board is being appraised on this significant matter regularly, and will decide as we progress towards a decision. Current thinking is that we will probably go into Part 149, but nothing is certain.

I was promised a reply to my email question very quickly. It took a while but has just arrived. Basically, it advised that CASA agreed but we had to commit to joining Part 149 by October this year to gain the extension. Part 149 will cost us up to \$150,000 according to the initial estimates provided by the Deputy Prime Minister when he initially advised that it had been approved by the Australian Parliament.

If the Board decides to take on Part 149, it will be the most significant change in our operating methodology since the OpRegs were introduced. It will have significant and long-term effects. We need to be alert to unintended consequences that, because of what I call the 'CASA effect', cannot be changed because they are enshrined in some form of legislation, including CASA internal 'how to' documents. With a clear timeline now in place on the GFA to make a decision, the Board has tasked three members to continue to review and make recommendations on this matter.

FINANCIAL CHANGES

The current approach of investing and actively managing our finances is at risk. The result will be wins and losses, ups and downs, but the aim is to grow our interest by greater than 4% above inflation. This does not stop us from going back to fixed bank fixed deposits if they ever increase their returns, but that is not going to happen soon, as fixed deposits are extremely low at the moment.

MARKETING AND PROMOTION

This group has started some great work. We have some new logos and more appropriate slogans, based around the word 'extraordinary'. We don't recognise that we do extraordinary things but we



do, and we should be proud of that. A new website is about to be unveiled, probably before this this is published. I hope you like it.

The website has been an area that has been discussed many times over the last few years. It's difficult to upgrade, when every time we change something – anything – it causes worry that some people will drop out of our sport simply because of the change. Sometimes the worry is due to the pace of the change itself around them. But we need to change to ensure we remain relevant in this brave new world.

SAFETY GROUP

You are probably aware that the Soar reporting now has an independent volunteer group conducting initial non-biased assessment of Soar reports. This has proved to be very good and efficient. Safety isn't about big targets and ideas. It's about all of us making the right and safe decisions before and when we fly, maintain or assist in the pursuit of our sport. Don't forget, it's a sport.

MEMBERSHIP

At May 2020 we had 2,488 members, down 1% since 2015. A membership deep dive has been conducted with the aim to identify clubs that have lost membership. On the basis of 'if you don't know, you can't fix it', this deep dive is based on clubs and has been made available to club committees. I don't know what the result of the virus restrictions will be, but some good signs have emerged to indicate that more people are joining as some parts of our country come out of the various and changing lockdowns. On another positive note, I just saw a report that said we now have 15% female membership, and that

is fantastic. The first time I saw female numbers in our organization, some 6 or 7 years ago, it was about 2%.

LOANS TO CLUBS

The GFA making loans to clubs seems to be occurring more often and is a really good thing. It's a win-win situation, in that it assists clubs in major purchases, such as aircraft, at a cheaper rate than the banks, and is a great support for our members and their clubs.

COMMUNICATION WITH MEMBERS

Launch points is the new communication to members. The name was chosen by asking you, the members for ideas. We still do the Magazine, the GFA Forum, Presidents Forum, as well as our Facebook page and individual emails when needed. Go Membership is slowly evolving and being used more fully and I sincerely hope members are becoming used to it and hopefully the saying in the next few years will be 'why didn't we do this before'. If you are on the forums please try to remain respectful and reasonable, remember the people you are talking to, about and of, are mostly volunteers.

SOCIAL MEDIA

Social media has both good and bad points. In the recent past, our social media pages have been full of hateful and targeted criticisms of the GFA leadership and governance, sometimes personal, vindictive, and often wrong. On the other hand, some terrific, mutually concerned and supportive aspects of the same social media have also appeared.

The Board was concerned, but rather than shut down our internal social media, some simple and responsible actions were taken in an attempt to take the vitriol away. They aim to prevent the actions of the small number of members who did the wrong thing from stopping the genuine members from talking and having a good time corresponding and questioning. It seems to be working.

UPDATED MEMBER PROTECTION POLICY

We have been continually updating Member Protection to make it reasonable and useful but, unfortunately, it is still cumbersome and sometimes almost unworkable without good faith on both sides. At the time of writing, three appeals are current within this process, taking a large amount of time from volunteer members who, I believe, could

be better focused on helping the GFA generally.

FEWER FACE-TO-FACE MEETINGS

Last year, I said we were having fewer face-to-face meetings as part of a plan to minimise unnecessary costs. Because of the COVID-19 situation, this decision has obviously accelerated. Thus, due to factors outside of our control, it will come as no surprise to members that face-to-face won't happen in the short term. All current meetings are to be electronic.

ONLINE TESTS

Currently, Radio Procedures, Airways and Airspace, and the A, B and C certificates and the flight reviews for both Command pilots and Instructors are also conducted on line. Expect more as we move to become more effective and efficient in this space.

AIRWORTHINESS VIDEOS

The Airworthiness Department and their Training Manager have been working diligently to improve documentation, and supplementing it with training videos. This is great work that we can all benefit from.

SIMULATORS

Last year I mentioned the GFA simulator. Because of the virus, many members have been playing with Condor and such. Simulators can be good, and they stimulate the mind, but without proper instruction they can lead to unhelpful habits and actions. Be careful when you come back to real flying.

Remove barriers to participation for our members.

We have significant challenges ahead of us, but we also have strategies in place to overcome most of these. We must not return to the days of internal disruption for political purposes. We can only survive if we work together, and unfortunately we sometimes forget that.

Although we worry about CASA and increased rules and regulations, we also need to be very careful that we don't turn into bureaucracy worse than CASA. A member I trust and listen to said to me recently, "RAAus isn't stealing our members. We are driving them away." That worried me. As a general rule at Board level the GFA is attempting to minimize and reduce barriers to activity, sometimes these continue to be put in place despite our best efforts, and with Part 149 somewhere close, we need to be very careful of anything new being

proposed that puts up barriers to participation. Please let's all work with this aim and remain the organisation we need to be, one that is vibrant, exciting and dynamic. So please remove barriers to participation for our members anywhere you find them.

BUSH FIRES AND COVID-19

This season has been hopefully a worst case, with bush fires and the resulting smoke haze limiting flying, competitions and activity generally, followed directly by the COVID-19 virus and restrictions. Talk about barriers to participation! I am concerned about two issues related to these items. First, I am concerned that we will lose members who have become used to not going to their gliding club, and second, the wider effect on some of those members.

The first needs clubs to be vibrant in enticing members back, when they can. Regarding the second, readers may remember last year I mentioned that we were slowly seeing the demise of a large and significant group of people through the impost of advancing years. I fear this will accelerate, given the current situation. A phone call to check on your mates is a worthwhile thing to do, as some of our members may well feel isolated and fearful.

Please also remember that these members have been very effective in keeping our organisation vibrant and alive over a very long period of time and we cannot hope to replicate some of their fine work. We should also ensure that their efforts are not lost as we move to the future.

VOLUNTEER POSITIONS

Each year, all positions in GFA effectively come up for election, some in regions, some at the GFA AGM. We also have a limit of five years for most positions.

I will not be putting my name up for President this year, simply because I have other things I feel I want to do, and now is my time of life to do them. We should all have that choice. However, I will commit to continuing to support the GFA as much as I can in the future.

Thank you to all who have given their time and efforts to make this a better organisation. Keep doing what you can and don't let social media drive you into poorly considered directions.

PETER CESCO
PRESIDENT

FROM OUR NEW PRESIDENT STEVE PEGLER



Although I studied engineering at university, my career took on a path in sales, sales management and business management in the proprietary industrial chemical sector mainly servicing Australian metal manufacturing markets. I enjoy dealing with people and being part of a team where we can develop solutions to problems that allow a better way forward through challenging circumstances. I am a strong believer in defined structure and good, strong governance as it provides a solid framework for successful decision making.

The GFA's essential objective is to preserve and foster an environment that allows its members the freedom to fly. Naturally, this privilege comes with responsibilities and challenges for us all – we must all work together to help protect and grow our great sport.

In closing, I would like to acknowledge the enormous effort of our immediate past President, Peter Cesco. He has served over a period of great change and challenge – thanks, Pete. Similarly, to our retiring Board members that have contributed significantly – thank you.

Our current Board is a collection of exceptionally talented individuals with a broad background of life experiences and professional skills. I am really looking forward to working with them for the betterment of the GFA membership.

Safe Flying,

STEVE PEGLER
PRESIDENT
president@glidingaustralia.org

At the Board meeting on Saturday 29 August I was elected GFA President. I think it appropriate I should introduce myself to the wider gliding community.

My first glider flight was as a young kid in the late 1960s at Adelaide Soaring Club, where I flew in an ASK13 – I think. Although I was as green as grass when the flight was over, it was the one of the most memorable and exhilarating experiences of my life. In 1974 I joined the ASC for a short period, after which I turned to the dark side for a couple of decades flying powered stuff. I never lost the fascination for gliding and the thought of sustained flight without an engine eventually got me back to gliding, when once again I joined the ASC in 1996. I quickly became totally involved with the club. Shortly after joining, I flew solo in gliders and obtained my tug pilot rating. I've served as President for two terms totalling 11 years and am an active Level 3 gliding instructor and Tow Pilot Examiner/ Delegate.

FROM THE EO

AGM 2020

We ran our first 'Virtual AGM' on Friday evening 28th August, using Zoom webinar software, and feedback has been very positive. 123 people attended the meeting from the comfort of their homes – although it was loudly obvious that the Beverley crowd were watching from their clubhouse following a day's flying. It was good to hear you guys! Another 59 registered who were not able to attend. We also had 75 members who submitted proxies, which means just under 200 members participated in the process.

This is the biggest participation at an AGM that I can remember, although there was one in the early 2000s when we changed the management structure of GFA. Quite a few members turned up to the physical meeting plus a large number of proxies.

The format of the meeting was mainly a presentation of information, but it also enabled people to raise their hands via a button on the Zoom interface and to type in questions to the meeting. Sarah Thompson was the Conductor of this interaction with members and was able to un-mute microphones for those who wanted to speak and to read out the typed questions in appropriate gaps. The demand was slow initially but members quickly developed confidence and the number of questions grew as the meeting progressed.

Voting was conducted via a Polling option in Zoom, and as each

vote was raised, a voting form appeared on each screen and members were able to vote quite quickly. The results were then flashed up onto the screen within a few seconds of closing the poll – very efficient.

The first few votes concerned routine reports and then approval of Officers for the next 12 months.

The people elected by the Regions to become Board members changed significantly, with only Greg Beecroft returning to the Board.

APPOINTMENT OF REGIONAL BOARD MEMBERS

8.1. Board Member & alternate – NSW: Ian Caldwell and Aaron Stroop

8.2. Board Member & alternate – QLD: Lisa Turner and Mike Codling.

8.3. Board Member & alternate – SA/NT: Peter Brooks and Alison Swart

8.4. Board Member & alternate – VIC/TAS: Duncan Robertson – Alternate to be advised

8.5. Board Member & alternate – WA: Greg Beecroft and Owen Jones
Department heads, who are the members of the Executive, remain unchanged. President, Vice President and Treasurer were elected by the Board at the Board meeting on the Saturday, and again, all three positions changed.

PRESIDENT
STEVE PEGLER

VICE PRESIDENT
LINDSAY MITCHELL

TREASURER
CHRIS BOWMAN

The table shows that three of the proposed changes were approved whereas one did not achieve hurdles 2 and 3 and therefore were not approved

	100 votes	75% vote	Majority from a majority of Regions	APPROVED
A. Admin changes	yes	yes	yes	yes
B. Discipline changes	yes	yes	yes	yes
C. Management changes	yes	yes	yes	yes
D. Regional elections	yes	No	No	No

Thanks go to the previous office holders for all of these positions. We really appreciate your large contribution.

CHANGES TO THE GFA ARTICLES

Any proposals for changes to Articles are required to pass three hurdles in order to be approved.

1. A minimum of 100 votes
2. 75% voting in favour
3. Majority of members from a majority of regions.

The table shows that three of the proposed changes were approved whereas one did not achieve hurdles 2 and 3 and therefore were not approved

The GFA Articles (rules) will be updated accordingly.

MEMBERS FORUM

Members were invited to ask questions after the AGM was closed and we had quite a few who took advantage of this with questions about our relationship with CASA and other topics.

TOPICS CONSIDERED BY THE GFA BOARD

The Board had a series of short meetings on the two Wednesdays before the AGM and on the Saturday morning and Saturday afternoon following.

MAIN TOPICS FOR CONSIDERATION

1. GFA Policies in relation to Integrity, Member Protection, Child protection etc
2. Part 149 proposal – we have been granted an extension of time in order to initiate this process with CASA.
3. Rollout of the new Gliding Australia website
4. Progress in developing the new Training handbook for Solo and GPC training
5. Strategic Plan update – surviving COVID-19
6. Biennial Flight Review feedback



TERRY CUBLEY AM
EXECUTIVE OFFICER
eo@glidingaustralia.org

GLIDING AUSTRALIA MAGAZINE

The magazine will continue only in electronic format for the next 12 months. This is a significant cost saving at a time when GFA's income has been impacted by the 6 month free membership and low flying activity. This has saved us close to \$50,000. The Board has agreed to offer a subscription to a small print run of a hard copy magazine to members who subscribe for 12 months (4 editions). We offered this opportunity in June and sold approx 40 copies, which means that the price needs to be set quite high. Members can subscribe for \$88 (\$22 per edition) and this is available in the GFA Shop – Go Membership Events. If we don't get enough subscriptions we will cancel the offer and refund the subscription payments.

GO MEMBERSHIP

As mentioned in some recent Launch Points emails, if you are looking to buy anything from the GFA Shop or anything that was on MyGFA, you need to start from Go Membership (GM).

If you need help in accessing GM there are instructions available via the web page – see Docs/Forms – Administration – Go Membership.

A green tile labelled 'MyGFA' will take you to the MyGFA area – SOAR reports, GFA Met, etc.

The other starting point is the green tile 'Events & Courses'. The title of this section is not quite comprehensive but we are unable to change that at the moment.

While it does show some upcoming events (NSW Coaching Week, for example), you will also see Form 2 kits, the GFA Shop, Courses, Webinars and so on.

Click on the GFA Shop and you will see all the items that we have been selling for some time – Classified adverts, Badges, Badge claims, Tost release products, AEF Forms and others. We have streamlined many of the costs, which means that many of them are now cheaper.

Another useful tile is the light green 'Documents' tile. This has many useful documents to help you use Go Membership, and also forms to apply for your GPC, Medical certificates, Online Exam menu, etc.

AEF - INTRODUCTORY MEMBERSHIP FORMS

We have been trying to make this process as simple as possible and feedback suggests we might be getting there.

There are only a couple of ways to legally take someone for a passenger flight in GFA. If you are taking someone you know and you don't want to let them handle the controls or pay more than half the cost of the flight, your Private passenger rating will cover this. I still suggest that you get them to read the terms and conditions of their risk and liability.

An AEI or higher rated instructor can take a passenger and give them a go on the controls, but they have to join GFA. The introductory Membership is designed for this situation. It costs \$35, makes the flight legal and protects the pilot conducting the flight. Our Insurances apply. When you purchase these memberships (usually done by a club) the forms are emailed to you to be printed. You have to provide a copy of the terms and conditions that apply regarding the passenger's acceptance that gliding is a dangerous activity and that they forgo their access to liability claims.

GPC TRAINING

Our member surveys show that a lot of members claim that there is a lack of standardisation in what they are taught and how they are taught. Operations and Soaring Development have been working on the training materials to be used by instructors and coaches, and are making good progress. It should provide a lot more guidance for the Trainer and for the student pilot, and improve the support material available to assist with consistency.

Training panels will be asked to review this material and to trial its use towards the end of 2020.

Operations and Soaring Development will supply updates as the new Training Manual nears completion.

GFA OFFICE

As the GFA office is located in one of the main hotspots of corona virus infection in Melbourne, strongly impacting all of our office staff – Tanya, Fiona and Carol. All are working from home, which places some strain on their day to day activity. They can no longer collect mail or visit the office, so we have had to provide extra phones and printers etc, and the staff are using a lot of their own equipment to help us out. We certainly appreciate their hard work and commitment to GFA members.

They have developed quite a few process improvements to make sure that members are well supported.

We have reduced hours of work for Tanya, which means that the GFA office is not staffed every second Friday, and it is certainly not staffed on the weekend. We appreciate members not trying to phone them on weekends. The best way to contact them is to email returns@glidingaustralia.org. They all see these emails and the person who is best to respond can do so, by phoning you or via email.

We all look forward to the end of this pandemic.

Pete's methodical and cooperative approach and relentless hard work. It has relied on Pete's knowledge gained from years of coaching lectures, coaching flights and instructing. Pete's knowledge and skills as an expert glider pilot are confirmed by his repeated wins at national championships.

Current trainees and future glider pilots will benefit from these training documents and programs and the resulting glider pilot satisfaction will benefit us all in gliding.

HOINVILLE AWARD

Drew McKinnie took on the role of Regional Manager Operations NSW/ACT in 2012, and then accepted the role of Chair of the Operations



Trophies

Trophy	For	Recipient	Achievement
Wally Woods Trophy	Longest Flight 2019-2020	James Cooper	1101.7km (1/3/20)
Bob Irvine Trophy	Flight with Highest OLC Points 2019-2020	James Cooper	1134 pts (14/12/19)
Martin Warner Trophy	Greatest Gain of Height 2018/2019	James Cooper	20,512 ft (29/8/19)
Roger Woods Trophy	Best placed Australian in World Competition	Jo Davis	4 th Club Class
Royal Aeronautical Society Shield	Highest Speed by an Australian in World Competition	Ailsa McMillan	156.6kph, WWGC 14/1/2020

Panel in mid 2014. He occupied this position until August 2019.

He has represented GFA in many operational consultations with CASA during that time. He took the initial lead in the rewrite of the GFA's flight training system and is still a member of the review team. He has also been the GFA's representative to the RAAF Airworthiness Board with respect to AAFC activities, a position that Pat Barfield now occupies.

Drew has assisted with many major accident and incident investigations. At the Safe Skies conference in 2017, which is a biennial two-day forum that representatives in the aviation industry (including regulators and the military) from around the world attend, he gave a presentation titled 'Soaring Safely into the Future - Transferable Lessons for Aviation', in which he discussed the various safety initiatives GFA

had introduced to reduce risk to its pilots.

