



Hang Gliding Federation of Australia
Land Owner Information Package



Background

In the late sixties Rogallo Delta wing hang gliders were invented, and over many dangerous years of trial and error the basic style, aerodynamic design and form of hang gliders took shape and has now, along with the new millennium, reached amazing technological advances. Over time, pilot skill, training and licensing requirements, structural design and operational practices have significantly reduced the risks involved in hang gliding and paragliding.



Rohan Holtkamp, Australian and World Record Holder

Any risks have now been minimised and are comparable with General Aviation (GA) and along with the GA community hang and paragliders are now represented and supported through the world administrative body the “Federation Aeronautique Internationale” (FAI)¹. National and international competitions are organised, world and local pilot ranking systems maintained. The governing body in Australia is the Hang Gliding Federation of Australia (HGFA)², they are responsible for all levels of administration and regulation of the sport including microlights or ‘trikes’, which are powered hang gliders, and are usually flown at airfields.

In Australia there are thousands of active pilots, over a dozen major competitions each year and hundreds of hang and paragliding sites on public, private and club owned lands.

¹ FAI Web Site at <http://www.fai.org/>

² HGFA Web Site <http://www.hgfa.asn.au/>

Hang Gliders

Modern hang gliders are made from aircraft grade aluminium, the highest quality Dacron and Mylar cloths, as used extensively in sailing, and we now share another of sailing's advances in the use of carbon fibre technology.

Hang gliders are unique in that they are foot launched and landed aircraft. That is, running launches them, either from a mountain, hillside or by towing methods, of which there are a variety. Control is by shifting your weight around which influences the wing and "steers" the aircraft, they are very manoeuvrable, with little effort. They may gain and maintain altitude by the use of warm uprising air currents called 'thermals' and can glide and fly extensive distances. The current Australian record stands at something like 427km. The current world record is a distance of 700km.

Paragliders

Paragliders are the more recent aircraft in the free flight or light aircraft soaring genre. They work in a similar fashion to modern day Ram Air parachutes, with openings in the leading edge (front of the wing) into which air can flow, giving positive pressure to the wing. Paragliders have a much larger wingspan and more defined airfoil shape which allows them to fly, as opposed to simply achieving a slow descent as in parachutes, which have little 'flight' capabilities. Paragliders are steered by manipulating the wing directly with "brakes"; lines that pull down on the rear of the canopy or "wing". They are also very manoeuvrable and fly a lot slower than hang gliders.

The current world record set by an Australian, at Mt Borah Manilla, a privately owned site in the northwest slopes of NSW (near Tamworth) stands at about 330km. Paragliders are also foot launched and landed. They may also be towed using ground-towing techniques.



Paraglider just after launching

Paragliders are the easier of the two forms of free flight to learn and fly, but due to their lighter construction and less performance they have a smaller flight envelope than hang gliders, depending on weather conditions; mainly wind strength. They do however perform much better than hang gliders in lighter lift conditions and are far easier to transport and set up. So there are pros and cons to each form.

Generally hang and paragliders share many launch and landing sites, but invariably due to the difference in the aircraft, they also have specific areas only accessible to one or the other.

Foot launch

Foot launching these aircraft is quite a simple process. All that is required is a suitable hill or mountainside without obstructions. We fly in two ways:

1. Thermalling – Catching rising warm air currents.
2. Ridge Soaring – Riding the lift created by winds blowing over landscapes.

Varying degrees of slope and height may be required depending on the type of flying undertaken; the higher the launch the better in most cases, which gives us a greater opportunity to find lift in order to climb and fly further or simply enjoy the views.

Contrary to popular belief, we do not need any wind to fly or launch our aircraft. The only critical factor is that we have any prevailing wind, of whatever strength, blowing towards us on launch and landing, in order to maintain safe air to groundspeed ratios.



Hang glider launching from the world famous Mt Buffalo National Park launch ramp

Aerotow

In many ways hang and paragliding share aspects of our aviation genre with sailplanes or gliders. We may also launch using winches, or, for hang gliders, specific aircraft to tow us aloft.

