

2005 Qld State Comps Safety

As reported by Ralph Henderson in another article, 50 gliders and around 53 pilots participated in the 2005 Queensland State Championship, being the first competition for the 2005-6 soaring season.

Queensland has had two gliding fatalities and two other very serious accidents this year, one of the fatalities being from a visiting pilot flying from our Club. Our Club has also been involved in organizing a number of comps in the last two years especially and a number of us have been concerned on some safety aspects seen at these competitions. So we took a few new (and some existing) initiatives for improving awareness and outcomes of safety at these comps.

We also believe if the sport is to grow and remain attractive to newer pilots, we have to make competitions not only attractive, but also safe. We have had a number of newer pilots express their reticence to participate in competitions because of perceptions of it being an unsafe flying environment.

The experience of pilots for these comps ranged from 200 hrs to around 5000 hrs+.

Airspace

At DDSC we operate within the Oakey Military Restricted Airspace, and have limitations placed on our operations from Monday to Friday. Pilots were told they would receive a zero score if they infringed airspace and this was applied in every case. Unfortunately, for some pilots, this zero score made the difference between them winning or coming down the scoring list. We did provide information on our website pre-competition, and again at briefings but as many pilots fly at sites where this is never a consideration and are not familiar with having to manage their flights in limited areas at comps this may have been a factor.

DDSC's relationship with the Oakey Army Base is critical to our operation and we needed to be strict in this area.

200 ft minimum finish height

Firstly, we applied to CASA for, and received, an authority to permit competition finishes below 500 feet and not below 50ft above obstacles. However, at all of the Queensland comps held recently, we have seen a number of misjudged low and unsafe finishes both from inexperienced and experienced pilots. In addition, McCaffrey's field has no cross strip and has its limitations, as well as powerlines and buildings surrounding some parts of the strip. We believed that the max 50 ft finish height does not provide enough safety margin so for this comp, we mandated a minimum 200 ft finish (above obstacles). The 200 ft rule was well received by all competitors, which was a surprise to us, and all pilots (except one) complied with it. We were quite adamant that penalties would apply if the 200 ft was breached, which may have had an effect in "enforcement", but it certainly did not seem to get any adverse reaction from pilots.

All who saw the finishes agreed that overall, we had the safest competition finishes ever observed. The benefits of the 200ft finishes were:

- Pilots had to prepare a bit further out on how they finished.
- All the "straight-in" finishes were well-executed, and more pilots took that safer option, rather than try a low finish.
- It added a safety margin for executing turns in the circuit.

Overall, this initiative was highly successful in achieving safe finishes.

Start Points (No start line)

Nine start points with a 1km circle, located within about 10kms of the airfield, and well outside restricted airspace, were used. Each pilot was randomly allocated 3 possible start

points each day, to spread the field out and encourage people to leave the immediate area around the field.

Given we had many blue days, spreading the gliders out was a good choice. Some pilots still want to see a start line, but any initiative that forces the field to spread out has been seen to be beneficial. A possible area of concern may be that pilots focus on GPSs with heads in cockpits when making their starts but we had no reported incidents at the start points themselves.

Finish Line (rather than a finish circle)

The competition committee debated whether to have a finish circle or a finish line, and settled on the finish line, despite the National Competition Rules that require a Finish Circle. The experience of a previous competition using the circle was that some pilots focused in the cockpit on the GPS rather than outside. We had no reported incidents using the finish line approach. It would appear that having a line of 1 km long, which is easily known and identified, keeps people's eyes outside, and focuses attention and is more 'uni-directional', avoiding converging courses somewhat.

McCaffrey's Field has limitations, and there are occasions in competition, where straight-in approaches oppose the normal circuit final. The competition did have two persons manning finishes, one for recording times, and one experienced person who monitored and manned the radio. This was an informal arrangement that developed during the competition and proved to work very well. The experienced person on the radio was monitoring the radio from 10 kilometres out to Final, and was able to give situational reports where there were potential conflicts or converging aircraft. Of note, a large proportion of radios were barely readable and this had the potential to cause a lack of pilot information especially on final glides.

Radio Serviceability

During the competition, we had several aircraft with very poor radios and/or flat batteries, resulting in considerable repetition of messages and general frustration. Given the importance of radio to safety (we do after all require radios in competitions and mandate a safety frequency), future competitions should try to improve this situation, as this problem has not been limited to this competition.

Particularly at the end of the day when many gliders are finishing together, good radio communications are essential for arranging the safe arrival of everyone on to what can be a restricted amount of airfield space. It is also a fairly common occurrence at some airfields to have power traffic intermixed with finishing gliders, with significant safety implications if glider radios are not working.

It should not be acceptable to have unserviceable radios at competitions and we will make serviceable radios a future requirement for competition entry.