RYAN AWARD

Andrew Simpson took on the role of Deputy Chair Airworthiness 1 (DCAD 1) in April 2015. He then

accepted the role of Chair Airworthiness Department (CAD) in mid 2016. He occupied this position until November 2019.

During his time as Chair Airworthiness, Andrew led numerous improvements to the GFA airworthiness system including many small changes that significantly improved the experience and application of airworthiness at the club level. At the same time, he maintained full employment with Qantas.

Andrew has returned to the role of Deputy Chair Airworthiness 2 (DCAD 2) and still actively contributes to ongoing airworthiness including modification approvals.



GFA Trophies 2020

Award	Wording	Recipient
Wallington Award	Services to the Sport of Gliding	Peter Temple
Muller Award	Services to the Promotion of Gliding	No Award
Hoinville Award	Services to Operations	Drew McKinnie
Iggulden Award	Service to gliding as a volunteer	No Award
Ryan Award	Services to Airworthiness	Andrew Simpson

S2F

SOARING TO THE FUTURE IS THREE YEARS OLD

As we move into the AGM season, it's time to reflect on what Soaring to the Future has achieved in the past three years.

At the GFA AGM in 2017, Soaring to the Future, or S2F as it is now known, was launched. It included a partnership with Sports Community and my decision to step down as President to drive this important initiative.

I've just re-read some emails from that time to remind myself of where we've come from, how we started and what we've achieved. I think that perhaps we don't shout from the rooftops enough to celebrate what we have achieved. We can sometimes be too shy to share our achievements.

DISCOVER SOARING

One of the first things that we did was to set up the Discover Soaring website as a base for disseminating information about the initiative. We actively promoted the Family membership and Family Flying membership to allow family members of pilots to be more involved with the business of the gliding club. I know several members whose teenage children have this membership and are

learning to fly. This has also increased our female participation, up from a longtime level of 5% to 15% currently.

We improved the Club Finder to add Facebook links and information about whether or not clubs have facilities such as accommodation or a bar, or run courses etc.

We introduced a course calendar which will now be transferred to the new GA website that Sarah is putting together.

In response to member requests in the member surveys, we produced a pathway which will also be on the new website, showing options for progression through the various departments and details on how to get there.

MEMBER AND INSTRUCTOR SURVEYS

We conducted a survey of all instructors and coaches asking them what would increase their satisfaction in delivering instruction and coaching. Over 50% of them responded – which is amazing – and the overwhelming response was:

- Standardise the training
- Share instructors and coaches between clubs
- Better documentation
- Mandate thermalling as part of early glider training

At this time we also encouraged members to remember the ground instructor qualification as an option

for pilots with huge accumulated knowledge and skill whose physical attributes guide them to give up their solo status.

We did another survey of 690 joining members over a 12 month period to see where they came from and found that over 60% came from three sources:

- Other forms of aviation
 - Previous members
 - Friends of existing members
- Note that only four came from AEFs.

Going forward, this trends allows us to more effectively target marketing at clubs. Many clubs are now running very successful 'Welcome Back to Gliding' days that have increased their membership.

NEW SYLLABUS

In 2018 we embarked on putting together a syllabus and rolling out 'Training Principles and Techniques'. I'm pleased to say that this has now become the standard syllabus and will be taught to all Instructors and Coaches as part of the basic training and at their refreshers.

This training gives Coaches and Instructors access to modern ideas and specific techniques on how to coach and instruct using different methods, for example, some people prefer verbal instructions, some people oral and so on. The syllabus also covers how to instruct people who are overly confident or lack confidence and assists with advice on a range of different techniques for our diverse students.

GRANTS AND RETENTION

We were able to support a large number of applications for grants from local councils, which I'm pleased to say is gradually increasing and has been a great initiative. A number of clubs are now receiving significant Grant funding from councils. I remember when I was President three years ago, it was really unusual to hear of anyone getting a grant for more than about \$500. I believe that Southern Cross Gliding Club has now set the bar

with their recent success.

We relaunched the 'Aviate in April' initiative, also used as a way of inviting friends back to the club, which we now know is a large source of new members.

Based on member feedback, we moved the A, B and C certificate tests online, and later the Official Observer test and revalidation. This decision has proven very successful and work continues to add to the online training.

After 18 months of S2F we reviewed club initiatives that had proven popular and achieved widespread roll out. The top changes were:

- Cashless payments
- Automatic flight logging
- Integrating flight log data sheets to billing systems
- On field trailer toilets
- Online assessments

We produced another pathway infomercial which is now used in all new log books to show new members where they can go with a gliding membership:

- Airworthiness
- Coaching
- Aerobatics
- Flying in Competitions
- Gaining badges
- Working on Club Committees

Most recently UK Coach John Gatfield visited and successfully ran six back-to-back Flying Further post solo courses for us, teaching the coaching elements of the GPC syllabus to B certificate pilots. Last year we achieved around 25 new GPC qualifications in Australia, 12 of them resulting from John's courses. Having said that, we normally reach over 100 A certificates each year – that is, 100 solo pilots – which shows that we're losing 75% of them between solo and GPC.

We have the opportunity to capture these members by running more Flying Further courses to convert them to GPC pilots. Then, hopefully, we'll never lose them. To reinforce the understanding that GPC rather than solo is the aim, we now have GFA GPC wings for members. These are proving very popular.

STAYING IN TOUCH

Most recently, we arranged for Sports Community to run a successful series of webinars for all members. The work that Sports Community did with the clubs identified two areas of weakness – social media and Governance. The GFA Board were persuaded that this was a useful area to fund as we know that poor governance often leads to disputes and MPP claims. These issues can take up a huge amount the Board's time, so it was felt to be a worthwhile investment. We ran four webinars over four weeks and had 244 individual participants, mostly from club committees, and many more members watched the recordings later.

The first two webinars were on social media and the last two on relevant regulatory requirements and how to run a successful club and manage conflict. After the first two meetings, it became clear that there was an appetite to discuss IT solutions for clubs and we ran our own fifth webinar to explore this. As a result we have now set up a group it4clubs@gmail.com, which is quite active discussing options and ways that clubs can be more

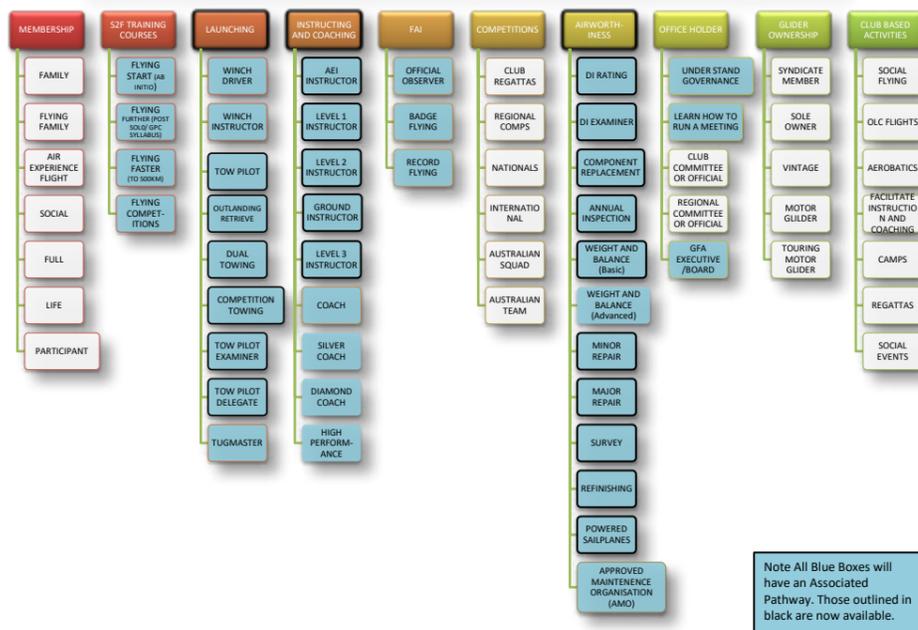
efficient and use their IT in a better way to reduce member effort.

I also wonder if there is perhaps a place for a tug forum? I'm happy to set it up if anyone is interested. I imagine you might want to talk to each other about spare tyres, Magnetos and such things? If anyone thinks it might be useful, please let me know. I guess you could also discuss the pros and cons of the E-tug.

WHAT'S NEXT?

Over the past three years, in addition to everything else that we have learned, I believe that we've established what it is that clubs need to do to better retain their members. Although we may have known for a long time that clubs are quite successful at attracting new members – although we can always do better – the issue has always been retention. Over these last three years, I think we've learned a lot on how we can improve on that and I think we're ready now to go forward and roll out these ideas to all of Australia.

So, my proposal to the Board next week at the AGM will be that that we do exactly that – continue our partnership with Sports Community but launch a national initiative to



share our discoveries to all clubs around Australia. Of course, none of this work will be compulsory. It is purely a voluntary exercise.

I remember that earlier on, I did get an application from a club that said, "Yes we would love to do S2F and we really want to be part of your program. We think it's really exciting but we're not prepared to change anything." In short, not everyone gets the message.

I know that change is difficult and can be painful. People have been doing the same things in the same way for a long time and it isn't always comfortable to try new things. But we now have a lot of evidence after three years that if you do change, you can reap the rewards. You can become part of a happy, vibrant growing club with happy members.

CLUB CO-OPERATION

One big change that we've seen

in the clubs that have enrolled in S2F is increased co-operation between clubs. The building of trust and sharing between clubs was quite absent before and is now a benefit to everyone. Something that we've heard in the responses from the member surveys is that members want greater freedom to move between clubs. Certainly, the instructors and coaches said that this was what they wanted in the survey back in 2018, so it's lovely to see that it is starting to happen. It can only strengthen all clubs.

I have all sorts of numbers and statistics to show you that the S2F clubs are increasing their membership and that other clubs are declining. But if I say X% someone will say Y%, so I will leave those numbers for now until we get the official figures, which are being crunched by a professional statistician in Queensland.

I can only say that I believe S2F

is working. I believe the numbers that I see are showing an increase of roughly 10% across the clubs that are now part of S2F and I'd really like to see that change extended across all clubs in Australia so that everyone can continue to enjoy this amazing sport that we are privileged to be part of in these difficult times.

Thanks again to everyone for the support over the past three years. At times it's been quite a battle and I have faced some strong head winds. Nevertheless, I really do appreciate the support and encouragement that I've had from so many members.

Thank you again

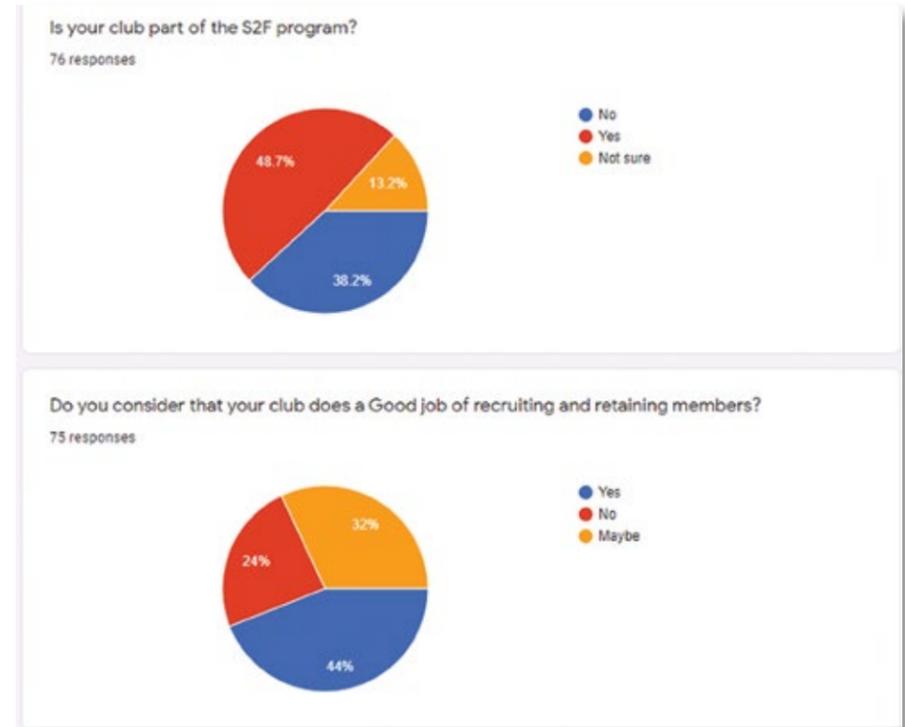
MANDY TEMPLE
CHAIR S2F
s2f@glidingaustralia.org
GFA investing in clubs

more courses. Collaboration can also be across state and regional boundaries. GFA and RAs could and should have a greater integration and coordination role, and push club committees harder to operate outside of their islands

- Actively support each other and encourage members to mix between clubs freely.
 - Clubs encouraged to share more
 - Clubs should not be 'islands'.
- Certain levels of regional and inter-club cooperation, coordination, support for multi-club courses and events should be required, with financial incentives at club re-affiliation. Less cooperation, pay more! More cooperation, pay less! Encourage club committees to share resources with nearby clubs – in other words, basic training vs cross country training, as some are more suitable, rather than lose members due to slow progress. Sister club arrangement where members feel equal visiting another club for training. Perhaps better communication between nearby club committees and panels.

OTHER COMMENTS

- It's important to regulate all the relevant areas enough and leave the rest alone
- Clubs should be encouraged to seek assistance from the GFA board but not regulated. Education not regulation.
- Stay out of club business. Your level of interference is driving members away.
- The GFA is and should remain a back-office operation. Clubs are the heart of the movement. They need an atmosphere of support, not scolding.
- You are treading on very fragile ground here, continue down this track at the GFA's own peril.
- GFA is not authorised to define/select/determine the individual gliding club's raison d'etre, ethos, membership source (regional locality vs age sector or interest sector - ie educational or workplace base) or any other determining factors that gives rationale for an individual gliding club to exist. Some of Australia's most successful gliding clubs were formed and prospered in the environment of GFA's active opposition.
- Many if not most clubs are the beneficiaries of a few hard working volunteers. This is both a blessing and a curse. The first because if not for these work horses the club may not



exist, the second because the club becomes fixed in its ways and change threatens the achievements and standing of those who have committed to the club as it stands. S2F is often seen as 'in with the new and out with the old'. While that's not actually the case, it's a perception that is as good as real to many club stalwarts. Publishing the first Sports Community report that established S2F would do much to change attitudes and lead to recognition of the past efforts of those club stalwarts as the base for building a better club future. Keep the 'old' but shape the future to be inclusive.

● The GFA June 2020 'Launch Points' newsletter asks whether the national federation should involve itself at the sport's coal face through setting minimum standards for gliding clubs in terms of their Constitution and club rules, responsibilities, governance and standards of behaviour.

● Having viewed GFA performance for more than half a century, this proposition raises a number of issues – a history of failures indicates that if GFA enters the coal face minimum standards arena, GFA will end up picking winners and losers by offering affiliation only to 'minimum compliant' clubs, thereby further reducing the number of gliding clubs in Australia. This is the opposite outcome to the publicly stated GFA objective.

● Rude and grumpy old men put people off.

● It's easy being a part of a large, strong club but I wonder how smaller clubs can avoid becoming a one man show that can be more like a dictatorship that does not attract new members.

● Members elect their club committee. Leave it there!

● My club's training committee continue to make and / or enforce rules that have been superseded/ removed. Example is the change to a biennial flight review being met with resistance.

● Local club rule enacted to mandate an annual flight review unless a minimum criteria is met.

● A rule is written into MOSP 2 but the local panel feels they know better.

● Keep up the excellent work that everyone does for/in the GFA whether voluntary or paid. Great communication with all members.

● I fully support the contention that, if we get people to GPC level, they will self-motivate to remain in gliding. Thus, we must all focus on enabling timely progress from beginner through to that level.

● I don't know why I bother with this as it always ends up in the bin and nothing ever changes for the better

Thank you to those who took the time to respond.
MANDY TEMPLE
CHAIR SOARING TO THE FUTURE (S2F)
GFA INVESTING IN CLUBS

SF2 SURVEY RESULTS

SF2 Chair Mandy Temple and the SF2 committee ran an online survey over the last three months on the level of control Australia's gliding clubs feel is appropriate for GFA to exert on their activities. In particular they sought opinions on whether GFA should insist on certain minimum standards for all clubs, similar to the idea of minimum standards for airworthiness, instructing and coaching. They also asked for opinions on the idea of imposing minimum standards on club committee behaviour.

Below Mandy reports on the comments they received. She said, "There were a lot of comments, too many to reproduce, but here are a

selection that capture the essence of what was said."

GFA SHOULD PROVIDE ASSISTANCE WITH -

- Gender bias
- Staff to run national training events
- Guidance in matters like sexual harassment, gender equality, youth, member retention and so on
- Volunteering
- Ensuring that everyone in a club position completes an equal opportunity course or similar
- "GFA needs to continue to work cooperatively with clubs to provide support and resources. Setting minimum standards for clubs is fraught

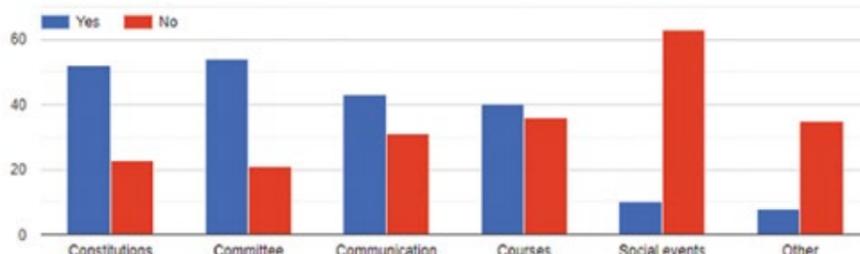
with difficulties. For example, at a practical level, how would GFA manage a club with a dysfunctional committee as they have no power to appoint an administrator or otherwise intervene in any legal way. Clubs also receive no, or very little funding directly from GFA so there is no opportunity to influence behaviour through that mechanism. On the other hand setting guidelines for minimum standards could be very beneficial in helping clubs to be successful and stop clubs continually reinventing the wheel."