We are lucky enough to have two quality hang glider manufacturers in Australia. One, Airborne Windsports in Newcastle, manufacture hang gliders and they are also the world's largest powered hang glider manufacturer. These aircraft, which are fully certified to aviation standards, are also called "trikes" or "microlights". The HGFA is also responsible for the administration and regulation of these aircraft, though they may also be registered and flown under the General Aviation requirements. Microlights are also used to aerotow hang gliders.



A "trike" showing it's versatility towing a hang glider and a sailplane

It was not until about 1990 that another aircraft was designed and built specifically for aerotowing hang gliders. This aircraft was designed and created in part, and is now made by the Australian and world pioneer in hang gliding Bill Moyes. His family is now also a leading world hang glider manufacturer. A number of these towing aircraft were registered with the Australian Ultralight Federation, full certification in Germany has been completed and CASA's certification of the aircraft is pending ratification. They can be for use by clubs and are also in use internationally in hang gliding airparks, whose sole purpose is the promotion, instruction and safe enjoyment of hang gliding.



The 'Tug' A Moyes-Bailey Dragonfly awaiting the "GO"

A basic overview of the set up for aerotow operations, which is similar to ground tow, is as follows and as set out in the HGFA Towing Manual. The tow aircraft, an Airborne "trike" (microlight), or Moyes-Bailey "Dragonfly", colloquially known as 'The Tug', sets up on the airstrip with between 70-90m of a polypropylene braided rope, attached to the special bollard and a release at the tail of the aircraft. The rope then runs back to a bridal and another release, which is attached to the pilot and hang glider. Also in use is a 'weak link' that is set to break if tow forces become too strong. The hang glider may be placed in a launch 'dolly' or 'cart', to save running. It is a simple A-Frame with two castoring wheels at the front and a single wheel at the back. The 'Tug' then tows them aloft.



Pilot and glider launching aerotow out of the 'dolly'.

Ground towing

Due to the speed that they fly, paragliders may not yet aerotow, but they may tow by the use of ground towing techniques, as can hang gliders. By using a long line, much longer than in aerotow, we may use winches or vehicles to tow us into the air to gain our initial altitude. The principles behind this are similar to the way a kite is flown. Ground towing, while simple and safe, requires quite a large area. The longer the better because it means the tows can take you much higher.

Site Access

Due to the higher logistical requirements of towing operations, we often prefer the use of hill and mountain foot launch sites. In the past and present we have often relied upon the benevolence of private landowners (including pilots), council and other authorities to allow us access and use of any sites, tow or foot launch. This has continued as such for the past 20 or more years. However due to the continuation of the urban sprawl, liability and other various issues, site access and retention is now in need of better management than the previous ad hoc arrangements, to be acceptable to all concerned parties.

There are two areas for which we require site access 1) the launching phase and; 2) the landings, where our primary objective of soaring has not been achieved due to uncooperative conditions.

Launch Sites

To launch a hang or paraglider by foot from a hill requires an area of at least 20m width. The length of the launch depends on how steep the slope is, but generally it would have to be about 10-15m. The only other real factor is that the area in front of launch be clear of obstructions, at the most, trees and other obstructions may be a few meters below the launch height to allow adequate clearance.

Landing Sites

To land a hang glider we require at least a football-sized field. It is possible to land in much smaller areas as long as the border of any such area is clear of obstructions. Part of the training and licensing requirements for both forms of soaring require the pilot to be proficient in landing in close proximity to a designated spot time and again. Advanced pilots can often land on a 2m round spot consistently, and more novice pilots will land within 15meters.

Paragliders require less area to land than hang gliders and they can land quite consistently at most levels within 5 metres of a designated spot. One of the beauties of paragliding is their ease of flight and landing in smaller areas. It is now a regular adventure for paraglider pilots to fly from one mountain and land on the top or side of another, camp overnight then, launch and fly on to the next mountain the next day. This type of flying is called 'Bivouacking' after the rock-climbing concept of the same principles, just with out the flying.