Formal Reporting of Mid air Near Misses (Air Prox)

The competition tried to capture the number of near miss events, but asking pilots to formally report their experiences (anonymously if required) was difficult to achieve. By asking pilots directly, when we heard of near misses, we were able to get five formal reports. There was at least double this number of near misses discussed by pilots during the week. In **ALL** cases, only one pilot saw the other and in most cases, aggressive flying, was a clear factor. Interestingly, two of the near misses involved tugs at the time of launch. Our recommendations are:

- Look at introducing formal tug patterns, and keeping gliders out of tug patterns.
- Mandate that gliders keep their speed down before the start, as there is no need to fly fast in the start area. There is also no need for aggressive gagging in the start area.
- Actively discourage dangerous pull-ups into thermals. In the worst reported near miss, a glider pulled up into a thermal on track, believing he had seen the two

gliders in the thermal above and below him, but there were actually three in the thermal, and the pilot pulled up very close to the third unseen glider.

Statistically (from 9 known events):

- Tug near misses pre-start 2
- Gaggle near misses on track 5
- Gaggle near misses at pre-start 2
- Near misses at control points 0
- Near misses at finishes 0
- Near misses in cruise on track 0

However, five formal reports do not form enough data to make hard and fast recommendations. We would urge future comps to continue to take on an anonymous reporting system for near misses in comps so more data can be collected.

We actively discuss lookout when educating glider pilots on the risk of collision, but two other factors should get equal discussion and education i.e. aggressive inconsiderate flying, and traffic patterns (eg circuit, gaggle management, etc)

100% Assigned Area Tasks (AAT)

Whilst the task-setting team did not deliberately pre-determine that all tasks would be AAT, all seven days of competition were set as AATs for reasons as described below.

- With 50 gliders, we wanted to spread the field as much as possible.
- AATs enabled us to task all classes together, so they went in basically the same direction and avoided conflicting tracks.
- With mostly blue days, it encouraged the fleet to spread out to a degree.
- Aside from safety, it encourages new pilots to competition, without the fear of failure every day.
- Outlandings should be less. With few crews coming to competitions in recent years, this is a workload factor for competition organizers.

For more information on the benefits of AATs, both from a safety point of view, and a planning and Competition Director's point of view, go to the Darling Downs Soaring Club website Safety Centre (www.gogliding.org.au)

Use of Control Points

On most occasions, when using the AAT task, finish tracks can be quite varied. Control points were used for two reasons, both on the outbound track and inbound track to encourage the avoidance of airspace, but also to put some consistency in the finish tracks. The circles on the control points varied from 5km to ½km. We had no reported incidents associated with use of control points.

Effect of Weather

Much of this is obvious, but noted here as observation.

- Blue thermal days are more hazardous, as there is much more "leaching" and gagging.
- Launching when the convection base is low increases the potential risks of collision pre-start.
- Setting AAT tasks in weak weather gives pilots (especially those of lower experience) more options.

Presentation on FLARM

During the competition, Nigel Andrews gave a presentation on progress with transponders, ADSB and FLARM. The pilots appreciated this informative information session, and put a motion to Gliding Queensland to look further at implementing FLARM at future competitions.

Now that this technology is available, competition committees and directors should look hard at mandating this at comps. Many pilots have said they will purchase the system, but unless all competition gliders are equipped, it will have diminished value.

Outlandings

The Downs is a generally good flat safe area for outlandings. There were about 20 outlandings in total, all uneventful.

Overall Understanding of a Safety Culture

There is some more education to be done in the area of improving safety culture. Pilots were happy to talk about experiences around the bar, or in extreme cases, take their safety issues to the pilot committee so that someone could be penalized, but were reluctant to fill out a form so we could capture the data. Most pilots believed that talking to the pilot is enough and that the "problem is solved" once this is done. Safety is not about patching up the holes, or blaming and disciplining individuals. It is finding the issues in a general sense, improving education, having an open attitude, and developing new approaches, so we don't keep repeating the same dangerous events.

Safety Officer and Ground Volunteers

The Competition Director nominated himself to be the Safety Officer but as he flew nearly every day, this job was frequently informally delegated. The Competition Director's role alone is comprehensive enough, there is possible conflict of roles being both CD and safety officer, and not being present for starts and finishes leaves an exposure for others to manage.

Getting enough people to voluntarily run competitions is getting harder, or at least that has been our experience. DDSC has run two, and been involved in running one other, competition in Qld in the last 12 months - finding experienced people who don't want to fly and who will give up their own time for ground jobs in the heat, dust and flies is becoming more difficult.

Safety Briefings

The compulsory safety briefings were informal and only held on a few occasions. The lack of briefings may be in part due to the fact that the material is quite known to most competition pilots and needs some re-energization. Overseas experience shows that nominating the pilots (of any experience) to do these briefings encourages interest and involves the audience by the fact that they may be called upon to prepare and do one of the briefings. Perhaps we will try that next time.

Summary

We achieved 7 out of a possible 7 days of competition. The weather was weak on most days, with most days producing blue thermals. We had no accidents, no aircraft damage, and no injuries to pilots or volunteers. However, the large number of reported near miss incidents continues to be of concern.

DDSC would like to thank all pilots who displayed a very high level of airmanship and professionalism, and made the competition a safe and happy one.