- flight logging and payment system

CLUBS WORKING TOGETHER

- Cooperative approaches between clubs for the good of the sport
- Some clubs are good, others less so, at putting pilots, flying members and social members at the top of their priorities, turning the hierarchy pyramid upside down. Benefits to members can be multiplied if much more inter-club cooperation and coordination are present. If there were more non-training clubs, there could be more adventurous activity such as camps, safaris and coaching events, and performance flying. More development opportunities could be realised if clubs collaborate to run

Do you believe GFA should set minimum standards for all clubs?



GFA CALENDAR

Use the Contact GFA menu at www.glidingaustralia.org to send event details to the GFA Secretariat for publishing online and in GA.

QUEENSLAND STATE GLIDING CHAMPIONSHIP

Darling Downs

24 September - 2 October 2020

Contact Bob Flood Mob: 0421 663

458 Email: bobflood@optusnet.com.au for further details.

AUSFLY 2020

Narromine NSW

8 - 10 October 2020

AusFly is a relaxed, traditional Aussie fly-in event where aircraft owners, pilots, builders, industry supporters and enthusiasts come along and soak up the true spirit of Australian general aviation. AusFly is a non-commercial event, focussed on all aviation supporters, wherever you come from, to get together and have a tonne of fun. ausfly.com.au

COACH THE COACHES

Bathurst Soaring Club NSW

12 - 15 Oct 2020

The first is a set of two 2 day "Coach the Coaches" events to be held at Bathurst from 12-13 and 14-15 October 2020 which are open to any current Instructor or coach who wishes to obtain a Silver Coach rating.

Register at this link bit.ly/31rBZJ4

MELBOURNE CUP VINTAGE GLIDER RALLY & GLIDING MUSEUM OPEN DAY

Bacchus Marsh Airport, Parwan VIC

31 October - 3 November 2020

The Melbourne Cup Vintage Glider Rally and Australian Gliding Museum Open Day will take place at Bacchus Marsh Airfield near Melbourne from 31 October to 3 November 2020.

The Australian Gliding Museum Open Day, including Lunch and the AGM, will be held on Sunday 1 November 2020. All members and friends are welcome. Contact Dave Goldsmith at 0428 450475 or daveandjenne@gmail.com

NSW COACHING WEEK

Narromine NSW

1 - 7 November 2020

For further details contact Armin Kruger

0477 945 387 kruisa@ozemail.com

NSW CHAMPIONSHIPS LAKE KEEPIT

Lake Keepit NSW

14 - 21 November 2020

For further details

Contact: Tim Carr

president@keepitsoaring.com

Website: keepitsoaring.com/

NARROMINE CUP

Narromine NSW

21 - 28 November 2020

For further details contact Arnie

Hartley on email arnie.hartley@gmail.com

com

Web narromineglidingclub.com.au/ CLUB SPORTS CLASS NATIONALS-TOCUMWAL

Tocumwal Airport NSW

12 -19 December 2020

Contact Allan Barnes 0403 948 928

F1GP

Leeton NSW

28 December 2020 - 5 January 2021

Club & Old Open Class

info@f1gp.com.au

JOEYGLIDE 2021

Leeton NSW

1 - 16 January 2021

Junior Nationals & Junior Coaching Program

Contact: admin@juniorsoaring.org

See: joeyglide.juniorsoaring.org for more information.

HORSHAM WEEK

Horsham VIC

6 - 13 February 2021

2 SEATER NATIONAL 2021

Narromine NSW

20 - 27 February 2021

The competition is specified as a single class event for both 20m 2 Seat Class gliders and Open Class which is ANY 2 Seat Glider. The competition will be run in accordance with the GFA National Competition Rules with GFA National MultiClass Handicaps.

Contact Beryl Hartley on email arnie.hartley@gmail.com for details.

BADGE DECLARATION

Click the **BADGE DECLARATION** button on glidingaustralia.org to go straight to the form. Or use this address tinyurl.com/hsp4h7p

BADGE CLAIMS ALL BADGE FLIGHTS WITH THE EXCEPTION OF HEIGHT CLAIMS MUST BE PREDECLARED AND OVERSEEN BY AN OFFICIAL OBSERVER PRIOR TO THE COMMENCEMENT OF FLIGHT. ALL BADGE FLIGHTS MUST BE FLOWN SOLO (NO PASSENGER, NO SAFETY PILOT). ALL BADGE FLIGHTS CLAIMS MUST BE SUPPORTED BY AN IGC FILE FROM THE FLIGHT.

EASY PEASY SILVER C

As or Badge flights: The pilot must be alone in the aircraft.

The pilot may not be provided with any in-flight assistance or coaching during the flight.

Find an Official Observer for your flight.

Make your flight plan and place the declaration of your flight in the logger to be carried on board. If the logger does not have the capacity for declaration, use the

declaration page on the GFA web site. tinyurl.com/hsp4h7p

Make sure you declare: Pilot name, Glider type, Task details.

Enjoy your flight – The distance must be more than 50kms straight distance from the start.

Download the IGC file from the logger in the company of the Official Observer.

Complete claim form, available on the GFA website under Sport Forms, and have it signed by the OO.

Send the file and claim form to: Beryl Hartley, PO Box 275, Narromine NSW 2821

Or, if more convenient, email the file to: arnie.hartley@gmail.com Post your green gliding certificate book.

Make the payment on the GFA web site in the shop.

Safe soaring, **BERYL HARTLEY**

FAI GLIDING BADGES TO 25 MAY 2020

A BADGE

MICHAEL O'BYRNE SUNSHINE COAST GC
GEOFFREY KEMPSTER ADELAIDE SC
CHRISTOPHER GUY SUNSHINE COAST GC
ANDREW KING BEVERLEY SC
DYLAN COSGROVE DARLING DOWNS SC
GREG BECKER SUNSHINE COAST GC
ANDREW PLUMPTON SOUTHERN CROSS GC
DOMINIQUE LONSDALE DARLING DOWNS SC
STEPHANIE DALTON DARLING DOWNS SC

B BADGE

PHILIPPE FREIDEL ALICE SPRINGS GC
DAVID BRADSHAW ADELAIDE SC
ZACHARY MCPHERSON RAAF RICHMOND GC
MICHAEL O'BYRNE SUNSHINE COAST GC
GEOFFREY KEMPSTER ADELAIDE SC
ALEXANDER FOGALE WARWICK GC
OLIVIA DOWNEY DARLING DOWNS SC



BERYL HARTLEY
FAI CERTIFICATES
OFFICER
faicertificates@glidingaustralia.org

UDAY SINGH SOUTHERN CROSS GC
CHRISTOPHER GUY SUNSHINE COAST GC
ANDREW KING BEVERLEY SC
SAMANTHA STONE DARLING DOWNS SC
GREG BECKER SUNSHINE COAST GC

C BADGE

DAVID BRADSHAW ADELAIDE SSC
PIERO VELLETRI BEVERLEY SC
MICHAEL O'BYRNE SUNSHINE COAST GC
GEOFFREY KEMPSTER ADELAIDE SC
DEAN PERRY ADELAIDE SC
ANDREW DAVEY GEELONG GC
DAVID ALLEY NARROGIN GC
CHRISTOPHER GUY SUNSHINE COAST GC
ANDREW KING BEVERLEY SC
GREG BECKER SUNSHINE COAST GC
ANDREW KING BEVERLEY SS

THE SOARING ENGINE VOL.3

Gliding is a spectacular sport that, as we all know, has many facets, can be shared among our peers, and gives us endless joy and freedom from the world below. What I love about our sport is that you can enjoy it any way you please – local soaring, joy flights with the public, aerobatics, cross-country soaring, racing or records. It's limitless and exciting.

Like G I am an avid racer. I'm always eager to learn how to go further, go faster, be more efficient and, ultimately, to win points. I enjoy my days flying more and more. After learning to fly, often you're left to your own devices on how to do this, stumbling around the sky.

Anyone who knows G would say that he has an innate ability to describe with passion, simplicity and ease everything he's learned over the years. He can help you enjoy your soaring more, pass on your own knowledge to friends and enjoy this magnificent sport more. If you are like me and you want this too, then this book among his whole series is for you!

What I love about G's three volumes, and this one is no different, is their simplicity. He's able to break down the subject in question, explain it to you in

a simple concept that really sticks. He then expands on it so that you really grasp it and, most importantly, visualise and remember it. I certainly put a lot of my recent competition success down to G's books – it all just makes sense!

While the purpose of this book is the same as the last two volumes – that is, to help you become a better soaring pilot – this book is all about high performance soaring, which really excites me, as anyone who knows me understands. No matter whether you're chasing badges, competitions or records, or cross country flying for yourself or with friends, this book aims to help you develop a sound technique that will help you pursue it.

Volume three is essentially broken into four parts which build and build as the book progresses. 'Flying' covers cross country soaring strategies, concepts and theory. 'Thinking' draws on sports psychology, human factors and decision making. 'Training' is self-explanatory, explaining how to best do it. 'Competition' tells how to reach for excellence, which of course opens so many avenues to explore to get the best out of the skies.

G tackles all these topics effortlessly,

G Dale



The Soaring Engine
volume three

which gives the reader a very strong base to work from, and then apply easily within their own flying and freely discuss with peers to maximise each day's soaring. You'll learn how to get the best out of a glider's performance characteristics, manage sporting risk, and learn about the game of skill and chance, controlling your mind.

If you want to extend your gliding knowledge, accelerate your soaring, enjoyment, speeds and satisfaction in our great sport, then this book is for you. Highly recommended!

ADAM WOOLLEY

JOHN WILLIAMSON

FIRST PUBLISHED AND IN SAILPLANE & GLIDING (UK)

**JOHN SHAPCOTE WILLIAMSON (JOHN WILLIE) 29 OCTOBER
1928 - 3 JUNE 2020**



I had the pleasure of meeting John Williamson at Benalla where he was resident in the early 1990s. He helped me achieve my first 300km and introduced me to the JSW Calculator which I used on every flight into the 2000s long after I purchased my first Garmin GPS - to check that the Garmin was giving me accurate data.

John was a gentleman and great glider pilot and I am sure many Australian pilots remember him well. SEAN YOUNG

Gliding recently lost another of its legends with the death of 'John Willie', inventor of the John Willie Calculator and mentor to many young glider pilots.

John's father was the novelist Henry Williamson, whose experience in the trenches of WW1 made him a dedicated pacifist. This did not deter John from joining the RAF in 1947 and training as a radio fitter. He started gliding in 1948 at Wahn (near Cologne, Germany) using the solo training system on a primary glider - low hops, graduating to high hops and finally circuits. It was some years before he flew a two-seater. Returning to the UK with a Silver C flown in a Grunau Baby, John was posted to Farnborough. He continued gliding at Lasham, flying his first competition in the 1953 Nationals, part of a team entry in a Prefect.

He went on to gain Gold and Diamond heights flying a Weihe in a Cu Nim over Basingstoke, self-taught in cloud flying. John completed his Gold and Diamond goal, also in the Weihe, flying over the Welsh valleys to St Davids. He said if his geography had been better, he might have chosen a different task as his maps didn't show hills. John became an instructor at Lasham, and one of his students was a pretty, young Swedish visitor, Böel.

In 1958 the RAF hinted to John that helping run an RAFGSA club would mean availability of a competitive glider for the nationals. Posted to Yatesbury, he became CFI of the Moonrakers Club at Upavon. For the next few years John encouraged dozens of trainees from Yatesbury and Compton Bassett to take up gliding, a number of whom continued to become competition pilots. His energy and enthusiasm to take expeditions in the winter months to ridges at Huish, Roundway and Westbury, cloud flying training when the cloudbase was below 800ft by winching into cloud, and trailer reversing races when the weather was completely unflyable - all stick in the memory of those who experienced those days.

John's energy included the design of a circular calculator for final glides that allowed for wind and thermal strength. The John Willie Calculator became an essential piece of every UK soaring pilot's kit until it was eventually superseded by electronic aids.

In 1959 John flew the Olympia 401 to 7th place in the nationals. All the pilots who placed higher -- and most placed below -- were flying gliders with at least three metres more wingspan. As a reserve pilot and radio expert for the British Team at the 1960 Worlds in Germany, he met Böel again, as they had kept up a correspondence, and that winter they married in Sweden.

FROM PETER PURDIE, LASHAM GS
CHAMPION

In 1961, John flew the RAFGSA's Olympia 419 in the nationals. In spite of his crew chief rolling the trailer the week before, from which the 419 escaped unscathed, John won the first day and remained in the lead throughout to become national champion. The tasks included a series of flights into Devon and Cornwall, with long night retrieves. While still in bed after one such retrieve, he was summoned to be presented to the Duke of Edinburgh. He and Böel quickly put on flying suits over their pyjamas to meet Prince Philip. A few weeks later John broke the out-and-return record, and in August flew north across the Scottish border to complete the first Diamond badge flown entirely in the UK.

At this time he had the rank of sergeant. His abilities were acknowledged by being commissioned as a pilot officer and posted to RAF Locking (Weston-super-Mare), where he founded another RAFGSA club. John then broke three UK records and became a member of the British Gliding Team, flying a Skylark 4 at the world championships in Argentina in 1963. He recounted his frustration at watching the Polish Zefirs cruise past 10kts faster yet getting higher in the sky, but he still finished in 7th place.

In 1965 in the UK, John flew an Olympia 419, outclassed by the D-36 and SHK of the German team, and finished 6th. In 1968 in Poland, he flew a Dart 15W when most other pilots were now flying glass gliders. The canopy on his factory-modified Dart distorted the forward view so much that a crew member had to drive

ahead, spotting the otherwise invisible gaggles and reporting on the weather. The result was inevitably John's lowest placing in a Worlds. He did win the 1970 Sports Class/Standard Nationals, and his final team appearance was in Australia in 1974, where he developed an affection for the country and its gliding opportunities, to which he returned later.

On leaving the RAF as a flight lieutenant, John became a BGA National Coach, running instructor courses and cross-country training the Junior Squad, which developed into the Junior movement. In the 1980s, one would often encounter a gaggle of young pilots that John was leading. A radio call of "I'm getting low" was likely to get the reply "OK, I'll come up and join you!"

On handing over the soaring coach role to Chris Rollings, John emigrated to Australia to run the club at Benalla, where he broke a few records and, more importantly, welcomed many Poms and other nationalities to the pleasures of flying in Australia.

John was a consummate soaring pilot and communicator. When he started competition flying, the top pilots were very reticent to share their experience. John was the opposite, and eager to pass on his knowledge to others. If one of his former pupils beat him in a competition he regarded it a success, not a failure.

FROM MIKE YOUNG, BRITISH TEAM MEMBER

I was part of the Junior Squad training in 1984, coached by JW and flying alongside the regionals. He was a gliding legend by this time and it would have been easy for him to intimidate a young 18-year-old with just 200 hours' experience. John had a rare skill of quickly putting you at your ease, freely sharing his knowledge and never patronising. I recall a 300km lead and follow with John flying the BGA ASW 19 and me following in a Ventus B. On several occasions he airbraked down to help me quickly find the core of a thermal. His enthusiasm and encouragement, particularly towards young pilots, was notable in an era when gliding appeared to be wrapped up in mysticism.

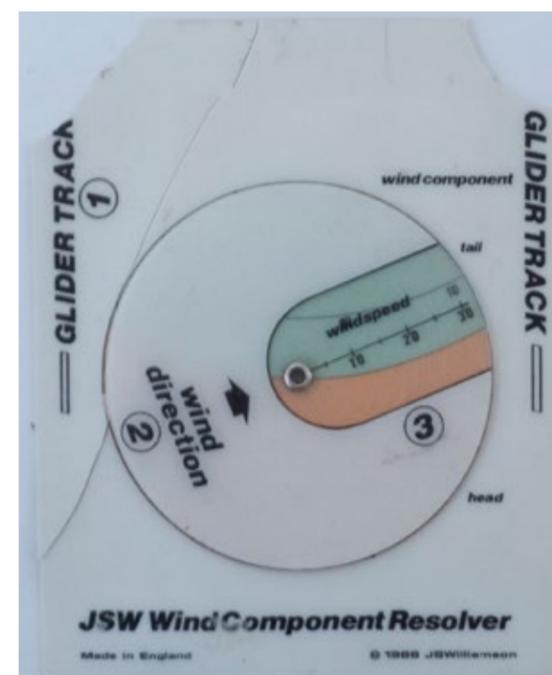
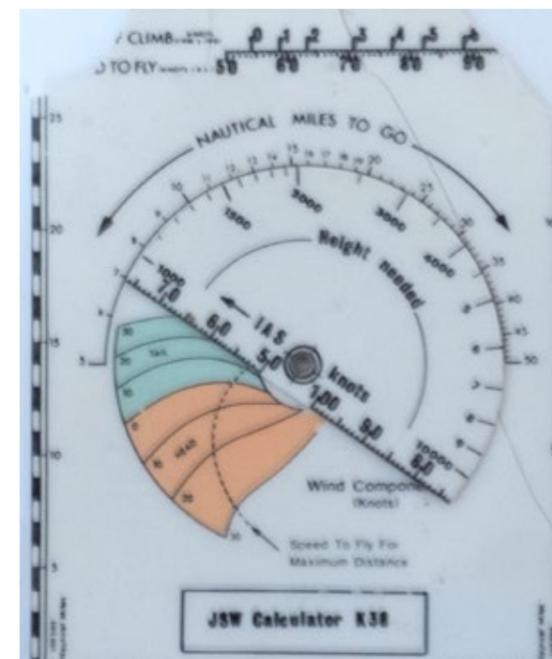
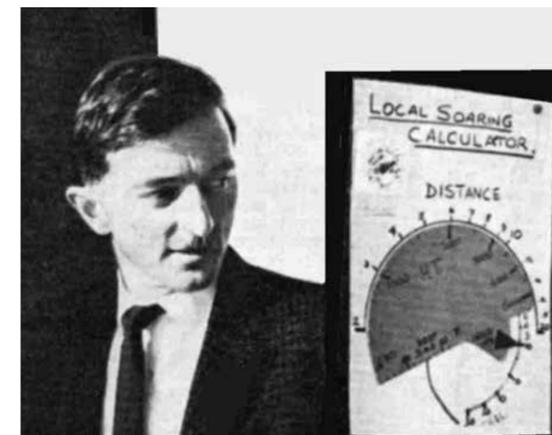
FROM G DALE, BRITISH TEAM MEMBER

I first met JSW (callsign Magpie) when at a BGA soaring course as a retrieve crew. It was a great programme that opened my eyes to gliding sport, and JSW was just brilliant. I immediately became a serial consumer of BGA cross-country courses, absorbing all the lectures and, of course, the great stories.