If a site has been identified as suitable for use, it is probably best to consult with the local club intending or in current use of the site to ascertain why and how it is suitable or may be improved. This may already be apparent where the site has been the subject of continued use.

Essentially though, the typical intent of our pilots in flight is to fly as far away from the launch areas as possible (Cross Country or XC), except in small ridge soaring areas where we fly for the pure joy and scenery, and so landing areas are sometimes not as critical in requiring continued access. Generally though, we have a designated landing area available at all launch sites in case we cannot find the lift we need to continue on. Some sites may not have designated or suitable landing areas and they are restricted to pilots of an Advanced rating, for obvious reasons, they need to be sure they can fly elsewhere to land.



Paraglider in flight

Site Access Agreements

As previously mentioned we currently have hundreds of sites in regular use across the nation. These sites are the subject of various types of agreements and arrangements for their use. Restrictions and conditions may be applied and each site is generally subject to different management conditions and restrictions to suit each individual area.

Various land tenure devises may be used in managing the use of sites:

- **Consent Agreements** are a simple tool in the management of site access. Currently this type of agreement is all that is used in access to National Parks Sites across the nation and in various other areas. A consent agreement may contain any and all restrictions and conditions, and in fact it can be used if desired, as a type of contractual agreement where some form of consideration has passed between the parties, like site fees. This

type of agreement would likely be regarded in law as a licence, per below (Example of Consent attached)

- **Leases** may be used to secure the tenure over the use of a site where the owner is willing to let the management and access arrangements be managed by the club or local HGFA representatives. The benefit of the Lease as a form of access agreement is that it is a recognised and acceptable form of land use agreement with enforceable rights for both parties, and conditions may be entered into regarding the use of the site. Financial reward for the owner is offered for the availability and use of the site. Mount Tamborine launch in South East Qld has been negotiated through the use of a lease from the Beaudesert Shire Council for an extended term of 30 years. The cost of the lease is financed by the payment of site fees by club members for the use of the site. Also, in leasing the site to the club, there is a separation from the owner as regards certain liability, because the site is effectively under the club or specified body's control. A disadvantage is that under a lease the owner may be specifically excluded from access to the site, in preference to the "quite enjoyment" and "exclusive possession" rights of the lessee. These rights of the lessee, of course, could be excluded from having effect in the terms of the lease, if not acceptable to the landowner.
- **Licences** as opposed to a lease, have some fundamental differences. A licence to use a specific site is more akin to a simple contractual arrangement, and as such the right of the occupier (the user) to exclude the owner is not supported. So a licence would be more appropriate where the owner wishes to still have access to the use and entry upon the subject site. Licences can also be supported, as in any contractual arrangement by financial compensation for the use of the site. It is also possible, as in any contract, to indemnify from liability with in the terms of the licence (liability discussed in more detail below)

Leases and licences are extremely flexible tools in the management of access and site usage. Any conditions and restrictions can be entered into at the agreement of both parties, including costs, if any, restrictions on use by pilot skill levels, restrictions on number of users, time of use, access arrangements i.e. vehicle types and numbers.

- **Verbal agreements** many sites currently in use are the subjects of only a simple verbal access agreement, with access continuing on an ad hoc basis with specific terms negotiated and applied from time to time. The advantage of this type of arrangement is that the owner can maintain total control over the use and access to the site at any given time. Many such sites are still viable in providing financial support for the use of the site; generally, with individual site fees payable on a user pays system. In some cases

landowners offer access and transport to pilots to launch at a certain price. Simple arrangements like this are still a highly desirable and functional means to manage site access and use. The disadvantages are the possibilities of misunderstandings, mismanagement through the lack and the simplicity of having a written document to refer too.