John would stand at the blackboard at the start of the course and list the stories he could tell during the week - 'cream teas', 'the day I crashed twice' and so on. I remember him standing on a desk with his head up against the ceiling to show us how you couldn't see the route ahead from cloudbase. Pip, his faithful collie, watched from underneath the desk, having seen it all before. I was lucky enough to pass through John's hands right at the beginning of my time in gliding and he made a massive difference to my life. He taught me to soar, taught me to instruct, and inspired me to follow his example and to become a gliding coach.

Maybe two or three times in a life, you come across someone who helps you up, who changes your world. John made a huge difference to many, many people. Thanks, Magpie, we'll miss you.

GA



LEFT: My much used JSW Calculator was an invaluable final glide calculator before the advent of GPS and electronic navigation aids.

Like many pilots, I have internalised the basic calculations and, to this day, use the rule of thumb wind components distance and speed to fly to mentally confirm what my expensive new flight computers are telling me. SY

WINTER SOARING AROUND THE NATION

Despite the difficult times, this winter saw flying and training continue around the country adhering to COVID-19 safety guidelines. Congratulations to all the pilots who achieved their first solo and other training milestones during the winter.

We are all set for a great soaring season to come - with health and safety the top priority.



NT Soaring at Alice Springs were fortunate that restrictions were lifted early. Sam McKay flew his first solo in mid May.



Congratulations to Peter Herrmann on going solo in June at Leeton. The Gliding Club of Victoria was closed, but Mark Bland organised for them to do the training at Leeton instead.



Craig Challen received his gliding wings after going solo in only nine flights, with instructor Rob Duffy on the left and CFI Sid Dewey on the right.



Two happy pilots on the weekend with their B certificates and first mutual flight together at Darling Downs in early August.



Congratulations to Alex for converting to his first single seater at Adelaide University Gliding Club.



Sixteen year old Liam flew his first solo flight at Central Coast Soaring Club, Mangrove Mountain NSW in early August.

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Articles should be between 450 and 1000 words. If preferred, your identity will be kept confidential. If you have video footage, feel free to submit this with your close call.

Please do not submit articles regarding events that are the subject of a current official investigation. Submissions may be edited for clarity, length and reader focus.

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Charles A. Spatzberg

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IS PILOT INSECURITY A PROBLEM AT YOUR CLUB?

ANTHONY SMITH
 Chair Airworthiness Department
 cmd@glidingaustralia.org

It is not uncommon for people to feel insecure during unpredictable events or crisis such as COVID-19. But a pilot or passenger feeling insecure in the cockpit is particularly dangerous – especially during unpredictable events like turbulence. Two incidents have been reported this year involving harnesses failing to stay secure under load.

INCIDENT 1



A pilot in a single seat aircraft encountered turbulence while returning to the airfield on a high speed final glide. The left hand lap-strap of the harness came loose and the pilot struck his head on the canopy. The pilot was unable to retighten the lap strap despite a number of attempts. The pilot reduced speed to minimise the effect of the turbulence and landed safely.

After the flight, the harness was examined by an annual inspector who identified the thin wire spring tensioner in the adjuster mechanism that supplies tension to the buckle cross bar was dislodged,

allowing the webbing to move freely within the buckle (see photos below), and was unable to maintain tension.

The inspector removed the buckle end strap from the adjuster, and the spring was removed and inspected for damage. No damage was found and the spring was securely refitted. The inspector noted the spring is a firm fit and worked as intended. The reason why the spring came loose could not be identified. However, it is believed the failure was likely to have occurred before the Daily Inspection was conducted.

INCIDENT 2

During a Daily Inspection on a club two seat training aircraft it was discovered that the rear seat left hand lap strap would disengage from the rotary buckle under applied load. After demonstrating that the problem was

repeatable and confined to the one harness, the rear seat harness was removed and the aircraft used for solo flying only.

Investigation afterwards revealed that both the front and rear harness had been incorrectly assembled after a recent Annual Inspection. At the end of the Inspection, a shoulder strap from the front seat had been fitted to the lap strap of the rear seat and vice versa as shown in the photos below.

On closer examination, it was noticed the shoulder strap fittings are a different shape and part number to the lap strap fittings. The shoulder strap fitting will not successfully engage the buckle if used in the lap strap location. Note that the harness manufacturer's manual specifically states a WARNING relating to the positioning requirements.

While it wasn't immediately obvious on the rear harness, as all the fittings looked the same, it should have been immediately obvious on the front seat harness as there was clearly a mismatched fitting. Of concern is the fact that the aircraft had been returned to service two weeks earlier, had dual Daily Inspection checks on the first day and had several Daily Inspections afterwards before the fault was discovered.

This reinforces the need to ensure harnesses are properly inspected as part of the Daily Inspection process. Daily inspectors should look particularly for:

- Safe attachment of the harness to the glider airframe
- The condition of the harness webbing (eg abrasions, wear, damage, pulled or loose stitching)
- The ability of the buckles to secure the webbing
- The correct operation of the fasten/release mechanism
- The ability of the harness to hold an applied load

The harness must be able to perform its function of securing the pilot in flight against turbulence and manoeuvring or aerobatic loads, and protecting the pilot against deceleration and sliding underneath the harness in the event of a crash. If a Daily Inspector believes that anything might detract from the ability of a harness to perform these functions, the glider should not be flown.

How secure are you feeling in the cockpit?



Front harness configuration

Rear harness configuration

WORLD LAUNCH RATE RECORD CLAIMED BY ETUG

Robert Pugh (GCV, Benalla) is claiming an Australian – and probably a world – record launch rate for a Piper Pawnee PA25, the workhorse tow plane of the Australian gliding movement.

Robert has videoed a launch of an ASK-21, two-up, at Gliding Club of Victoria, to 2,100ft and return to the ground in three minutes. Robert reported conditions were perfectly still, no thermal assistance, with the temperature a cool 13° C.

His video is one of many informative files on a new website www.etug.com.au, giving evidence of the extraordinary performance of VH-PIJ, the latest iteration of the eTug project.

Robert said, "Alongside eTug's huge cost savings, this flight perfectly demonstrates the value of the project to Australian gliding – the opportunity for clubs both to offer low-priced flights to expand memberships and to strengthen club finances, considerably reducing training costs. It also makes winch-launching irrelevant, a waste of club resources and members' time."

The website outlines the history of the development of eTug and contains details of the cost savings available to clubs operating the conversion.

eTug can reliably perform at least twice the tows per hour of a Lycoming-engined Pawnee or equivalent tug, and at hugely lower costs. Compared with an avgas-burning Lycoming PA-25, eTug's cost per launch is 87% lower. Clubs can use these large savings to either add to their bottom lines, reduce launch costs for members, or a useful combination of both. The capacity of eTug to lower costs for the gliding movement is clear.

For those clubs dominated by Lycoming aficionados, this proof of superior performance will probably be dismissed. Nevertheless, the reality in

glider towing is that Lycoming/Continental engines are asked to do something that they were just not designed to do.

You could adopt the eTug descent profile – engine at idle and 2,500 fpm descent rate – using a Lycoming engine, but it wouldn't last very long. Shock cooling – or more accurately, cooling damage over time – is a very real condition when Lycoming engines tow gliders. They were designed to climb, then cruise at a reduced rate of revs, and then gradually descend.

Towing gliders is a totally different environment. Glider towing needs an aircraft to climb rapidly, not cruise at all, and then descend as rapidly as possible to get back on the ground for the next tow. The Lycoming engine descent profile that is most often used does take care of the engines, but takes a much much longer time per tow. To achieve a 4,000ft AGL tow in a Lycoming engine fitted to a PA-25 Piper Pawnee towing a 2-seat glider takes between 10 and 13 minutes, depending on thermal assistance.

The eTug VH-PIJ, running the eTug conversion with a GM LS3 V8 engine installed to eTug specs, can perform that launch of an ASK-21 with two adults on board in 7 to 8 minutes, in the middle of winter – every time. www.etug.com.au gives you a pilot's-eye-view of a 2,000ft AGL launch and a 4,000ft AGL launch. These launches were performed at Benalla on 25 July 2020. The video also shows the pilot flight sheet, noting seven tows for the day with none exceeding 8 minutes.

Cost reductions are achieved not just on the field while towing. A recent (2019) re-build – with the engine out, completely stripped and worn-out parts replaced – of the LS1 engine in eTug VH-CUR was completed for under \$12,000 – not just the engine re-build costs, but the cost of the engine OUT by a LAME, and re-installed by a LAME, and running.

As for the launch rate record, it most likely won't get into the Guinness Book of Records, but it does demonstrate eTug's ability to launch 15 gliders per hour in a real-world situation, repeatedly and reliably. This rate has been achieved on many days at Benalla over the past few years with eTugs.

More eTug details at www.etug.com.au

MICHAEL SHIRLEY
THE ETUG GROUP

Item - Cost per launch	PA-25	eTug	eTug % Saving
Launches per hour	7.5	15	
Launches per 2,000 hours	15000	30,000	100.00%
Fuel			
Avgas 72l/hr @ \$2.40	\$23.04		
Vortex 95 49l/hr @ \$1.05*		\$3.43	
Fuel cost per launch	\$23.04	\$3.43	-85.11%
Maintenance (Engine only)			
Top overhaul	\$20,000.00		
Rebuild	\$70,000.00		
Engine overhaul		\$8,000.00	
Maintenance Total	\$90,000.00	\$8,000.00	-91.11%
Maintenance cost per launch	\$6.00	\$0.27	-95.56%
Total cost per launch	\$29.04	\$3.70	-87.27%

*incl Road Tax rebate

COME AND GET ME!

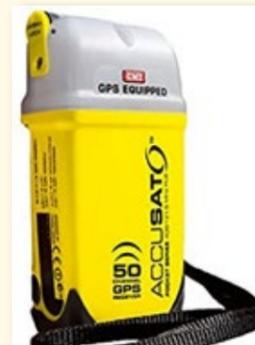
As we come into the spring and summer soaring season, it is once again time to prepare for the possibility of landing out while flying cross country.

No matter where you fly from, you could easily find yourself in a remote area in intense heat and fading light, out of radio and telephone contact with no inhabited farms within walking distance. If you add to that the possibility that you may be concussed or injured, then you maybe in a very critical situation.

For decades, pilots have juggled these risks and fortunately very few critical situations have ended badly. But in any club you will hear stories from glider pilots of amazing good fortune resulting in lucky retrieves. Since the development of GPS and satellite telephony services, we need no longer take such risks.

406 BEACON

Many pilots consider a 406 Beacon to be an essential safety item for cross country pilots, properly registered with www.beacons.amsa.gov.au. There is no charge for registration. This will ensure that the rescue authorities will not need any third party to inform them that you are in an emergency. Once you push the SOS button, they will be on the way. There are many small Personal 406 beacons. Popular ones can be bought at boating supply stores.



INREACH

InReach uses the Iridium satellite network and provides you with two-way messaging communication as well as emergency, position and pre-set retrieve messages. The advantage over SPOT is that you can receive messages so that you will know that your retrieve message got through. It will also enable you to coordinate with your crew so you can remind them to stop at the servo on the way and bring you a cold drink.

Evaluate the systems available, but be sure to select at least

one. Not only will it make cross country soaring much safer for you, it will also make it more convenient and enjoyable as you will not be left wondering if anyone is coming to get you.



SPOT

SPOT has been used for the last decade to send outlanding and emergency messages. Many pilots report that the system works well. Club members and family can keep track of your location on a web page. If the glider stops

moving, they can see where you are, even if you are unable to press the button and send a message.



SATELLITE TELEPHONE

A satellite phone using the Iridium satellite system enables you to voice call anyone including your club, crew or emergency services no matter where you are. This is

the most expensive option, but some pilots say it is the best for retrieves as you have full voice and text communication. Many types of units are for sale or rent, and you can buy a connection package and only use it in the main gliding season.



MESSAGING SERVICES

Many pilots are now using phone messaging services including tracking services such as WhatsApp, TrackMe and similar apps. Be sure you know their coverage and availability in remote areas before you rely on them.

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JONKER SAILPLANES	SA	MARISKA NORTJE	+27 82 879 8977	mariska.nortje@js1.co.za
KEEPIT GLIDER TECH	LAKE KEEPIT	GRANT NELSON	0417 843 444	keepitglider@outlook.com
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MADDOG COMPOSITES	IPSWICH	ANDREW MADDOCKS	07 3143 3131	andrew@maddogcomposites.com.au
MORGY'S GLIDER WORKS P	WAIKERIE	MARK MORGAN	0427 860 992	morgans@sctelco.net.au
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ULTIMATE AERO P/L	BOONAH	NIGEL ARNOT	0437 767 800	nigel@ultimateaero.com.au

Test Instruments: Conrod Bearing Clearance Tester (CGT) required for 50 hour maintenance of 2 stroke engines

John Amor jbamor@optusnet.com.au 0408 178 719 03 9849 1997. Bert Flood Imports david@bertfloodimports.com.au 03 9735 5655





GLoucester Glide

BY PATRICK BARFIELD



landing practice on the narrow, 2,000ft grass strip. Michael Vince did a great job of organising and running the camp, Bob Wilson supplied the trusty Cessna 180 towplane and refuelling facility and, as always, the camp was warmly hosted by Chris Maslin and the Gloucester Aero Club. The fabulous conditions, friendly flying and the chance to meet new people from other gliding clubs will probably lead to increasing popularity in coming years.

The camp is a reminder that taking gliders away from home base is a great way to improve interest levels and keep the fun in flying. Don't wait until the Club's Christmas camp to go somewhere. Try organising smaller groups for short trips several times throughout the year, even in winter, and see the positive impact on glider pilot retention.



The annual gliding camp at Gloucester has been organised by the Central Coast Soaring Club for nearly 40 years. The airstrip is on a working dairy farm at the base of a north-south ridge, rising roughly 1,000ft above the valley floor, guaranteeing ridge lift in a decent westerly breeze.

Thirty-eight pilots from clubs around NSW were treated to some great soaring weather at Gloucester. Opposite you can see morning briefing in the age of COVID.

Gloucester NSW is on the eastern side of the Barrington Tops, which generate wave conditions in a strong westerly wind. This year we experienced ridge, thermal and wave lift, sometimes on a single flight. With the advances in weather forecast accuracy using SkySight, gliders are encountering wave and convergence lift more frequently using self-launching gliders or high aerotows.

This year, 12 gliders participated, including the ES-56 Nymph Mark1, also the most unusual and oldest, Slingsby Dart 17, Valentin Taifun touring motorglider, DG1001C, DG1001M, Duo Discus, Mosquito, PW6, Puchatek, Astir, Jantar and Pilatus B4.

Even though the numbers were restricted due to the COVID-19 management plan, 38 pilots from Central Coast Soaring Club, Hunter Valley Gliding Club, RAAF Richmond Gliding Club, Southern Cross Gliding Club, Bathurst Soaring Club, Narromine Gliding Club and Lake Keepit Soaring Club flew during the 9-day camp.

For the records, all nine days were flyable, resulting in 145 flights for a total of 199 hours. The longest duration was 5 hours 54 minutes, flown by Andrew Dickson in the Dart and the highest flight was 6kts lift to FL180 (airspace limit) in primary wave 20nm west of Gloucester by Paul Tridgell and Chris Madden in the DG1001M.

Fortuitously, Bill Bartlett had negotiated with the RAAF well in advance to hold the camp between 15 and 23 August because the week prior, which are the usual dates for the event, would have been a washout. Instead, we were treated to a consistent 10-30kt westerly wind all week and had constant access to a box of airspace, even though the surrounding RAAF Restricted Area was active for most of the week. Also, the runway's north-south orientation made for good crosswind takeoff and



WAVE 18K, THERMAL AND RIDGE YOU GET IT ALL AT GLOUCESTER

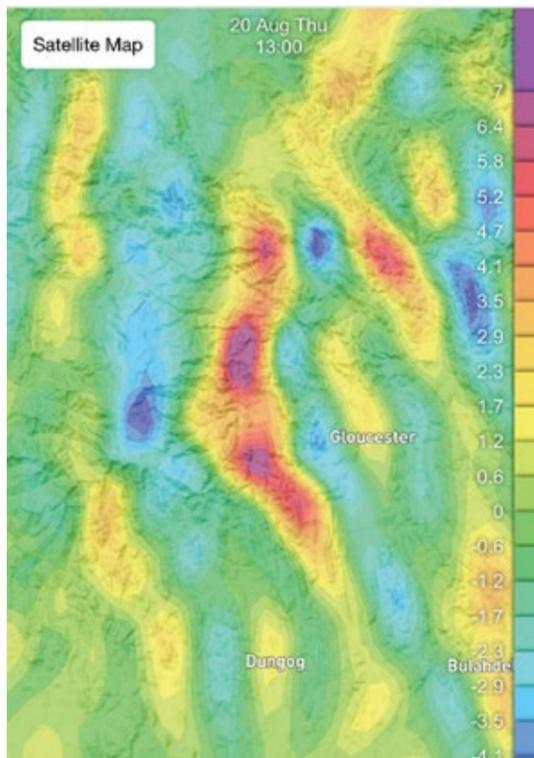
BY PAUL TRIDGELL
RAAF RICHMOND
GLIDING CLUB



ABOVE: The view starting descent from 18,000ft.

Central Coast Gliding Club organised a fantastic camp from 15 to 23 August, thanks especially to the efforts of Michael Vince and Mike Wooley. This camp had it all, great company, stunning views and on many of the days you could enjoy a bit of ridge, thermal and wave soaring. Chris Madden

LEFT: SkySight showing wave on Thursday was still strong at FL180.



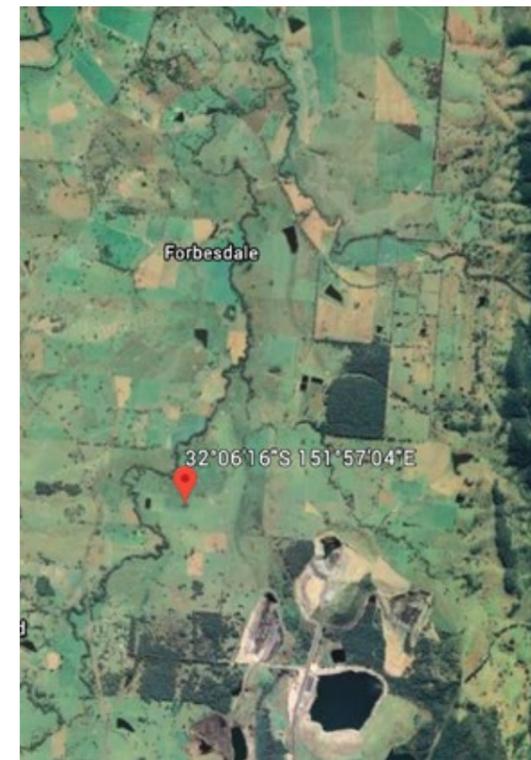
and I took my DG 1001M IXZ up for four days during the eight-day camp.

The aero club strip is located on a working dairy with a single grass runway 17/35. We certainly had a good look and walked the length of a 550m alternative landing paddock should the westerly cross wind become a significant issue. Briefing was at 9.30 after a COVID temperature check and sign-in enabled a relaxed start to the day. Williamtown Airbase gives airways clearance for a box surface to 10,000ft for gliding operations for the period when the military airspace R583A becomes active. This is ample space for the 15 gliders and once you are above 10,000ft there is no restriction till FL180 class A.

WAVE

We encountered wave on Monday 17 August and also on the Wednesday and Thursday. On the Monday and Thursday wave was picked up in the South West corner of the box (32° 06' 16S 151° 57' 04E) just where there is a little triangle in the Avon river. The wave started at about 7,000-8,000ft. Sky Sight had predicted stronger wave about 20 miles (37km) west and this site was working on both the Wednesday and Thursday. Pat Barfield explored it the following day and also found 5-6kts in this location that enabled a soaring climb in the Taifun.

On the Thursday flight, we wanted to try to the west again but started at the SW corner in the box and picked up a climb in wave to 13,500ft. We did two pushes west each using about 4-5,000ft of height into sink and a strong westerly wind of 30-40kts. We found wave at almost exactly 10 NM



and 20 NM west. It was a fast trip up with climb rates of 3-6m/sec, with the strongest climb at about 37km west and the band of lift easy to stay in. The wind at FL180 was 37kts at 255 degrees.

AIR TRAFFIC CONTROL

IXZ has a Trig TT22 class 1 Mode S transponder with ADSB out and also a dual scan radio to enable ATC to see us and to monitor radio frequencies. At FL130 there is a frequency change. IXZ also has two dual Mountain High oxygen systems for



redundancy. Brisbane Centre kept us informed of regular IFR traffic being directed clear of our location.

Evening entertainment included a 'Pizza and Astronomy' night, two tables at the local Thai restaurant and a campfire to stand round and chat. You will sleep better if you come with a good set of tie downs for your glider. A ground coffee machine was also always available.

Thanks again to Central Coast Gliding Club. Since returning home I am getting into building our new tug, a 4-seat Bearhawk – with an engine of about 280 Hp 540 with CSU, uses 98 fuel – that we hope will be flying by December. Perhaps we'll write an article on this once we assess its performance.

GA



RIGHT: Initial pick up location – SW corner of 'The Box'

ABOVE: 18,000ft on the altimeter

GLIDER FLYING IN MT GAMBIER BY RON AUSTIN



In 1948, while living in Mt Gambier, I became aware of a group that was building a glider to fly. Enquiries lead me to a chap named Frank Swartz. He worked in the town as a motor mechanic and explained the flying idea to me.

Those interested met on a Thursday night in a domestic garage located on Commercial Street at the western end of town. The glider they had chosen was a Grunau Baby designed in Germany during the 1930s. Plans had been obtained and when I joined, considerable progress had already been made constructing the various components to enable the full sized glider to be assembled.

I joined in the task of framing ribs for the wing.

All the timber used was light and costly, and everything used had to be manufactured by the team. Steel brackets and cable runs were all part of the build. Eventually it was completed and we rigged it outside the garage

For transport, the wings were designed to be attached at the gliding site. Arrangements had been made to use a truck with relatively high sides to transport us 10km north of the town to the Aerodrome. The surrounding farms had adequate large paddocks to land out, if necessary, and since the airstrip at the airport was used only occasionally for passenger DC3s, it was usually clear of any traffic.

The intention, after rigging, was to tow the glider into wind on a long cable behind a motor car to get it into the air.

Several members of the group had been pilots in the recent war three years earlier. They intended to fly the glider first, planning to teach the rest of us later in the program. There was at least one Spitfire pilot among us, Charlie Miller from the bakery on Bertha Street.

Many Sundays were spent and false starts to fly were made till we eventually broke something, and then it went back on the truck to return to the garage for repairs.

The more industrious among us built a winch on a trailer, which could be used with a very long cable to haul the craft to circuit height. Our Sunday adventures continued, following a standard pattern. Fly, break and repair.



When the aircraft is pulled by the winch, it climbs at a very steep angle. When it reaches the required altitude, the cable is released by the pilot, who then makes a turn downwind and a subsequent landing. This sounds simple but it entailed hours of work. Not being involved in the operational side we 'worker' members retrieved the cable, rewound it onto the drum, pushed the glider in place for the next launch and generally

ran around as directed. The inevitable happened. One of the pilots lost airspeed in his turn and the glider stalled and crashed. The breaking of the wooden fuselage absorbed the shock and the pilot was not injured. The glider looked a write-off but, after loading the pieces into the truck, we returned to our garage and attempted to rebuild it. At the time, we were disappointed that the chap who crashed it did not return to assist the repair.

The bulders made a decision, in an endeavour to minimise the work, to dispense with the streamlined body and rebuild it as a simple primary glider. This design of glider only has a main keel, a structure to hold the wing and a seat for the pilot, who needed goggles and warm clothes. The launching, flying and landing continued in a satisfactory manner for some weeks. Our intentions of learning to fly looked dismal, so one of the more practiced pilots offered to take each of us up for a circuit of the field.

My turn came. You stood on the narrow keel with your feet positioned across the beam, crouched behind the pilot holding tight to the wing support posts and, with a wave to the winch man, the glider accelerated.

I found the rate and attitude of the initial climb very steep and alarming, levelling out at circuit height. I just gained a view of the airport surrounds, when we began lining up to land close to the winch.

A rather hairy operation - no safety monitoring by Government officers or Health and Safety officials. Eventually the project came to an inevitable end and the glider became a memory.

GA



GREAT WORKS AT LASHAM!



BY ANDREW JARVIS

Gliding sites in Britain come in all shapes and sizes, mostly rather small – and then there’s Lasham, which is on a totally different scale from anywhere else. Lasham Gliding Society is an amalgamation of about six clubs operating on a large WW2 aerodrome, which was once home to many squadrons of Mosquitoes and Typhoons and so on.

Today, an active airliner maintenance operation, which somehow co-exists with the intense gliding, means the main runway is kept in perfect condition. Even entering the site is a little daunting – you have to speak the right words into a grey device resembling a filing cabinet at the checkpoint, and hopefully the

striped pole will go up for you.

When I arrived on Sunday 2 August, I thought at first that a competition must be in progress – several million pounds worth of sleek white ships were already lined up on the launch grid on the runway. Apparently, this was just a normal Lasham Sunday. There also seemed to be far more gliders than pilots, but that’s because the briefings are now done online.

AIRSPACE GRAB

As you might have heard, Lasham Gliding Society has recently been dealt a very harsh blow, in fact, a ‘double-whammy’, by the imposition of an outrageous

airspace grab – a private-jet superhighway. This now goes right down to ground level, just a mile or so east of the airfield boundary, so the almost empty business jets can cruise in to Farnborough in comfort.

Yes, that same Farnborough, once the very cradle of British aviation, and which later saw the greatest airshows on Earth, is now just a sort of garage for billionaire’s air taxis. The double whammy was that Lasham’s management felt they had to fight their legal corner at a Judicial Review, which, some would say, was inevitably lost, at enormous cost.

This airspace grab has had huge consequences for everyday flying at Lasham, and especially so for vintage gliding. From now on, every glider, except possibly the Slingsby Grasshopper that is considered incapable of leaving the circuit, must carry three electronic items – a radio, a transponder/Flarm device and a moving-map GPS device. Amazingly, the latter two have been cleverly grafted together and minimised in cost by Julian Ben-David, Gliding Heritage Centre Treasurer, so the resulting unit will cost under £50 while still meeting the statutory requirements of the CAA.

BUILDING PROGRAMME

On arrival, I drove round the perimeter track to the remarkable ‘club-within-a-club’, which is the GHC or Gliding Heritage Centre. Let me briefly update you about the GHC building programme. First, there was just one GHC hangar, which itself was a great achievement. This hangar was opened at the VGC International Rally in August 2013. It was immediately overflowing, so an identical second hangar was started, which was opened in 2018.

Now, the third hangar is going up, which will be a top-class workshop. There is an article on it in the current issue of VGC News, Number 159. The work and progress is amazing to behold. I have to single out Gary Pullen as the human dynamo, driving on a loyal band of workers, while putting in countless hours of toil himself.

After I had lifted a token few building blocks, we got out some gliders. Only a few people wanted to fly, so we just rolled out the GHC’s beautiful Skylark 2, and two T21s. The weather was almost vintage, with a light westerly breeze, a fair amount of sunshine and a cloud



base of around 3,500ft (QFE) – Lasham, uniquely in Southern England, is over 600ft above sea level.

DISTINGUISHED VISITOR

Once the great white fleet had all departed, we almost had the field to ourselves. The huge local membership were still staying away in droves, for such is the hold that this virus still has on people. At one stage, only the CFI Colin Watt and myself were at the launch point.

During the day, a very distinguished visitor arrived and was delicately eased into a T21 – none other than VGC founder member Geoff Moore, also long time membership secretary. Geoff has made huge financial contributions to the GHC building programme. In fact, without him, the second hangar would have no floor.

Just a couple of background points. People inevitably confused the VGC with the GHC. They are quite separate entities, overlapping like a sort of Venn Diagram, but we will become more intertwined soon. Due to a generous legacy, the VGC has just enough funds to refurbish a WW2 building on the Lasham site. This will become the new VGC Archive Centre, not to be confused with the GHC Archive, under the expert care of David Williams. I’ll be delighted to update you when this exciting project is more advanced.

FLYING INTO THE FUTURE

Lastly, in view of the new, invisible ‘scareway’ on the very doorstep of the world’s busiest gliding site, will we ever again hold a major VGC event at Lasham? Perhaps it’s too early to say, but I have been wondering about the 2023 Rendezvous, with an emphasis on two-seaters. Then each glider could have a pilot and an Air Electronics Officer or AEO, as they had on the RAF’s V-bombers. Well, it’s just a thought.

So, those who came to Lasham on Sunday 2 August enjoyed a very fulfilling day. One always goes away knowing that the future of the Gliding Heritage Centre, with its unique collection of flyable historic gliders, is secure in the hands of the indomitable GHC team.

OPPOSITE TOP: Simon Guttman pulls off another smooth landing in his T21.

OPPOSITE BOTTOM: Great to see two T21s at the launchpoint.

ABOVE: Andrew in the GHC Skylark 2.

BELOW: The new workshop under construction.



WINNING THE MENTAL BATTLE

PART 2

BY BERNARD ECKEY

In the last issue, we looked into positive thinking and the importance of focussing on the task at hand. This time we will deal with two other vital mental skills. First, we will put 'thinking ahead' under the microscope, and afterwards we will learn how to turn setbacks into something positive.

THINKING AHEAD

When we learned to fly, our instructors undoubtedly told us to expect the unexpected – another aircraft appearing out of the blue, changing weather conditions or a tailwind springing up on short final. After we became solo pilots, and especially after having attained an advanced level, we were no longer dependent on instructors. Success in a complex sport like ours depends entirely on whether we master the art of teaching ourselves.

One of the first lessons newcomers often learn the hard way is to consider the next stage of the flight well in advance, and think of the next decision(s) in good time. Particularly while flying cross-country, it prevents decision making overload situations and this holds true especially when difficult circumstances arise.

Thinking ahead not only avoids getting into tricky situations in the first place but it is also absolutely essential for safe and successful soaring. The sooner we start thinking about the next decision, the better our chances of getting it right. Put differently, staying mentally one step ahead frequently makes the difference between success and failure.

It is not without reason that coaches often proclaim, "Never let your glider take you to a place your brain hasn't been to a few minutes earlier."

IMPROVING YOUR CHANCES

Let's consider the typical example of climbing nicely under a big cumulus and rapidly nearing cloudbase. Now we have only seconds before we must leave the thermal, which gives us very little time to decide on an optimum strategy for the next section of the flight. Our procrastination has deprived us of the opportunity to make a calculated and well-considered choice on the options available to us.

If, on the other hand, we start our decision making process well before we reach cloudbase, we are much better off. We can pick the most promising cloud on track, which greatly improves our chance of finding the next strong thermal without delay. Further, we can take into account matters relating to meteorological navigation and thus make the optimum track across the ground.

We could elaborate on this topic with countless other examples but I'm sure you get my point. Decisions have to be made sooner or later whether we like it or not, so why not make them without haste and in good time? Not very many rushed ad

hoc decisions are likely to be good ones, just as split-second decisions are unlikely to be perfect. Finally, not making a decision is the worst decision we can ever make!

DEALING WITH MISTAKES AND SETBACKS

To be human is to make mistakes, and gaining experience without making a few along the way in our flying career is impossible. Taking off with the wrong trim setting, switches in the wrong position, or an incorrectly selected radio frequency are just a few examples of mistakes on the ground. They happen to anyone but should also be motivation for improving our performance and for learning from such blunders. Being annoyed about our mistakes is understandable, but what follows is what really matters.

Because the aviation community has learned to build redundancy into virtually every procedure, minor mistakes hardly ever lead to an accident, but that doesn't mean that we can ignore them. On the contrary, they should be reason for a critical self-evaluation and for a review of practices. Only then can we avoid future repetition. Recognising a mistake and being receptive to a critical assessment from our peers is a vital step towards less error-prone aviation activities. But learning from the mistakes of others is equally important.

A past culture of blaming the pilot after a mishap is changing to a frank assessment of the causes of an incident or accident. The aviation world has long recognised that it is never a single event that results in a mishap but a series of relatively minor and seemingly insignificant occurrences. Only when pilots can be sure there are no repercussions can we expect a frank and open sharing of information that prevents others from falling into the same trap.

AUTOMATIC VS CONSCIOUS BEHAVIOUR

Making a mistake for the first time is highly educational for most of us but we occasionally meet pilots who repeat the same mistakes time and again. As a longstanding instructor and coach, I have seen this too often. Why do we revert to the same wrong actions even though we have resolved never to repeat the same mistake again? Why is it so difficult to keep to one's resolve and why is it so hard to change old habits, behaviour and conduct? The answer lies in behavioural patterns deeply embedded in our brain.

Without conscious input on our part, previously acquired behaviour is automatically selected if the brain judges it appropriate for a certain situation. Evolution has adopted this as a survival strategy for a million years when there is no time for rational



thinking to escape danger. However, if we want to make behavioural changes or adopt a different reaction to a set of circumstances, we need to be aware of our brain's reluctance to implement them. Otherwise we will fall back to the old way of doing things and already well-established actions will run their course.

In aviation we need both type of actions – the automatic ones as well as the actions governed by conscious thought. Any attempt to eliminate automatic reactions would be highly counterproductive given that flight safety is often dependent on rapid response on the part of the pilot. Automatically implemented behaviour patterns are positive in principle but they also greatly hinder our ability to change unwanted reactions. In cases like these we must apply strict countermeasures and consciously steer our decision making in a different direction. Otherwise our brain will just revert back to the standard pattern again.

RECOGNISING MISTAKES

This brings us back to mistakes. When we want to learn from our mistakes we must first realise that we are making them, but this doesn't always happen. Recognised mistakes are relatively easy to deal with as long as we keep the above comments in mind. Coaches, instructors and distinguished peers can often provide help, but studying relevant literature can often lead to a more in-depth analysis of the problem and – what is just as important – provide good advice on preventing such mistakes in the first place.

Now let's focus on mistakes that are not recognised, because they are far more difficult to eliminate. Why would we change something if we don't know what we are doing wrong? During basic training we relied on our instructor to correct our mistakes. Now, having banished the instructor from the back seat, identifying and correcting errors is entirely up to us.

The chance to get help when it comes to identifying

mistakes diminishes greatly after we have attained solo pilot status, but it doesn't mean that such opportunities don't exist. Engaging in discussion with like-minded pilots comes to mind. They not only help us to eliminate our own weaknesses, but such frank interactions also benefit our participating friends. It is remarkable how such opinion exchanges help fellow pilots to lift their game and move them a step closer towards their ultimate goals.

Apart from that, we can also attend coaching weeks usually offered by state associations, get help from club coaches, or from commercial organisations. Another great opportunity for skill and knowledge advancement is individual coaching. Coach and coachee can deal with specific issues and target specific skills considered in need of some polishing.

FAILURE, LEARNING AND BOUNCING BACK

Gaining flying experience without making a few mistakes in the process is unavoidable. Experience is not what happens to us but what conclusions we draw from what happens to us. We must be determined to implement changes and be firm in our resolve to never repeat the same mistakes. This isn't possible to do without first analysing our blunders, only then can we avoid a recurrence and reap the fruit of our soul searching.

To sum up, failure is an element of learning and bouncing back is critically important. There is nothing wrong with making the odd mistake as long as we admit it, learn from it and strive for future improvement. No achiever made it to the top without persistence and no glider pilot has won a competition or set a record without a past string of failures. Let that inspire and motivate us. Finally, let's not forget that by socialising with achievers you will become an achiever by adopting the attitude of achievers.

In the next issue we look a lot deeper into this interesting topic and investigate how we can polish our skills without being anywhere near a glider. Stay tuned to this channel. I promise some enlightening reading.

GA

THERMALS, SOURCES AND STREETS

PART 1

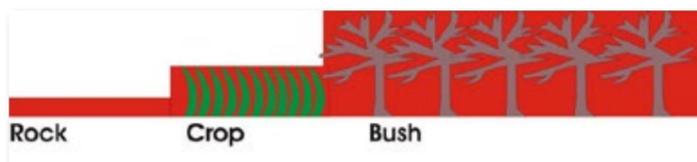
BY JAMES COOPER

Over some years, I have considered my theories on the development of thermals and streets as the two blend together, and they consistently appear to be proved correct. Most of the ideas are from my personal observations, but stem from a concept mentioned in Wallington's Weather for Glider Pilots. The use of the lee side of bush as a thermal source works from the very first think in the morning to the end of the day.