There are a number of flexible options available for the continued use, management and access to sites, suitable to any scenario, which may arise. Attached you will find an example of the basic consent we use including guidelines in its completion. For sites where leases and other licenses are used a more specific document may be required depending on your location and exactly what agreement is being entered into.

Liability

The continued development of the litigious nature of our society has had a dramatic effect on our, and ALL other sports, mainly due to the rising cost of insurance. The Hang Gliding Federation of Australia holds, as required by law, a \$10,000,000 public insurance policy. All affiliated clubs are covered under this policy, as are all members of the Federation. It includes insurance for any injury or damage to public third parties and property and the members of the Federation. Of course, some sites may exclude the general public due to the nature of the area used; however there are probably more successful sites on public lands where the public and HGFA members share the area symbiotically.

Operations of the HGFA are regulated in a number of ways. The HGFA has a Pilot Handbook or “Operations Manual” which sets out the rules and regulations requiring adherence by all members. These rules and regulations are authorised by, but are subordinate to, the general Civil Aviation Orders (CAO’s) and Civil Aviation Regulations (CAR’s), which all aviation activities are regulated by in Australia. As part of these regulations, HGFA operations are exempt from some sections of the CAO’s and CAR’s, mostly in relation to the proximity in which we launch and land our aircraft to structures and the people. These documents also have disciplinary processes in which members may have sanctions, restrictions and expulsion applied to them.

Significantly for landowners, with in these orders and regulations, are exclusions provided from liability to landowners. At CAO pt 95 Section 95.8 Note :

Attention is directed to the fact that the exemption granted by this section does not confer on an operator of a hang glider to which this section applies any rights as against the owner or occupier of any land on or over which the operations are conducted, or prejudice in any way the rights and remedies which a person may have in respect of any injury to persons or damage to property caused directly or indirectly by the hang glider.

Also, by entering into membership with the HGFA, which all pilots must do to fly, we are strictly subject to sections of the Constitution of the Federation, where at sections 8.14 – 8.17 our legal liability is restricted to the insurance provided by the Federation. In short, the only target of any claim or lawsuit would be the \$10,000,000 insurance policy held by the HGFA, because the HGFA Constitution binds us to it. Through the terms of any contractual site access agreement, it

is also possible to exclude any liability, except to that covered by OUR insurance. Legislative reform also now gives weight to Waiver forms and voluntary assumption of the risks involved in our sports. A copy of the HGFA Certificate of Currency of insurance is available to Clubs on request to the HGFA.

Conclusion

Hang and Paragliding has continued and developed into a legitimate sporting and recreational pursuit. While it does still suffer from the stigma of “bad old days” it has evolved into a cheap and relatively safe form of aviation. It is arguably the purist form of flight; solar powered.

Once believed to be the domain of “a weird kind” of person it is now enjoyed by all types of people and professionals, including but by no means exclusive to, farmers, tradespersons, doctors, lawyers, police, and students, both male and female from ages of 15 to 80 years.

Our continued progress and success is supported, in no small amount, by the passion and motivation of pilots, landowners, governments and councils, in promoting the values and rewards of exciting sports and recreation in our communities. We have evolved into an extremely community minded sporting pursuit, with whole towns and communities relying on our sport for economic support in annual competitions, day to day activities and through the acknowledgement that we each have something to offer the other.

We look forward to your continued assistance and hope that one day we may meet in the air, fulfilling one of mans oldest and greatest of dreams.

Sincerely,



*Prepared by
Damien Gates
General Manager, Hang Gliding Federation of Australia
general.manager@hgfa.asn.au
March '02 amended June '03*