Many years ago when reading Wallington's Weather for Glider Pilots I noted the absolute concept of how thermals develop.

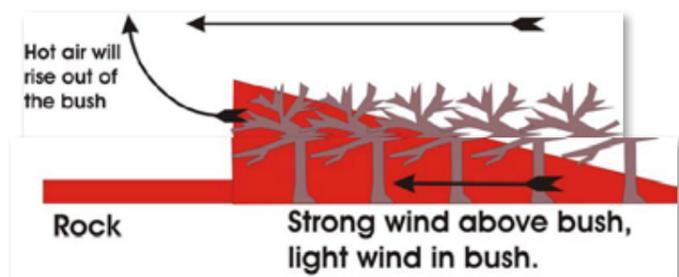
- The sun heats the ground.
- The ground heats the air in contact with the ground.
- The air does not immediately rise but is stored for a period of time in the form of a hot air reservoir for a period of time until some function causes it to break away from the surface.
- The depth of this layer of hot air depends upon the environment.

So, what governs the depth of the hot air reservoir? If the air is over an area of rock or road, the layer will be very thin. You can see it as a mirage when driving on a hot summer day. Over some grass, the layer is a little thicker, while in crop, the layer can build up to the depth of the crop. Finally, in bush, the layer can be deeper still.



There is another influence that will affect the depth of this layer and that is the wind. If the wind is strong it will tubulate the hot air adjacent to the ground and force it to break away and rise. If the wind is light the hot layer can build up to a greater depth until it has reason to break away. We will see what causes it to break away later.

Let us picture a day where the wind is blowing from right to left. When the wind meets the bush, it will slow down to a light breeze through the bush. This light breeze will assist in filling the bush up with hot air. In addition the sun will still be adding to the reservoir of hot air within the bush. Thus the layer of hot air will build up within the bush over a period of time. Now when hot air comes to the lee side of the bush, it may border some crop or even better, some rock. There will be a large volume of hot air flowing out of the bush that



cannot be sustained over the rock - remember point d) above. Therefore this huge volume of hot air that has been stored up in the reservoir of the bush will have to escape. It will tend to do so in a continuous stream from the downwind edge of the bush. Similar situations occur where a rocky environment exists in the middle of the bush.

So now we see that the leeward side of bush will give a good thermal source. It works nearly every time for me. Now, what happens down wind?

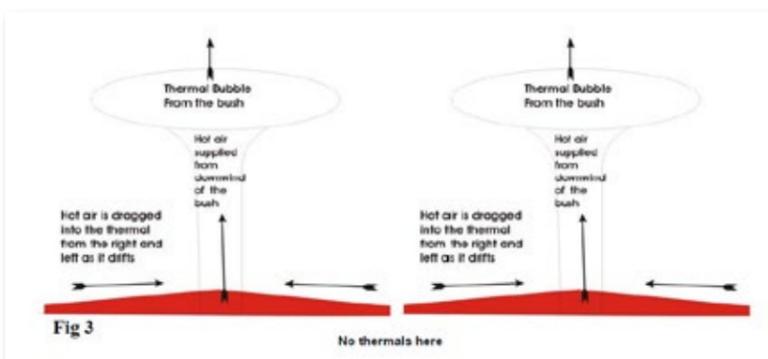
We have a large bubble of air rising vertically, but being drifted down wind. The bubble has considerable mass and momentum and will, as it rises, create a low pressure underneath that will suck any residual hot air off the surface of the ground below. Now we can see that the layer of hot air over the rock or crop down wind is not as large in volume as the air that has just exited the bush, but it will now be persuaded to leave the grip of the earth. The thermal will be continually fed by this energy supply as it drifts downwind.

We can look further at what happens as the thermal drifts downwind and is further stoked by the hot air below from the crop that it is passing over. As the volume of air that has been stored up over the crop does not have the volume, strength and size, the thermal will be weaker and narrower.

In addition, as the thermal drifts downwind it will consume any available air to the right and left of track, and as this is a continuous process, a thermal street will be created. In addition to the right and left of the thermal for some distance, there will be little hot air available to create another thermal, since all the hot air will have been consumed, as we can see in Fig 3

To look now at the situation we have seen develop -

- We have a strong thermal reservoir in the bush.
- The thermal escapes on the lee end of the bush.
- As it rises, it draws up further fuel from the paddocks below.
- The thermal downwind of the bush is not so strong.
- The street will be very narrow perhaps, 30m across
- As the air is drawn from the sides there is little or no chance of other thermals developing for some distance either side of the thermal street. So, what do we gain as glider pilots from this knowledge?
 - On a day with sufficient wind to generate streets, we will probably find lift if we fly away from the sink cross wind.
 - When we find lift, if it is weak, we will need to fly upwind to the thermal source. Don't turn if it is too narrow - you will fall out the side.
 - This part of the street may be narrow, broken and turbulent, so fly with all your senses switched on straight into wind.
 - Do not turn until you find the thermal bubble that



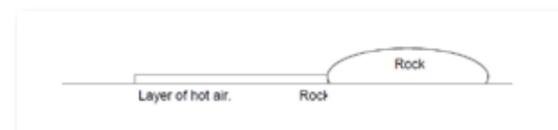
is stronger and smoother. This will be the bubble that has left the lee of the bush.

- Once you have gained sufficient height, if you leave into wind you will probably run out of lift very soon as you leave the main thermal bubble. So pick up speed before you leave the lift.

Just some further comments, you may find willy willys running down the side of bush. One of our clubs in Western Australia has a runway that is located against an area of bush, which creates problems of willy willys upsetting parked gliders. I have even noticed small ground turbulence running down the border of cut and non cut grass.

The explanation of the layer of hot air explains why large rocks are not good sources. Let's look at why.

In this case we see that the hot layer adjacent to the rock is actually sealed in and will only escape by drifting



around the side of the rock, or being pushed up over the top in the case of a strong breeze.

MY FIRST THERMAL

As a child I lived in a large area of woodland, Sherwood Forrest. To the back of our house was an area of cleared land measuring about 100sqm. When I was about 10 years old, I had a small figure of a man with a parachute that I would send through the air. Usually, he would drift down to the ground with the parachute generally open. On one day, however, the man's journey was rather different. The hot layer that had stored up in the woodland must have drifted into the grassy area. Although I did not understand the process at the time, I did understand that my little man was not coming down. Instead, he was lifted up and drifted over the trees and horizon, never to be seen again. I suppose that from that moment, I was hooked.

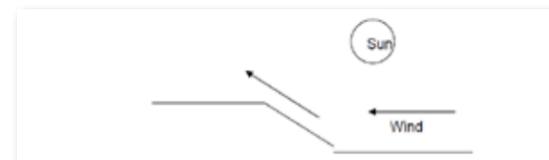
HUMID AIR

Another interesting point to remember is that water vapour is actually lighter than air. Hydrogen has an atomic weight of about 1 and oxygen of 16. Therefore, the weight of H₂O is 18 while nitrogen, which is the largest component of air, has a weight of 14 and N₂ therefore has a weight of 28. It is, however, also important to remember that water requires a lot of heat

to raise its temperature. So areas like salt lakes that reflect the heat and absorb much heat will not be a good source in the early part of the day. With their high water content they may be good in the evening, as they will have stored up a lot of heat energy over the day. In addition, the more humid air will be inherently more buoyant.

Although I fly in predominantly flat lands, it is worth noting how hills will help us. If a hill faces into the sun it will absorb more heat than the surrounding flat land. If the wind is blowing up the slope it will assist the now hot air to break away. I can assure

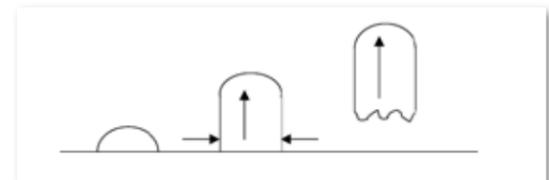
you that if the wind is blowing the opposite way to the diagram it could still work. I have experienced this fact, and the logic is as follows. The lea side of the hill is sheltered by the wind, allowing a thick layer, or reservoir, of hot air built up in the shelter of the hill. As this layer builds up and drifts down wind, it will eventually break away as a large volume of air.



BREAKING AWAY

As we have looked at how the air is heated up, now we should look at what happens as it breaks away from the ground. Let us initially assume there is no wind.

The thermal rises and in doing so, drags in hot air



from all sides. It will continue to rise and increase its cylinder length while being supplied with more hot air. This will depend on its local environment. If there is a large area of available hot air in the vicinity the thermal column will be tall. However, if there is little available air due to a thin hot layer, adjacent cloud shadows, or other thermals in the vicinity, the height will be less. Once the hot air supply has run out, the bubble will be cut off, leaving the bubble to rise. One thing to note is that the top of the thermal has a smooth contour, while at the bottom of the column it is turbulent. When you are flying, if you find a smooth thermal it may be the top of a new bubble worth hanging on to. Alternatively, if it is rough then you may have arrived too late. We will see later, however, that it is possible to climb through the bubble, that is, climb faster than the bubble itself.

Next issue we look at thermal structure

jamescooper.com.au.

GLIDING - THREAT AND ERROR MANAGEMENT OR HOW TO REDUCE MISTAKES AND FLY SAFELY PART 1

BY ARTHUR GATLAND

This three part series of articles were first published in Soaring NZ and is reproduced here with their kind permission.

Arthur Gatland started flying in 1963 at age 13 and has accumulated many thousands of hours flying including RAF fighters such as Harriers, Hunters, Hawks and as a Boeing 777 Captain and instructor. For ten years was Manager of Training and Flight Standards for Air New Zealand. He is an A Cat glider instructor. He was a previous CFI of the Auckland Gliding Club.

These articles are based on a Threat & Error Management Arthur wrote for Air New Zealand, he has also given lectures on TEM to various medical conferences in NZ over the years. He says the principles are valid in all areas of life.

In Soaring NZ issue 15, George Rogers asked why our gliding accident rate has been so bad over recent years. The fact is that on average we have one fatality a year with all the tragedy that this brings to families and friends, not to mention the huge cost in damaged and destroyed gliders and associated increase in insurance costs etc. Yet gliding is inherently a relatively safe sport, and historically has been second only to airline flying as one of the safest types of aviation. To my knowledge, none of our spate of accidents has been the result of structural or mechanical defects – all have resulted from pilots unnecessarily putting themselves in a situation that for various reasons have resulted in a crash. Ridges, rocks and trees do not suddenly leap out and hit gliders – yet we manage to collide with them on a regular basis. And despite the fact that gliders are safer, have better handling and performance, better airbrakes, more comfort, and better visibility than those of 30-odd years ago, our accident rate is worse.

Why is this – and more importantly, what can we do about it? Already, I can see a number of pilots losing interest in this discussion – because “This doesn’t apply to me – I’m experienced / skilled / smarter / an above average pilot (delete where applicable) and I don’t make those mistakes.” If you really believe this of yourself, then you can replace those descriptions with “arrogant / overconfident / unrealistic / unaware” (delete where applicable).

This series of articles applies to every glider pilot, regardless of experience. I believe that, like many accidents where contributing causes are often small but multiple, there has been a lowering of our flight standards for a number of reasons. These include:

- lower average flying hours due to less leisure time and financial constraints.
- higher performance gliders that create an unrealistic expectation that we always get home from cross-country flights.

- changes to national culture where people think they have the right to be more independent which leads to less discipline, reluctance to ask for on-going training, less time to talk to and listen to more experienced pilots, and unfortunately a lowering of instructing discipline and standards.

We all – individually and collectively – need to look at ourselves and see where we can attack these issues and reverse the slide in our flying standards and safety. One technique we can all use to improve our flying safety is the use of Threat and Error Management, which I will describe in this and following articles. This is a simple technique of understanding the type of situation where we are more likely to make a mistake and to prevent making errors which might lead to disaster.

“TO ERR IS HUMAN.” (CICERO, 50 BC)

In other words, we ALL make mistakes. Accepting this is an important step to understanding when and where errors occur, and therefore how to prevent errors. Pilots who think they don’t make mistakes are

- seriously mistaken
- dangerously overconfident
- have a limited life expectancy!

Errors are most likely to occur when we are faced with a THREAT, that is, something that presents a change to what we are used to, or what we are comfortable with. To understand what constitutes a Threat, I will introduce the concept of a Pristine Flight (courtesy of Continental Airlines). In this first article, I will concentrate on a local soaring flight and discuss possible threats, and in part 2 and 3 we will expand this to cross-country flights, and competition and other specialised flights.

PRISTINE FLIGHT

This is a simple gliding flight where everything goes exactly to plan. You arrive at the airfield and the club glider you want to fly is available, already DI’d and at the launch point. Helpers are readily available to pull it out for you, and a towplane is waiting. You are current on type and an instructor is happy to authorise your local flight. There is no wind and no lift or associated sink. There are no other gliders flying and no delay to your takeoff. The weather is pleasant; not too hot. You aerotow to 2000 feet and glide gracefully back to the circuit, practising a few turns and speed control. Your well-planned circuit is uninterrupted by other gliders or crosswinds and landing is uneventful. This is a Pristine Flight – arguably a bit boring, but with no real interruptions to your simple plan. Now let’s talk about likely variations – many of them



If someone talks to you when you are halfway through your pre-takeoff checklist, recognise that this threat is likely to result in your

very common – that can upset your plan. You planned to be at the airfield by 11.00am but you are annoyed that you are late because your partner was late getting back from shopping.

No-one has bothered to get the glider out of the hangar and it hasn’t been DI’d. You are short of time so you must hurry these processes. The only instructor is flying, and you haven’t flown for two months so although you think you might need authorisation, you decide it’ll be OK to go without. There is only one other person to help push the glider on to the start line, an inexperienced student who you need to brief. After the exertion of pushing you are hot before you even get into the glider. You strap in and as you are doing your pre-takeoff checks, someone interrupts you to ask for your tow tickets. It’s a bit windy and you haven’t briefed the towpilot, so after takeoff he annoyingly takes you downwind to what he probably thinks is a good looking cloud.

You don’t find lift, but you practice a few turns, then head back to the airfield, encountering unexpected sink on the way. Your circuit is lower than you would have liked and you are concerned about another glider on circuit at the same time. Your circuit is a bit rushed, and with a short final, you don’t quite sort out the crosswind so the landing is a bit untidy. After landing the next pilot points out that the DI hasn’t been signed today.

All of these variations to the Pristine Flight

constitute Threats that will increase the likelihood of you making a small slip, or an error in judgement, or forgetting something – regardless of your experience. Let’s review what these Threats might include:

Time pressure	Frustration
Impatience	Procedural uncertainty
Heat discomfort	Interruptions
Weather changes	Poor preparation
Unexpected sink	Outside interference
Inexperience	Lack of currency
Fatigue	Other traffic
Poor training	Poor health
Inexperienced crew	Launch delay
Turbulence	Unfamiliar airfield
ATC / airspace	Technical issue
Dehydration	Hunger

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ABOVE : A race to the finish and other traffic has created a change from pristine flight. The lead glider is about to land with his wheel up.

Cross-country introduces an additional list of threats which we will discuss in the next article. Note that many Threats are normal and some even desirable. For example a moderate wind might be appreciated for ridge soaring, but results in a crosswind takeoff and landing, and results in a headwind when returning to the airfield. Good thermals can also cause unwanted sink on the downwind leg in the circuit. You may be aiming for your 5-hour endurance, but this will raise threats of thirst, hunger, fatigue, etc.

THREATS

All threats increase your likelihood of making an error. A proficient pilot can easily recognise all threats, and implement a strategy to prevent an error resulting. Some examples might include:

INTERRUPTIONS

If someone talks to you when you are halfway through your pre-takeoff checklist, recognise that this threat is likely to result in your forgetting something, and start again from the beginning.

PROCEDURAL UNCERTAINTY

Any time you hear that nagging voice questioning something (are we clear for takeoff, did I do my checks, did I sign that DI, do I need instructor authorisation, did I remove the tail dolly) – then

STOP and double-check. Observers always respect someone who acts professionally and questions some small detail, in stark contrast to someone who makes an assumption and is proven to be an idiot.

TIME PRESSURE

Any time you feel pressure to hurry – for whatever reason – you should be aware that this is a major cause of errors, through forgetting processes (tail dolly removed?), forgetting to take essential equipment (maps, drinks, hat etc.), ignoring procedures (takeoff checklist) etc.

OTHER TRAFFIC

A good pilot will always join the circuit assuming there will be other gliders rejoining, and have sufficient height to give way to a lower performance glider. He/she will also know the rules regarding landing if there is a glider ahead on final approach – where to land etc.

UNEXPECTED SINK

Always anticipate sink in the circuit. However if a circuit is flown using correct techniques this should be self-correcting – don't rely on the altimeter, or ground features for turn-in points, but assess your angle to landing point. Any unexpected sink can easily be corrected by adjusting distance out and turn-in point – if a pilot is alert to the possibility of unexpected sink.

'Any time you hear that nagging voice questioning something (are we clear for takeoff, did I do my checks, did I sign that DI, do I need instructor authorisation, did I remove the tail dolly) – then STOP and double-check.'

INEXPERIENCE AND INSTRUCTOR RESPONSIBILITY

Early solo pilots cannot be expected to recognise all threats existing on any particular day. This is why an instructor must authorise and brief early solo pilots. It is the instructor's responsibility to assess all threats and brief an early solo pilot accordingly. The brief might be along the following lines (abbreviated):

I have checked your logbook and confirmed you are current on this glider type. Your aim of today's flight is to search for lift and practice thermalling. There are several other gliders airborne, so let's review how you join a thermal if another glider is there first. Remember when you are concentrating on thermalling and speed control that lookout is

actually more important. There is a moderate northerly wind today, so stay upwind of the airfield. Always keep the airfield in sight and have a plan on how to rejoin circuit if you don't find lift. Be aware of the likelihood of sink in the circuit area.

Where will you land if another glider has landed ahead of you? It's hot today – have you got a sunhat and sunglasses? Now make sure you take your time getting comfortable in the cockpit and doing your checks – don't let anyone rush you. Any questions – anything you have any doubts about?