Useful Information Sources and Internet Links

Hang Gliding Federation of Australia

<http://www.hgfa.asn.au/>

PO Box 157

Hallidays Point, NSW 2430

PH (02) 6559 2713; FAX (02) 6559 3830

Civil Aviation Safety Authority

<http://www.casa.gov.au/>

United States Hang Gliding Association

<http://www.ushga.org/>

British Hang and Paragliding Association

<http://www.bhpa.co.uk/>

New Zealand Hang Gliding and Paragliding Association

<http://www.nzhgpa.org.nz>

Hang and Paragliding Association of Canada

<http://www.hpac.ca/hpac.html>

Airborne Wind Sports

<http://www.airborne.com.au/>

Moyes

<http://www.moyes.com.au/>

Appendix

H.G.F.A

Consent Agreement Guidelines

As a continued part of the Hang Gliding Federation of Australia's participation in the Governments Active Australia Project, Site Development and, as such, Site Management Development; it is proposed that flying and launch sites used by the H.G.F.A. membership be subject to manageable ongoing consent agreements between the H.G.F.A affiliated Clubs and site owners.

Previously, consent and agreements for the use of sites has been on an ad hoc basis, generally given verbally. Issues of continued use have arisen when previously used or otherwise allocated lands, for which verbal agreement exists, has come under different control and or Club management personal have changed. Continuity of consent, conditions of use and management issues, which over time suffer from lack of administration, become misplaced, confusing, misunderstood and even at times; denied to even exist.

Because of this, use, management of flying sites and the surrounding environment can fall short of desired levels.

The objectives of establishing a 'standard consent agreement' statewide are:

- Continuity of administration. Any Club Official or owner or authority can source all the relevant information and history of site usage and management.
- Specific management issues can be addressed.
- Specific conditions of use and/or restrictions can be addressed.
- Site Maintenance issues can be addressed.
- Contact information can be listed.
- Communication between owners, authorities and H.G.F.A Clubs and members is enhanced.
- Symbiotic relationships between owners, authorities and the H.G.F.A are enhanced, meaning expertise and experience can be exploited for mutual gain.
- Environmental impact, planning and protection issues can be specifically addressed and managed.
- Sport and recreational opportunities, can be managed and regulated.
- Secondary gain and enhancement of the natural experiences for other users, where communal access and use is identified e.g. Lookouts.

In the past the H.G.F.A and its members have taken an active role in the preservation and management of our natural resources, on private and public lands. With the continued rise in the

spread of suburbia across the country it is imperative that we take an active role in the continued preservation and management, for acceptable use of these areas

Consent Form Explanation and Examples

Form may be completed by hand

Site Name:	The name of the site, according to the H.G.F.A Club.
Site Location:	The name of the site, and description of its location.
Launch Desc:	Type of launch, Ramp, earth etc. Physical description of area allowed for use.
Period:	Time period the consent agreement is in place.
Site Management:	Who, what, where, when and how the site is managed. Who is primarily responsible for the site? What are their roles? Locking of gates and access conditions, vehicle parking and access and other users. Site Fee requirements.
Conditions of Use:	HGFA minimum rating for use of the Site. Number of persons who can access the site at any one time. Restrictions and any other conditions required for use.
Site Maintenance:	Who, what, where, when and how the site is maintained. Who maintains vegetation and how. Restrictions on use and access to limit environmental impact.

Further information may be obtained from the H.G.F.A. and local Club Site Development Officers.

For further information regarding these guidelines, obtaining consent and formalising existing oral consents, please feel free to contact me at any time.



Hang Gliding Federation of Australia

Site Consent Example

I/we _____, of _____
_____ authorise and consent to the continued use of this site, subject to the conditions listed,
by members of Hang Gliding Federation of Australia in participation of recreational, sporting and associated
activities under it's control.

Site Name _____

Site Location _____

UTM Grid Ref. _____ **H.G.F.A Controlling Club** _____

Club Contact _____ **PH** _____ **E-Mail** _____

Site Owner _____ **Contact** _____

Site Contact _____ **Contact** _____

Launch Description _____

Height (amsl) _____

Period from ____ / ____ / ____ **to** ____ / ____ / ____ **or until further notice.**

Site Management _____

Conditions of Use _____

Site Maintenance _____

.....
Name _____
H.G.F.A Club Officer

Date ____ / ____ / ____.

.....
Name _____
Owner or Authorised agent