The main ways that new pilots can gain experience and knowledge is by instructors or experienced pilots passing on these thoughts, OR learning by making mistakes! Which method is better?

[continued over page](#)

BELOW:
A Heavy landing.



SOME EXAMPLES OF THREATS AND ERRORS:

● An experienced pilot was rigging his motor-glider for a flight from a remote airfield where there were no other glider pilots around, although a number of interested spectators were watching and talking to the pilot. While rigging, he was further interrupted by a phone call, and failed to mount the tailplane correctly. After takeoff the tailplane detached and the pilot was killed.

the position of equipment (gear down, flaps set) or the operation of controls (airbrakes check). By completing a checklist diligently you remove any nagging doubt you may suddenly have, for example during takeoff (I can't remember if I took off the tail dolly>).

Eventualities planning – this is a required part of pre-takeoff checks, allowing you to plan for unexpected threats or emergencies. It should also be an on-going thought process throughout the

THREATS	POSSIBLE STRATEGIES
Remote airfield, unusual environment, out of normal 'comfort zone'.	Be aware of risk of errors because of change to normal routine. Exercise extra caution, take your time.
No other qualified glider pilots to carry out a duplicate rigging check.	Ask if anyone has flying experience and brief them on how to carry out a check for you. Alternatively go away briefly, and come back as if you were carrying out your own duplicate check with a 'fresh look'.
Interruption during rigging.	Recognise this as a serious threat! Start again and ensure everything is checked from scratch.
Interested spectators watching and asking questions.	While we want to foster interest in gliding, and encourage pilots to talk to spectators – a pilot must separate this from operational procedures. "Let me finish rigging, then I'll come and tell you all about it."
Nagging doubts or uncertainty.	NEVER assume – always check.
Over-confidence	Every pilot <i>must</i> acknowledge that we are all human and we do all make mistakes.

● A pilot elected to fly his new motor-glider to a family farm, where he flew a circuit, while extending the engine to carry out an approach and motorised go-around, to 'show off' the glider. The engine failed to start, and while flying the circuit he got low and slow, stalling on base turn. The pilot was killed.

flight. (If that glider joins the circuit ahead of me, what will I do? If this cloud has no lift, can I get back to the airfield etc.)

Standard Operating Procedures – normal procedures, circuit procedures, right of way rules, ridge flying protocols, are all part of TEM.

Make sure you understand WHY we do certain things – for example:

THREATS	POSSIBLE STRATEGIES
Remote 'airfield', unusual environment, out of normal 'comfort zone'.	Be aware of risk of errors because of change to normal routine. Exercise extra caution, take your time.
Carrying out an unusual and potentially high risk manoeuvre.	Practice engine-extended circuits at home airfield before trying this on cross-country flights or at other airfields.
Carrying out any demanding manoeuvre – risk of pre-occupation with this task and forgetting to fly the glider first.	Recognise this as a serious threat! First priority is always to fly the glider, and in this case maintain safe speed and correct circuit pattern in case the motor doesn't start.
Interested spectators / friends watching – pressure to 'put on a good show' and to stick to a plan even if it's not working.	Any 'display' or demonstration – official or ad hoc – should be legal and should only involve well-practiced manoeuvres and procedures. Keep it simple and safe.

PROCEDURES THAT ASSIST WITH THREAT AND ERROR MANAGEMENT

We already have a number of checks and procedures that have been developed over the years, all of which help with TEM. Some examples:

Checklists – all are designed to ensure we have completed all essential actions, and/or to check

- Strap in before doing control checks
- Don't attach towrope until fully ready to launch
- Specify nosehook or bellyhook open
- Check full operation of airbrakes on downwind
- Maintain safe speed near the ground.
- Always secure the wingtip when parking a glider

All of these procedures have resulted from learnings from previous accidents!

CONSEQUENCES OF ERRORS

An important part of Threat and Error Management (TEM) is to understand the consequences of possible errors, and to make doubly sure the most consequential errors do not occur. Forgetting your map on a local flight may not be important at all, but forgetting your map on a cross-country flight could lead to navigation uncertainty, infringing controlled airspace etc. Stalling while pulling up into a thermal might be slightly annoying, stalling on base turn may be the last mistake you ever make.

Some errors have downstream effects. Forgetting to raise the gear after takeoff has often resulted in gear being raised instead of lowered for landing which has led to a wheels-up landing. This is also a good example of 'seeing what you expect to see' – you can't believe you landed wheels-up "because I know I did my pre landing checks diligently!"

SUMMARY

Every flight involves some threats and all pilots must ensure they recognise these and have a strategy to manage the threats and prevent errors, and/or have a process to catch errors or slips that may have occurred. Remember we ALL make some mistakes on every flight – the important thing is to ensure they are not critical ones, or that they are captured before they lead to an undesirable situation.

<p>WHAT ARE THREATS?</p> <ul style="list-style-type: none"> ● Any variation to our straightforward Pristine Flight is a Threat ● Every Threat increases the likelihood of an Error being committed ● Every Threat requires a positive strategy to manage it and prevent errors
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USEFUL STRATEGIES

The following are just a few examples of TEM strategies that should become automatic to a skilled and safe pilot.

<p>TEM STRATEGIES:</p> <ul style="list-style-type: none"> ● Use SOPs / Procedures diligently ● Don't succumb to time pressure ● Always fly the glider first ● When fatigued be more careful and conscientious ● After interruptions, say "Where was I?" ● Always carry out a Situation Awareness review after a period of high workload ● Don't 'see what you expect to see' – look for errors ● Listen to 'that little voice' that questions what you are doing ● Take advice from other pilots, especially experienced glider pilots.

THREAT AND ERROR MANAGEMENT

TEM was introduced to Air New Zealand around 25 years ago, and is a mainstay of pilots' briefings for every takeoff and approach/landing. It is a proven technique for assessing and mitigating risk and has been accepted worldwide as a powerful yet simple tool in improving safety and preventing errors. It is imperative our gliding movement adopts this tool – individually and collectively – to stop our slide in safety standards and return to a safe and proficient operation – and still have great fun!

A MESSAGE TO INSTRUCTORS AND EXPERIENCED PILOTS

You have a particular responsibility for ensuring Club operations are always carried out professionally and responsibly. You can do this firstly by setting a great example with your own diligent procedures. You should also be watching what other pilots are doing as they prepare to fly, or when they approach and land. Never let your guard down – lives have been saved because someone had doubts about what another pilot was doing, and 'interfered' by questioning something...

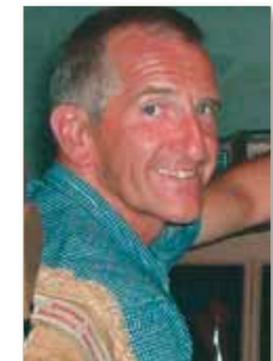
TO EVERY GLIDER PILOT

Acknowledging your vulnerability to mistakes is actually a sign of strength. In flying, you never stop learning. Every flight, whether you have 50 hours, 500 hours, or 15,000 hours, presents us with the same threats that must be recognised and managed. On every single flight you need to ask:

- What are my threats today?
- How will I manage and mitigate these?

In the next issue I will continue the theme of Threat and Error Management into cross-country flying – which is an area that has resulted in a significant number of serious accidents.

GA



Arthur Gattland

SAFETY DIFFERENTLY

PROFESSOR SIDNEY DEKKER
National Safety Advisor

An insight hit home when I was working with a health authority in Canada a couple of years ago. The insight was this: when we talk about safety, we actually don't talk about safety. We talk about the lack of it - the absence of it. We talk about incidents, we investigate accidents, we scratch our heads at the mismanagement of risk by our fellow pilots. We even measure our safety by the number of instances in which it was absent - for example, an accident rate.

As one of my doctoral students said, it's as if we are trying to understand how to have a successful marriage by studying divorce.

It was time to start doing, and seeing, safety differently. Think of safety outcomes as a hypothetical Gaussian, or normal curve, also known as a bell curve. The curve shows that the number of the things that go wrong - the left side of the curve - is tiny. On the right side of the curve are the heroic, unexpected surprises - a Hudson River landing by Sully, for instance - that fall far outside what people would normally experience or have to deal with.

MIDDLE OF THE CURVE

In between, the huge bulbous middle of the figure, sits the daily creation of success. This is where good outcomes are made, despite the organisational, operational and financial obstacles, despite the rules, bureaucracy and common frustrations. This is where work can be hard, but is still successful.

This figure suggests that the way to improve safety is not by trying to make the red part of things that go wrong even smaller, but by understanding what happens in the big middle part where things go right and then enhancing the capacities that make it so. That way, we make the red part smaller by making the white part bigger.

Let's go back to that hospital that cemented my insight. It was actually a large health authority that employs some 25,000 people. The patient safety statistics were dire, if typical: one in 13 of the patients who walked or were carried through the doors to receive care were hurt in the process of receiving that care - one in 13, or 7%.

When we asked the health authority what they typically found in the cases that went wrong, here is what they came up with. Among the patterns that all their incident data yielded, they consistently find:

- Workarounds
- Shortcuts
- Violations
- Guidelines not followed
- Errors and miscalculations
- Unfindable people or tools
- Unreliable measurements

- User-unfriendly technologies
- Organisational frustrations
- Supervisory shortcomings

WEAKEST LINK

It seems to be a pretty intuitive and straightforward list. It also firmly belongs to a particular understanding of safety: the person is the weakest link. The 'human factor' is a set of mental and moral deficiencies that only great systems and stringent supervision can protect against. Following that sort of logic, we have great systems and solid procedures—it's just those bloody-minded people who are unreliable or non-compliant. You probably recognise the logic:

- People are the problem to control
- We need to find out what people did wrong
- We write or enforce more rules
- We tell everyone to try harder
- We get rid of bad apples

Many safety strategies, to the extent that you can call them that, are organised around these very premises. Poster campaigns remind people of particular risks they need to be aware of. Strict surveillance and compliance monitoring gets done to achieve certain 'zero-tolerance' or 'zero-harm' goals.

The health authority had been doing that sort of stuff as well. None of it helped. They were still stuck at one-in-thirteen.

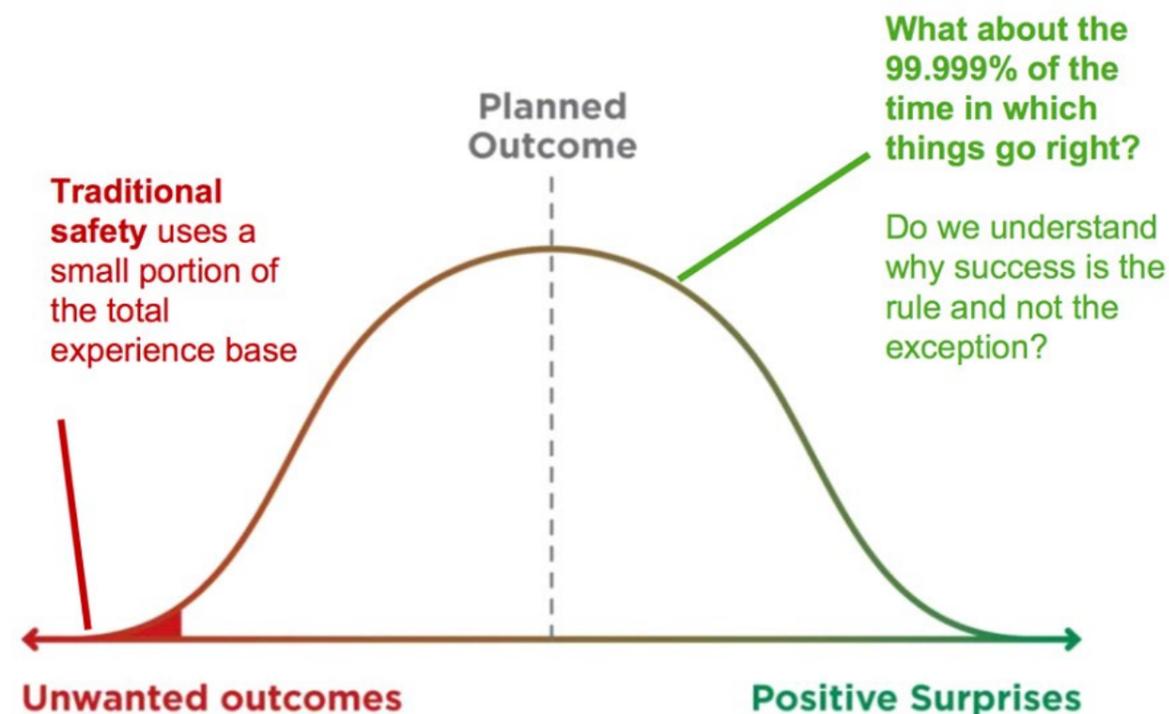
ASK THE RIGHT QUESTION

Then I asked the question that my colleague Erik Hollnagel, a professor of cognitive systems and author of the book 'Safety I - Safety II', would have asked, "What about the other twelve? Do you even know why they go right? Have you ever asked yourself that question?"

The answer from the health authority was "no". All the resources that they had for safety were directed toward investigating and understanding the cases that went wrong. There was organisational, regulatory, reputational and political pressure to do so, for sure, and the resources to investigate the instances of harm were too meager to begin with. This was all they could do.

So we then offered to do it for them. In an acutely unscientific and highly opportunistic way, we spent time in the hospitals of the authority to find out what happened when things went well, when there was no evidence of adverse events or patient harm.

At first we couldn't believe our data, but it turned out that everybody found that in the 12



cases that go right - the cases that don't result in an adverse event or patient harm - there were:

- Workarounds
- Shortcuts
- Violations
- Guidelines not followed
- Errors and miscalculations
- Unfindable people or tools
- Unreliable measurements
- User-unfriendly technologies
- Organisational frustrations
- Supervisory shortcomings

It didn't seem to make a difference! These things show up all the time, whether the outcome was good or bad. Sound familiar?

POSITIVE INGREDIENTS

But if these things don't make a difference between what goes right and what goes wrong, then what does? We looked at our notes again - because there was more. In the 12 cases that went well, we found more of the following than in the one that didn't go so well:

DIVERSITY OF OPINION AND THE POSSIBILITY TO VOICE DISSENT

Diversity comes in a variety of ways, but professional diversity - as opposed to gender and racial diversity - is the most important one in this context. Yet whether the team is professionally diverse or not, voicing dissent can be difficult. It is

much easier to shut up than to speak up. I was reminded of Ray Dalio, CEO of a large investment fund, who has actually fired people for not disagreeing with him. He said to his employees, "You are not entitled to hold a dissenting opinion ... which you don't voice."

KEEPING A DISCUSSION ABOUT RISK ALIVE AND NOT TAKING PAST SUCCESS AS A GUARANTEE FOR SAFETY

In complex systems, past results are no assurance for the same outcome today, because conditions and factors may have subtly shifted and changed. Even in repetitive work, such as landing a glider on a day of lots of instruction flights, repetition doesn't mean replicability or reliability. The need to be poised to adapt is ever-present. Making this explicit in briefings or other pre-flight conversations that address the subtleties and choreographies of the present tasks and the people doing them, will help things go right.

DEFERENCE TO EXPERTISE

This means asking the person who knows, not the person who happens to be in charge. In gliding, it also means being able to differentiate between those who have an opinion on something - we've got plenty of them - from those who actually know their stuff. Deference to expertise is generally deemed critical for maintaining safety. Research into so-called high-reliability organisations shows

continued over page

that safe ones push decision-making down and around, creating a recognizable pattern of decisions 'migrating' to expertise.

ABILITY TO SAY STOP

As Berkeley researchers Barton and Sutcliffe found in an analysis of bush firefighting, "a key difference between incidents that ended badly and those that did not was the extent to which individuals voiced their concerns about the early warning signs". Amy Edmondson at Harvard calls for the presence of 'psychological safety' as a crucial capacity in teams that allow members to safely speak up and voice concerns. In her work on medical teams, too, the presence of such capacities were much more predictive of good outcomes than the absence of non-compliance or other negative indicators.

BROKEN DOWN BARRIERS BETWEEN HIERARCHIES AND DEPARTMENTS

As is frequently obvious after an accident has happened, the total intelligence required to foresee bad things was often present in an organisation, but scattered across various units or silos. Get people to talk to each other – operations, planning, marketing, maintenance, training, finance – and break down the barriers between them.

DON'T WAIT FOR AUDITS OR INSPECTIONS TO IMPROVE

If the team or organisation waited for an audit or an inspection to discover failed parts or processes, they were way behind the curve. After all, you cannot inspect safety or quality into a process. The people who carry out the process create safety – every day (Deming, 1982). Subtle, uncelebrated expressions of fixes and improvements are everywhere in a safe organisation, if you know where to look. They are found among the kinds of improvements and ways in which people 'finish the design' of their systems so that error traps are eliminated and things go well rather than badly.

PRIDE OF WORKMANSHIP

This trait is linked to a willingness and ability to improve without being prodded by audits or inspections. Teams that take evident pride in the products of their work, and the workmanship behind it, tended to end up with more good results. What can an organisation do to support this? They can start by enabling their workers to do what they want and need to do by removing unnecessary constraints and decluttering the bureaucracy surrounding their daily lives.

MAKING IT GO RIGHT

The difference between things going right and going wrong was not in the absence of negatives, like violations. No, the difference was in the presence of positive capacities! Even organisations like NASA are getting around to this insight. "Focusing on the rare cases of failures attributed to 'human error' provides little information about

why human performance almost always goes right. Similarly, focusing on the lack of safety provides limited information about how to improve safety," they concluded in a symposium just last year.

If we apply it to our own sport, we might well recognise some or all of these capacities as responsible for why things go right! Because indeed, it is easy to see that much more in gliding goes right than goes wrong. Seeing safety only in relation to a small number of incidents or accidents is important but severely limits how we can learn and improve.

CAPACITIES FOR SAFETY

Understanding how success is created is just as important, if not more so. This is why Gliding Australia might see its safety not just as the absence of negative events or the existence of a safety bureaucracy, but much more as the presence of capacities that make things go well—in its organisation, in clubs, in training panels, in individual pilots.

This includes capacity to anticipate the changing face of risk and new harmful influences, for example, airspace changes, demographic shifts, technological developments and airworthiness insights.

Pilots need a capacity to be ready to respond and manage risk in more ways than just writing another rule to plug the hole that was found. Examples might include investing in pilot competencies, sharing accounts in Gliding Australia Magazine and other outlets, and carefully testing new systems such as those for collision avoidance.

A capacity to proactively learn and keep our conversation about risk open and alive is also valuable, not only within clubs, but also through the immediate, non-punitive, expert-based and independent analyses of incidents through the SOAR system.

The capacity to show curiosity, instead of judgment when confronted with non-conformances, helps understand incidents. Why did it seem impossible for this pilot, or this club, to complete the operation and follow the rules at the same time? The capacity to remain curious and open-minded, to withhold judgment and withstand pressure to act immediately, is critical here.

The capacity to respond justly to incidents by asking about the potential impacts of the event will reveal the needs that these impacts have created, and how our community shares the obligation to start meeting those needs.

Are these starting points for you and your club to identify some of the capacities that make things go right? If so, how would you enhance those capacities? What can you do to make them even better, more omnipresent, and more resilient? It is also an incomplete list. Perhaps you have found other capacities in your teams, in your people, and in your systems and processes that seem to account for good outcomes. What are they? What can you add?

GA

Occurrences & Incidents

All clubs and GFA members are urged to report all occurrences and incidents promptly, as and when they occur, using the GFA's occurrence reporting portal at glidingaustralia.org/Log-In/log-in-soar.html. This is always best done while all details are fresh in everyone's mind.

You can read the full SOAR report at tinyurl.com/lmk056

Reports noted 'Under investigation' are based on preliminary information received and may contain errors. Any errors in this summary will be corrected when the final report has been completed.

From 1/3/2020 to 31/7/2020

Damag	VSA	NSWGA	GQ	WAGA	Total
Nil	4	8	8	3	23
Minor	3	1	2	2	8
Substantial			1		1
Total	7	9	11	5	32

Injury	VSA	NSWGA	GQ	WAGA	Total
Nil	7	9	11	5	32
Total	7	9	11	5	32

Phases	VSA	NSWGA	GQ	WAGA	Total
Flight	1	4		1	6
Landing	3	1	3		7
Ground Ops	2	4	5	1	12
Outlanding	1		1	3	5
Thermalling			1		1

Type o	VSA	NSWGA	GQ	WAGA	Total
Local	4	7	4	1	16
Grounc	1		1	3	5
Trainin	2	1	3	1	7
Cross-Country			3		3
AEF		1			1
Total	7	9	11	5	32

Level 1	NAG/	VSA	SWG	GQ	Total
Airspace		1	2	2	5
Environment				1	1
Operati	5	6	7	6	24
Technical				2	2
Total	5	7	9	11	32

8-MAR-2020 VSA AIRCRAFT CONTROL - HARD LANDING DG-500 ELAN ORION

What Happened

At the end of a soaring flight the inexperienced pilot elected to land long to stop in front of the airfield access gate to the glider hangar. The pilot mishandled the airbrakes during the flare resulting in the glider ballooning, and the aircraft bounced a few times due to misapplication of the controls. The pilot deployed full airbrake to prevent the bounces, which caused the glider to strike the ground heavily

on the nose and tailwheel simultaneously. The nosewheel fairing was damaged.

Analysis

The pilot attempted to extend to flight in order to land long by reducing the airbrake setting during the holdoff stage. The pilot did not conduct a minimum energy landing but allowed the glider to touch down while still at flying speed, and this resulted in the aircraft rebounding into the air. The pilot over corrected with elevator. i.e. pitched too far forward, and the aircraft struck the ground several more times before the glider came to rest.

Safety Advice

When small amounts of airbrake are used during the float, and the glider is allowed to touch down at speed, the pilot must ensure that elevator control inputs are small. This is because the faster and cleaner the aircraft, the greater the pitch sensitivity. Recovery from a bounce should not be thought of in terms of 'control movements', but by reference to the glider's attitude and its position in relation to the ground. In other words, the pilot needs to recover by selecting an attitude which prevents any further climb. Bounces can be avoided by the pilot establishing the glider on the approach at the correct airspeed for the conditions using half or more airbrake. Pilots must endeavour to maintain the approach speed to roundout and aim to touch-down with low energy on the main-wheel and tailwheel simultaneously.

14-MAR-2020 GQ FUEL RELATED - EXHAUSTION PIPER PA-25-235

WHAT HAPPENED

During an aerotow, at around 1200ft AGL, the tow plane's engine stopped. The tow pilot waived-off the glider, which climbed away in a thermal, and landed the tow plane safely on the reciprocal runway at the aerodrome.

ANALYSIS

The tow pilot arrived at the field as the rostered tug pilot and found towing was already in progress. There was a large group of students for training, as well as single-seat aircraft needing launches. The tow pilot was not involved in the initial Daily Inspection but performed their own individual inspection prior to taking over the aircraft. The tow pilot assumed the aircraft had started the day with a full tank of fuel, and this belief was reinforced by the fuel gauge reading full and the flight record showing only one launch had been conducted.

LESSONS LEARNED

The tow pilot stated "The Pilot In Command has the sole responsibility to ensure there is no possibility of fuel starvation. I used methods to

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calculate remaining fuel that are inaccurate and unreliable, and ignored my feeling that the fuel must be low ... How do we stop it from happening again?. The human part will always be there, but the only way I believe to reduce the risk to the barest minimum is a proper fuel calculation, and write the tacho number down on the tug sheet as a 'go or no go' in your pre take-off check. Every tug pilot does one before each tow, even if it is abbreviated, and that check definitely includes fuel. It would also be a safety advantage for the club to install an accurate fuel meter on the bowser. I do not believe the complication of more rules or procedures will help, because those things are already in place, and I simply flew in ignorance."

SAFETY MESSAGE

Fuel exhaustion is a situation where there is no more fuel onboard. Unlike Fuel Starvation there is nothing to be done about re-establishing the flow of fuel. Most of these occurrences lead to a forced landing. Nevertheless, an ATSB study from 2015 (see Further Reading) showed that fuel exhaustion results in fewer fatalities than fuel starvation. A possible reason for this could be that the pilots involved in fuel starvation scenarios consider more options than just a forced landing, sometimes leading to inappropriate choices and fatal outcomes. Exhaustion occurrences are normally either the result of a gross error in the fuelling of an aircraft before flight, or the result of a number of seemingly minor aspects of fuel planning and management during the flight.

14-MAR-2020 GQ FLIGHT CONTROLS ASTIR CS JEANS

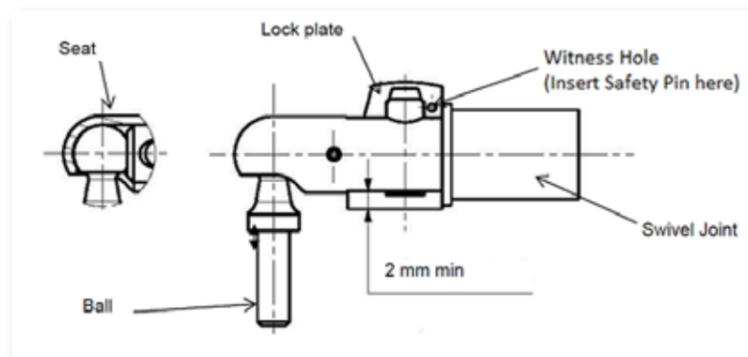
What Happened

During the Daily Inspection (DI) one of the aileron's L'Hotellier coupling safety pins was incorrectly fitted and not securing the fitting as required. The DI was being conducted by a pilot undertaking their first inspection on type. Although the pilot had been briefed on the DI, they choose to seek confirmation of the L'Hotellier coupling system from an airworthiness inspector, as they found the

connections for the ailerons and the airbrakes used two differing types of safety locking pins. The inspector confirmed that there were two different types of safety locking pins being used but noticed that the left aileron safety locking pin had been incorrectly fitted and was not in safety. They found the safety pin had not been inserted through the small hole at the top-rear of the locking tab as the designer intended but had been forced around the L'Hotellier coupling and merely clipped together. The safety pin was removed and found to have been bent out of shape. The safety pin was fixed and fitted through the small 'locking' hole, and its safety was independently confirmed. Following an independent control check, the maintenance release was signed, and the aircraft returned to service. The Club CFI noted that it was likely that the safety locking clip has been connected this way for a considerable length of time and that the aircraft had been flown in this configuration on several occasions. The CFI found that the aircraft had been signed out by several daily inspectors, which suggested a gap in their knowledge and training. The CFI sent an email to all members alerting them to this problem and some remedial training was conducted.

Safety Advice

The Daily Inspection is required to establish that the glider is fit for flight for that day's flying operations and certify that in the Maintenance Release. A thorough Daily Inspection is essential to avoid incidents and accidents by finding faults with the glider before it flies. A person holding Daily Inspector authorisation therefore plays a frontline role in incident and accident prevention, and in continuing to keep the glider airworthy... Another good reference is the 'Daily Inspector's Handbook' that is available from the GFA Documents Library. overloaded.



15-MAR-2020 VSA ROPE/RINGS AIRFRAME STRIKE ASK-21

As the slack was being taken-up in the rope for an aerotow launch, the rope caught around a tuft of grass to the side of the runway. When the rope became taut, while still caught in the grass, the wing runner gave the "all out" command. As the tow plane accelerated the rope disengaged from the tuft of grass and became instantly slack. The glider over-ran the slack rope, which then got



entangled with the nose wheel. The command pilot in the glider pulled the release but because the rope was wrapped around the front wheel and still connected to the tow plane, the glider continued forward. The command pilot applied the glider's brake, which alerted the tow pilot to there being a problem and the launch was abandoned. The command pilot reported this "All happened VERY quickly". This incident highlights the potential hazard of a rope overrun and highlights why a launch should not proceed if the tow rope becomes fouled. The Club's CFI has raised awareness of this incident and asked the instructors to ensure wing runners do not allow a launch to proceed if the rope is hindered or fouled.

21-MAR-2020 GQ COLLISION WITH TERRAIN VENTUS-3M

While on a cross-country flight an outlanding became inevitable and the pilot elected to conduct a selfretrieve. The engine failed to start, and during the subsequent outlanding the glider's port wing contacted long grass causing the glider to ground loop.

Factual Information

The pilot was flying a cross-country sortie in his self-launching glider when conditions deteriorated and an outlanding was likely. At an estimated 1000ft AGL the pilot decided to start the engine to self-retrieve. The pilot reported the engine appeared to raise slower the usual and stated, "I may have been influenced in this feeling by the flashing battery light on the engine controller." When the pilot tried to start the engine, it only clicked and did not turn over. The pilot then attempted to air start the engine by diving, even though this is not a procedure in the flight manual, but this was unsuccessful as the propeller failed to rotate. During this action the pilot did not have time to fully assess the suitability of paddocks for landing, and the paddock selected had a significant slope. While landing across the slope, and upon flaring for touch down in a wings level attitude, the uphill (port) wingtip caught in grass and the glider turned through 180 degrees.

Analysis

The aircraft is fitted with three LiFePO4 batteries – an engine battery in the nose, a battery in the tail and a battery behind the pilot's seat. All batteries can power the avionics but only the engine battery will power the engine. The pilot reported that the low-battery light had been illuminating

intermittently for some time, even though the battery voltage normally checked at over 13V, and he had already made arrangements to return the avionics controller (the prototype Sn1) to the manufacturer for checking and a software update...

Safety Advice

Batteries - LiFePO4 batteries feature a high discharging current, have a long cycle life and their voltage remains almost unchanged down to about an 80% discharged state. However, when the battery starts running out it drops rapidly. Pilots flying aircraft with these types of batteries need to be aware that a satisfactory voltage check does not guarantee there will be sufficient charge available during flight. Outlanding Incidents - A common reason for powered sailplane outlandings going awry is the pilot's mindset of expecting the engine to start first time and not having any other plan. GFA training requires pilots to remain within glide range of suitable landing options, and to make the decision to break-off the flight at a sensible height above ground. For pilots of powered sailplanes, including sustainer types, the decision to break off the flight will usually be higher than that for pure gliders. The actual height will be governed by the complexity of the engine starting process and availability of suitable landing options should the engine fail to start. This then allows the pilot sufficient height and time to conduct a safe outlanding should things go

30-APR-2020 GQ POWERPLANT/PROPULSION PIK-20 E

Under investigation. Returning to Mareeba airport from cross country, the pilot started the engine to selfretrieve. The glider was climbed to 6,000ft, which was about 2,000ft above that needed for final glide. While reducing power to cool the engine before retracting the pilot felt a jolt through the airframe and noticed in the rear vision mirror that the propeller tips were broken. The pilot shut down the engine but was unable to open the engine bay doors to apply the propeller brake. With the propeller windmilling, the glide ratio deteriorated markedly and the aircraft rapidly lost height. Eventually the propeller stopped but the engine could not be retracted, and as the glider was pushing into wind it became obvious to the pilot that an outlanding would be needed. The pilot selected a grassed paddock and configured the glider for a landing with the engine extended. The aircraft touched down safely, but during the initial landing roll it struck a rock hidden in the grass and the undercarriage collapsed. The right wing then got caught on the grass and the glider performed a ground loop and came to rest 90 degrees to the direction of travel. The pilot was uninjured, but the glider suffered substantial damage including a broken tail boom. Upon exiting the glider, the pilot inspected the engine and found the mechanism for raising and retracting the engine had detached at the top pivot point where the bolt had fallen out. The pilot found the bolt retaining nut in the engine bay. When the bolt let go the engine pylon moved

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forward, allowing the propeller tips to contact the small hinged door cover. When the engine stopped, the airflow pushed the pylon back into the engine bay doors and prevented them from opening. The pilot reported that he found the bolt to be in the normal position during the Daily Inspection, but he did not check whether the nut was secure. The incident is being investigated by the Airworthiness Department.

**10-JUL-2020 GQ
OTHER WEATHER EVENTS
ASK 21 B**

What happened

The Club was running an ab-initio training course and the weather bureau was predicating strong crosswinds in the afternoon that would have made it unsuitable for the training being conducted. A decision was made to commence operations at 06:30 to provide a window for training before conditions deteriorated. The first aerotow launch commenced on time and shortly after the glider became airborne the canopy began to fog over. The student, who was flying the glider, lost sight of the tow plane and inadvertently kited through its slipstream. The instructor took control at about 200ft AGL, released from tow and lowered the nose to attain safe speed near the ground. The instructor stated: "I had seen the windsock at the end of the strip go past and knew there was not enough strip to land ahead without going into the paddock at the end of the strip. A tractor had been seen in that paddock before launch so, unsure of its position, and not being able to see in front, only out the clear view, I made the decision to do a 180 degree turn and land in the paddock next to the strip. I commenced a shallow (no more than 20-degree bank) to the left and levelled out preparing to land in the paddock, when the student said she could see the club house. I then got a visual of the clubhouse and moved approximately 30 metres to the left and proceeded to land on runway 30 using the wheel brake to stop very short as I could still not see the other aircraft on the strip." Following this flight, the instructor halted operations for an hour to allow the air to warm. The instructor noted the temperature of the air at the time was close to the dew point and there was fog about 10kms away.

Comment

A cold canopy that is exposed to slightly warmer or moist air can 'fog up'. It is likely that the glider moved between different temperature layers as it climbed, and this may have led to a combination of temperatures suitable to allow fog.

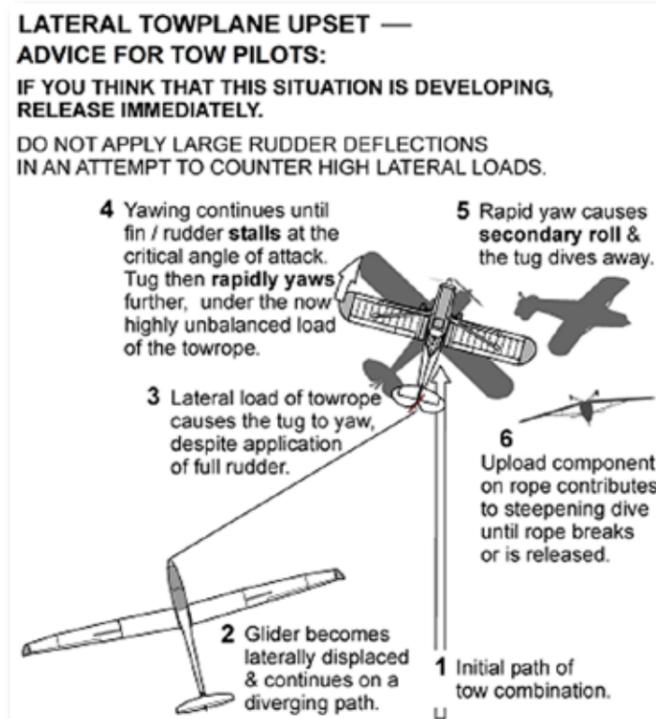
Safety Advice

While the above flight successfully turned through more than 180 degrees to land back on the airfield, such turns are not recommended below a height of 300 feet due to the risk of mishandling and low-level loss of control. Although it may be inconvenient, at low level it is safer to minimise the amount of manoeuvring by landing as straight

ahead as possible unless terrain features dictate otherwise.

**26-JUL-2020 VSA
AIRCRAFT CONTROL
PIPER PA-25 - TWIN ASTIR**

Under Investigation. During the aerotow launch and at a height of about 1500ft AGL the student commenced an exercise to 'box' the tow plane's wake (slipstream). The exercise had been pre-briefed with both the student and tow pilot. The student commenced the exercise from the low tow position and moved the glider quite quickly to the right. As the student began to transition into the high tow position while still out to the right of the slipstream, the tow pilot made a radio call to the crew in the glider advising the glider was displaced too far to the right and that he was having control difficulties - specifically that he was being pulled into a roll to the left. The instructor directed the student to return the glider to the normal low tow position but in so doing the student allowed a significant bow to develop in the tow rope. The instructor took control of the glider but was unable to prevent the rope from quickly becoming taught, at which point the weak link broke. As the towrope was re-tensioned, the tow pilot reported that this caused an excessive yawing moment and the tow plane commenced an uncommanded roll to the left that he managed to counteract before it became too severe. Upon the weak link breaking, the rope sprang back and draped over the glider's starboard wing. The student operated the glider's release and the rope slip off the wing and fell to the ground. Both the tow plane and glider landed safely back on the airfield.



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